



DOMINION ENERGY SOUTH CAROLINA
WILLIAMS STATION HIGHWAY 52 CLASS III INDUSTRIAL LANDFILL
BERKELEY 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
Williams Station Highway 52 Class III Landfill
2022 Annual Groundwater Monitoring and Corrective Action Report*

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Executive Summary

Dominion Energy South Carolina (DESC) operates an offsite Class III Industrial Landfill (Unit) for the disposal of coal combustion residuals (CCR) at the Williams Generating Station (Station) located near Goose Creek, in Berkeley 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:
 - Calcium – MW-LF-20, MW-LF-21, MW-LF-24, MW-LF-25, and MW-LF-26

- Chloride – MW-LF-26
 - Fluoride – MW-LF-25
 - Sulfate – MW-LF-25 and MW-LF-26
 - TDS – MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26
- 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 Highway 52 Class III Industrial Landfill (Unit) at the Williams Generating Station (Station) located near Goose Creek, in Berkeley County, South Carolina. Coal combustion residuals (CCR) are produced as part of the electrical generation operations at the Station, transported offsite, and 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 Solid Waste Permit (Permit # LF03-00001) and 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 that provides information regarding the groundwater monitoring and corrective action program at the Unit. This Report provides the monitoring and corrective action data and data evaluations for the semiannual CCR monitoring compliance events performed in March and September 2022.

1.1 Site Location

The Station is operated by DESC and is located at 2242 Bushy Park Road in Berkeley County, South Carolina (**Figure 1**). The Station is located approximately 6 miles northeast of Goose Creek, South Carolina. The Unit is located offsite at 2381 Highway 52 in Moncks Corner, Berkeley County, South Carolina (also depicted on **Figure 1**).

1.2 Site History

The Williams Highway 52 Landfill began operation as a Class III Industrial Landfill in 2010 (Permit LF3-00001). The Landfill consists of a total of 12 cells, of which only 4 cells (Cells 1-4) are constructed and in service today. The Unit receives both fly ash and flue gas desulfurization (FGD) waste from the Station located about 6 miles from the Unit in Goose Creek, South Carolina.

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. LF3-00001
- Initiated the Detection Monitoring Program (DMP) on May 11, 2016, with the collection of eight (8) baseline/background samples and completed the background monitoring activities on July 25, 2017, pursuant to 40 CFR §257.94(b).

- Conducted the initial DMP compliance sampling event on September 26-27, 2017, pursuant to 40 CFR §257.94.
- Placed a copy of the 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 23-24, 2022 and completed the sample analyses on April 4, 2022, pursuant to 40 CFR §257.94(b).
- Completed a successful ASD per 40 CFR §257.94(e)(2) for the potential SSIs identified during the first semiannual 2022 detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer. As required by 40 CFR §257.94(e)(2), a copy of the ASD is included in this Report and provided in **Appendix B**. DESC continued with detection monitoring in accordance with 40 CFR §257.94.
- Conducted the second semiannual 2022 detection monitoring between September 21-22, 2022 and completed the sample analyses on October 5, 2022, pursuant to 40 CFR §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

No problems were encountered during 2022 regarding the detection monitoring and corrective action system.

*TRC Environmental Corporation | Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill*

2022 Annual Groundwater Monitoring and Corrective Action Report

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Section 2

Site Information

2.1 Monitoring Well Network

Groundwater monitoring wells (MW-LF-20, MW-LF-21, MW-LF-22, MW-LF-23, MW-LF-24, MW-LF-25, and MW-LF-26) were installed in March 2016 at the Unit to serve as the EPA CCR Compliance Monitoring Well Network. Following installation in March 2016, subsequent groundwater gauging of wells MW-LF-22 and MW-LF-23 indicated insufficient groundwater sampling volumes in the wells. In April 2016, replacement wells were installed to greater depths adjacent to MW-LF-22 and MW-LF-23 and designated as MW-LF-22D and MW-LF-23D. Additional background monitoring wells were installed in November 2016 (MW-LF-27 and MW-LF-28) at hydraulically upgradient locations. Existing monitoring wells MW-LF-10 and MW-LF-11, utilized for other monitoring programs for the Unit, were incorporated into the monitoring network in 2016.

The Compliance Monitoring Well Network currently consists of four upgradient wells (MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28) to monitor background groundwater quality entering the surficial aquifer of the Unit and seven downgradient monitoring wells (MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26) that serve to monitor groundwater quality downgradient of the Unit. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**.

2.2 Monitoring Well Installation and Decommissioning Activities

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 historical static water level data for the Station are summarized in **Table 1**. Per requirements of the CCR Rule 40 CFR 257.93(c), the rate and direction of groundwater flow within the uppermost aquifer beneath the Unit must be determined after each sampling event. Groundwater potentiometric surface maps were prepared using water level data obtained from both semiannual sampling events conducted in March and September 2022. Using the groundwater contours from March (**Figure 3**) and September (**Figure 4**), the average horizontal hydraulic gradient was calculated using the following equation:

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

Where:

- i = horizontal hydraulic gradient (unitless)
- h^1 = water elevation in well 1 (feet)
- h^2 = water elevation in well 2 (feet)
- S = horizontal distance between well 1 and well 2 (feet)

The groundwater seepage velocity was calculated using the following formula:

$$Vs = ki/n_e$$

Where:

- Vs = Groundwater seepage velocity (feet/day)
- k = hydraulic conductivity (feet/day)
- i = horizontal hydraulic gradient (unitless)
- n_e = effective porosity (percent)

The result for each semiannual event is presented separately in Sections 2.3.1 and 2.3.2. As presented, the estimated groundwater seepage velocity in the uppermost aquifer beneath the Unit is between 1 to 2 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 7% and estimated average hydraulic conductivity value of 0.11 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 1.98 ft/year.

Well 1	Well 2	h^1 (ft)	h^2 (ft)	S (ft)	i	K (ft/day)	n_e	Vs (ft/day)	Vs (ft/yr.)
MW-LF-21	MW-LF-22D	39.51	34.07	875	0.0062	0.11	0.07	0.0098	3.57
MW-LF-11	MW-LF-26	39.89	30.24	2,560	0.0038			0.0059	2.16
MW-LF-28	MW-LF-24	40.70	36.55	2,535	0.0016			0.0026	0.94
MW-LF-21	MW-LF-24	39.51	36.55	1,365	0.0022			0.0034	1.24
1) Hydraulic conductivity and effective porosity values from February 2021: Analysis of Groundwater Flow Rate and Direction – Class III Landfill Wells (Nautilus 2021).						Average		0.0054	1.98

2.3.2 Second Semiannual 2022 Detection Monitoring Program

The groundwater potentiometric surface map for September 2022 is presented in **Figure 4**. Using an estimated effective porosity value of 7% and estimated average hydraulic conductivity

value of 0.11 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 1.76 ft/year.

Well 1	Well 2	h ¹ (ft)	h ² (ft)	S (ft)	i	K (ft/day)	n _e	Vs (ft/day)	Vs (ft/yr.)	
MW-LF-21	MW-LF-22D	42.71	38.23	875	0.0051	0.11	0.07	0.0080	2.94	
MW-LF-11	MW-LF-26	40.37	31.95	2,560	0.0033			0.0052	1.89	
MW-LF-28	MW-LF-24	41.11	38.74	2,535	0.0009			0.0015	0.54	
MW-LF-21	MW-LF-24	42.71	38.74	1,365	0.0029			0.0046	1.67	
1) Hydraulic conductivity and effective porosity values from February 2021: Analysis of Groundwater Flow Rate and Direction – Class III Landfill Wells (Nautilus 2021).							Average		0.0048	1.76

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 sampling 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
1 st Semiannual Detection Monitoring Program Event	March 23-24, 2022	April 4, 2022
2 nd Semiannual Detection Monitoring Program Event	September 21-22, 2022	October 5, 2022

During each of the DMP sampling events, the compliance monitoring wells were sampled in accordance with the Unit'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 samples 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 US EPA 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-25 location on March 24, 2022.
- Additional sample volume was collected at MW-LF-23D on March 24, 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-10 on March 23, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.
- A field blank was collected in the area of MW-LF-25 on March 24, 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-26 location on September 22, 2022.
- Additional sample volume was collected at MW-LF-21 on September 21, 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-23D on September 21, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.
- A field blank was collected in the area of MW-LF-24 on September 22, 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 §257.94, TRC evaluated Appendix III constituent detections against site-specific background values that were established for the DMP (**Appendix E**). Based on that evaluation, the following Appendix III SSIs were identified for the first semiannual 2022 event (**Table 2**):

- Calcium (MW-LF-20, MW-LF-21, MW-LF-24, MW-LF-25, and MW-LF-26)
- Chloride (MW-LF-26)
- Fluoride (MW-LF-25)
- Sulfate (MW-LF-25 and MW-LF-26)
- TDS (MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26)

An ASD and certification were prepared for this SSI and is attached as **Appendix B**.

6.1.2 Second Semiannual 2022 Compliance Event

Pursuant to 40 CFR §257.94, 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**):

- Calcium (MW-LF-20, MW-LF-21, MW-LF-24, MW-LF-25, and MW-LF-26)
- Chloride (MW-LF-26)
- Sulfate (MW-LF-25 and MW-LF-26)

- TDS (MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26)

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).

Section 7

Conclusions

7.1 Findings

The first semiannual 2022 DMP compliance sampling event was conducted on March 23-24, 2022, with sample analyses completed on April 4, 2022. The second semiannual 2022 DMP compliance sampling event was conducted on September 21-22, 2022, with sample analyses completed on October 5, 2022. These groundwater sampling and analysis activities were conducted in general accordance with the requirements of the Unit's GWMP for the CCR Rule network.

Evaluation of the monitoring results from the first semiannual 2022 event identified an exceedance above the background value for calcium, chloride, sulfate, and TDS. 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. Monitoring results from the second semiannual 2022 event identified exceedances above the background value for calcium, chloride, fluoride, sulfate, and TDS. 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 Appendix III 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 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*. [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN-2050-AE81.
- EPA. 2016. Federal Register. Volume 81. No. 151. Friday August 5, 2016. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*. [EPA-HQ-OLEM-2016-0274; FRL-9949-44-OLEM].
- Nautilus 2016. Groundwater Sampling and Analysis Plan, Williams Generating Station Highway 52 Class Three Landfill. Goose Creek, SC: Nautilus Geologic Consulting, PLLC.
- Nautilus 2018. Alternate Source Demonstration Report, Williams Generating Station Highway 52 Class Three Landfill. Goose Creek, SC: Nautilus Geologic Consulting, PLLC.
- Nautilus 2020. RCRA Groundwater Monitoring Report for the July 2020 Sampling Event, Williams Generating Station Highway 52 Class III Landfill. Goose Creek, SC: 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 Highway 52 Class III Industrial Landfill associated with the Williams 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

Table 1 Summary of Historical CCR Static Water Level Data Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill Goose Creek, Berkeley County, South Carolina				
Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-LF-10	52.29	5/11/2016	8.71	43.58
		7/13/2016	8.73	43.56
		9/13/2016	9.15	43.14
		11/17/2016	8.97	43.32
		1/19/2017	7.44	44.85
		3/27/2017	8.25	44.04
		5/25/2017	7.96	44.33
		7/25/2017	7.29	45.00
		9/20/2017	6.95	45.34
		3/13/2018	8.12	44.17
		9/19/2018	8.26	44.03
		11/28/2018	8.15	44.14
		3/18/2019	8.04	44.25
		5/20/2019	8.80	43.49
		9/17/2019	7.94	44.35
		3/12/2020	7.11	45.18
		5/12/2020	7.89	44.40
		9/15/2020	7.69	44.60
		10/28/2020	7.18	45.11
		3/11/2021	7.45	44.84
9/21/2021	7.15	45.14		
3/23/2022	8.67	43.62		
9/21/2022	7.85	44.44		
MW-LF-11	51.72	11/17/2016	11.49	40.23
		1/19/2017	10.68	41.04
		3/27/2017	11.25	40.47
		5/25/2017	11.10	40.62
		7/25/2017	10.67	41.05
		9/20/2017	10.34	41.38
		3/13/2018	11.13	40.59
		9/19/2018	10.89	40.83
		11/28/2018	10.73	40.99
		3/18/2019	11.07	40.65
		5/20/2019	11.78	39.94
		9/17/2019	11.04	40.68
		3/12/2020	10.68	41.04
		5/12/2020	11.57	40.15
		9/15/2020	11.10	40.62
		10/28/2020	10.64	41.08
		3/11/2021	10.88	40.84
		9/21/2021	10.49	41.23
		3/23/2022	11.83	39.89
		9/21/2022	11.35	40.37

Notes:

1) ft AMSL = feet above mean sea level.

Table 1
Summary of Historical CCR Static Water Level Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-LF-20	60.81	5/11/2016	21.91	38.90
		7/13/2016	21.52	39.29
		9/13/2016	20.87	39.94
		11/16/2016	20.60	40.21
		1/19/2017	21.34	39.47
		3/27/2017	21.72	39.09
		5/23/2017	21.56	39.25
		7/25/2017	20.90	39.91
		9/20/2017	20.21	40.60
		3/13/2018	21.29	39.52
		9/19/2018	20.26	40.55
		11/28/2018	20.21	40.60
		3/18/2019	21.38	39.43
		5/21/2019	21.31	39.50
		9/17/2019	20.22	40.59
		3/11/2020	21.18	39.63
		5/12/2020	21.41	39.40
		9/15/2020	20.35	40.46
		10/28/2020	20.18	40.63
		3/11/2021	21.55	39.26
9/21/2021	20.19	40.62		
3/23/2022	21.14	39.67		
9/21/2022	20.01	40.80		
MW-LF-21	56.14	5/11/2016	18.97	37.17
		7/13/2016	17.28	38.86
		9/13/2016	15.66	40.48
		11/16/2016	15.31	40.83
		1/19/2017	16.81	39.33
		3/27/2017	17.95	38.19
		5/23/2017	17.70	38.44
		7/25/2017	16.33	39.81
		9/20/2017	15.20	40.94
		3/13/2018	17.92	38.22
		9/19/2018	14.42	41.72
		11/28/2018	14.12	42.02
		3/18/2019	16.32	39.82
		5/21/2019	15.83	40.31
		9/17/2019	12.91	43.23
		3/11/2020	15.77	40.37
		5/12/2020	16.01	40.13
		9/15/2020	13.62	42.52
		10/28/2020	13.37	42.77
		3/11/2021	16.56	39.58
9/21/2021	13.81	42.33		
3/23/2022	16.63	39.51		
9/21/2022	13.43	42.71		

Notes:

1) ft AMSL = feet above mean sea level.

Table 1 Summary of Historical CCR Static Water Level Data Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill Goose Creek, Berkeley County, South Carolina				
Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-LF-22	50.33	5/11/2016	21.58	28.75
		7/13/2016	16.33	34.00
		9/13/2016	13.78	36.55
		11/16/2016	14.20	36.13
		1/19/2017	16.05	34.28
		3/28/2017	17.43	32.90
		5/24/2017	17.29	33.04
		7/25/2017	15.54	34.79
		9/21/2017	13.59	36.74
		3/13/2018	17.33	33.00
		9/20/2018	13.33	37.00
		3/18/2019	16.78	33.55
		5/21/2019	16.61	33.72
		9/18/2019	12.97	37.36
		3/11/2020	16.37	33.96
		9/15/2020	12.86	37.47
		3/11/2021	16.19	34.14
9/21/2021	12.40	37.93		
3/23/2022	16.36	33.97		
9/21/2022	12.16	38.17		
MW-LF-22D	50.36	5/11/2016	16.04	34.32
		7/13/2016	15.59	34.77
		9/13/2016	13.83	36.53
		11/16/2016	14.11	36.25
		1/19/2017	16.27	34.09
		3/28/2017	17.58	32.78
		5/24/2017	16.97	33.39
		7/25/2017	15.08	35.28
		9/21/2017	13.76	36.60
		3/13/2018	17.48	32.88
		9/20/2018	13.47	36.89
		11/29/2018	13.95	36.41
		3/18/2019	16.98	33.38
		5/21/2019	16.42	33.94
		9/18/2019	13.11	37.25
		3/11/2020	16.49	33.87
		5/13/2020	16.15	34.21
		9/15/2020	12.91	37.45
		10/28/2020	12.94	37.42
3/11/2021	16.35	34.01		
9/21/2021	12.35	38.01		
3/23/2022	16.29	34.07		
9/21/2022	12.13	38.23		

Notes:

1) ft AMSL = feet above mean sea level.

Table 1 Summary of Historical CCR Static Water Level Data Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill Goose Creek, Berkeley County, South Carolina				
Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-LF-23	49.99	5/11/2016	19.66	30.33
		7/13/2016	16.26	33.73
		9/13/2016	15.61	34.38
		11/16/2016	15.44	34.55
		1/19/2017	15.34	34.65
		3/28/2017	15.96	34.03
		5/24/2017	15.95	34.04
		7/25/2017	15.30	34.69
		9/21/2017	15.15	34.84
		3/13/2018	16.72	33.27
		9/20/2018	14.99	35.00
		3/18/2019	15.61	34.38
		5/21/2019	14.90	35.09
		9/18/2019	13.32	36.67
		3/11/2020	15.11	34.88
		9/15/2020	12.53	37.46
		3/11/2021	14.20	35.79
9/21/2021	12.13	37.86		
3/23/2022	14.40	35.59		
9/21/2022	12.36	37.63		
MW-LF-23D	49.69	5/11/2016	15.68	34.01
		7/13/2016	14.42	35.27
		9/13/2016	14.17	35.52
		11/16/2016	13.55	36.14
		1/19/2017	12.97	36.72
		3/28/2017	15.18	34.51
		5/24/2017	14.72	34.97
		7/25/2017	13.92	35.77
		9/21/2017	14.09	35.60
		3/13/2018	15.72	33.97
		9/20/2018	13.72	35.97
		11/29/2018	14.38	35.31
		3/19/2019	14.08	35.61
		5/21/2019	13.33	36.36
		9/18/2019	13.02	36.67
		3/11/2020	14.22	35.47
		5/13/2020	14.00	35.69
		9/16/2020	12.50	37.19
		10/29/2020	13.06	36.63
		3/11/2021	14.62	35.07
9/21/2021	12.12	37.57		
3/23/2022	14.14	35.55		
9/21/2022	12.39	37.30		

Notes:

1) ft AMSL = feet above mean sea level.

Table 1
Summary of Historical CCR Static Water Level Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-LF-24	52.40	5/11/2016	16.06	36.34
		7/13/2016	15.05	37.35
		9/13/2016	15.00	37.40
		11/17/2016	16.01	36.39
		1/20/2017	16.93	35.47
		3/28/2017	17.06	35.34
		5/24/2017	16.35	36.05
		7/26/2017	15.35	37.05
		9/21/2017	14.81	37.59
		3/13/2018	15.95	36.45
		9/20/2018	14.10	38.30
		11/29/2018	14.95	37.45
		3/19/2019	16.26	36.14
		5/21/2019	15.55	36.85
		9/18/2019	14.52	37.88
		3/11/2020	15.55	36.85
		5/13/2020	15.40	37.00
		9/15/2020	13.69	38.71
		10/29/2020	14.12	38.28
		3/11/2021	15.50	36.90
9/21/2021	13.90	38.50		
3/23/2022	15.85	36.55		
9/21/2022	13.66	38.74		
MW-LF-25	50.93	5/11/2016	15.40	35.53
		7/13/2016	14.44	36.49
		9/13/2016	14.15	36.78
		11/17/2016	15.00	35.93
		1/19/2017	16.30	34.63
		3/28/2017	16.34	34.59
		5/24/2017	15.69	35.24
		7/26/2017	14.75	36.18
		9/21/2017	14.24	36.69
		3/13/2018	15.60	35.33
		9/20/2018	13.69	37.24
		11/29/2018	14.26	36.67
		3/19/2019	16.17	34.76
		5/21/2019	15.39	35.54
		9/18/2019	13.73	37.20
		3/11/2020	15.39	35.54
		5/13/2020	14.66	36.27
		9/16/2020	12.96	37.97
		10/29/2020	13.40	37.53
		3/11/2021	15.35	35.58
9/21/2021	12.34	38.59		
3/23/2022	15.19	35.74		
9/21/2022	12.29	38.64		

Notes:

1) ft AMSL = feet above mean sea level.

Table 1 Summary of Historical CCR Static Water Level Data Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill Goose Creek, Berkeley County, South Carolina				
Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-LF-26	55.21	5/11/2016	25.06	30.15
		7/13/2016	24.51	30.70
		9/13/2016	24.00	31.21
		11/17/2016	24.05	31.16
		1/20/2017	24.76	30.45
		3/28/2017	25.40	29.81
		5/24/2017	25.25	29.96
		7/26/2017	24.32	30.89
		9/21/2017	23.45	31.76
		3/13/2018	25.09	30.12
		9/20/2018	23.63	31.58
		11/29/2018	23.54	31.67
		3/19/2019	24.90	30.31
		5/21/2019	25.08	30.13
		9/18/2019	23.70	31.51
		3/11/2020	24.25	30.96
		5/13/2020	24.61	30.60
		9/16/2020	23.57	31.64
		10/29/2020	22.84	32.37
		3/11/2021	24.47	30.74
9/21/2021	23.40	31.81		
3/23/2022	24.97	30.24		
9/21/2022	23.26	31.95		
MW-LF-27	53.25	11/17/2016	9.01	44.24
		1/20/2017	6.49	46.76
		3/27/2017	7.71	45.54
		5/23/2017	8.15	45.10
		7/25/2017	7.24	46.01
		9/20/2017	6.14	47.11
		3/13/2018	8.48	44.77
		9/19/2018	8.46	44.79
		11/28/2018	7.65	45.60
		3/18/2019	7.36	45.89
		5/20/2019	9.44	43.81
		9/17/2019	8.24	45.01
		3/12/2020	5.16	48.09
		5/12/2020	7.81	45.44
		9/15/2020	8.18	45.07
		10/28/2020	6.85	46.40
		3/11/2021	5.85	47.40
		9/21/2021	7.02	46.23
3/23/2022	8.89	44.36		
9/21/2022	8.29	44.96		

Notes:

1) ft AMSL = feet above mean sea level.

Table 1
Summary of Historical CCR Static Water Level Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
MW-LF-28	51.22	11/17/2016	10.54	40.68
		1/19/2017	9.41	41.81
		3/27/2017	10.26	40.96
		5/23/2017	10.37	40.85
		7/25/2017	9.56	41.66
		9/20/2017	9.34	41.88
		3/13/2018	10.36	40.86
		9/19/2018	9.65	41.57
		11/28/2018	9.60	41.62
		3/18/2019	9.97	41.25
		5/20/2019	11.08	40.14
		9/17/2019	10.07	41.15
		3/12/2020	9.18	42.04
		5/12/2020	10.05	41.17
		9/15/2020	9.70	41.52
		10/28/2020	9.32	41.90
		3/11/2021	9.21	42.01
		9/21/2021	5.72	45.50
3/23/2022	10.52	40.70		
9/21/2022	10.11	41.11		
PZ-01	44.51	3/11/2021	5.70	38.81
		9/21/2021	6.71	37.80
		3/23/2022	5.81	38.70
		9/21/2022	6.49	38.02
PZ-02	45.67	3/11/2021	5.85	39.82
		9/21/2021	6.98	38.69
		3/23/2022	6.65	39.02
		9/21/2022	6.43	39.24
PZ-03	47.97	3/11/2021	4.40	43.57
		9/21/2021	7.35	40.62
		3/23/2022	7.91	40.06
		9/21/2022	7.80	40.17
PZ-04	38.90	3/11/2021	10.97	27.93
		9/21/2021	12.39	26.51
		3/23/2022	11.01	27.89
		9/21/2022	9.98	28.92

Notes:

1) ft AMSL = feet above mean sea level.

Table 2
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Background Wells															
			MW-LF-10				MW-LF-11				MW-LF-27				MW-LF-28			
			Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
			03/23/2022				03/24/2022				03/23/2022				03/24/2022			
CCR Appendix III																		
Boron	µg/L	500.0	63.4		4.00	15.0	21.8		4.00	15.0	30.3		4.00	15.0	9.17	J	4.00	15.0
Calcium	µg/L	90100	66800		150	500	17100		30.0	100	28500		30.0	100	10200		30.0	100
Chloride	mg/L	28.6	20.4		0.335	1.00	6.49		0.0670	0.200	7.25		0.0670	0.200	5.96		0.0670	0.200
Fluoride	mg/L	0.756	0.438		0.0330	0.100	0.235		0.0330	0.100	0.242		0.0330	0.100	0.0858	J	0.0330	0.100
pH	SU	5.16 - 8.33	6.87		0.01	0.01	6.01		0.01	0.01	6.36		0.01	0.01	5.82		0.01	0.01
Sulfate	mg/L	45.2	5.08		0.133	0.400	1.36		0.133	0.400	2.45		0.133	0.400	0.839		0.133	0.400
Total Dissolved Solids	mg/L	389	350		3.40	14.3	98.6		3.40	14.3	147		3.40	14.3	47.1		3.40	14.3
Field Parameters																		
Conductivity	µS/cm	--	595.12		0.1	0.1	171.97		0.1	0.1	259.28		0.1	0.1	93.62		0.1	0.1
Dissolved Oxygen	mg/L	--	1.52		0.01	0.01	1.83		0.01	0.01	0.35		0.01	0.01	2.72		0.01	0.01
Temperature	C	--	20.34		0.01	0.01	18.88		0.01	0.01	19.69		0.01	0.01	18.07		0.01	0.01
Turbidity	NTU	--	2.77		0.1	0.1	2.60		0.1	0.1	6.08		0.1	0.1	2.73		0.1	0.1
Depth to Water*	ft btoc	--	8.67		0.01	0.01	11.83		0.01	0.01	8.89		0.01	0.01	10.52		0.01	0.01
Groundwater Elevation*	ft msl	--	43.62		0.01	0.01	39.89		0.01	0.01	44.36		0.01	0.01	40.70		0.01	0.01
Oxidation Reduction Potential	millivolts	--	22.7		0.1	0.1	74.7		0.1	0.1	-16.0		0.1	0.1	80.7		0.1	0.1

Notes:

MDL = Method Detection Limit
 QL = Quantitation Limit
 mg/L = Milligram per liter
 µg/L = Microgram per liter
 µS/cm = MicroSiemen per centimeter
 SU = Standard Units
 C = Degrees Celsius
 NTU = Nephelometric Turbidity Unit
 ft btoc = feet below top of casing
 ft msl = feet above mean sea level

Qualifiers (Qual)

J = Estimated Results
 = Concentration greater than Background Threshold Values

Bold font = Detected constituent

* - Groundwater Elevation data collected on March 23, 2022

Table 2
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Downgradient Wells																			
			MW-LF-20				MW-LF-21				MW-LF-22D				MW-LF-23D				MW-LF-24			
			Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
Sample ID: _____																						
Sample Date: 03/24/2022																						
CCR Appendix III																						
Boron	µg/L	500.0	206		20.0	75.0	208		20.0	75.0	343		20.0	75.0	277		20.0	75.0	84.6		4.00	15.0
Calcium	µg/L	90100	151000		150	500	134000		150	500	85300		150	500	65700		150	500	103000		150	500
Chloride	mg/L	28.6	12.5		0.134	0.400	11.5		0.134	0.400	10.0		0.335	1.00	16.0		0.134	0.400	19.1		0.134	0.400
Fluoride	mg/L	0.756	0.206		0.0330	0.100	0.228		0.0330	0.100	0.248		0.0330	0.100	0.327		0.0330	0.100	0.403		0.0330	0.100
pH	SU	5.16 - 8.33	6.32		0.01	0.01	6.48		0.01	0.01	6.80		0.01	0.01	6.92		0.01	0.01	6.20		0.01	0.01
Sulfate	mg/L	45.2	5.41		0.133	0.400	7.14		0.133	0.400	32.9		0.665	2.00	22.5		0.266	0.800	12.4		0.266	0.800
Total Dissolved Solids	mg/L	389	651		3.40	14.3	620		3.40	14.3	579		3.40	14.3	516		3.40	14.3	477		3.40	14.3
Field Parameters																						
Conductivity	µS/cm	--	1087.5		0.1	0.1	1044.5		0.1	0.1	947.94		0.1	0.1	829.54		0.1	0.1	811.08		0.1	0.1
Dissolved Oxygen	mg/L	--	0.27		0.01	0.01	0.69		0.01	0.01	1.15		0.01	0.01	2.05		0.01	0.01	0.28		0.01	0.01
Temperature	C	--	20.09		0.01	0.01	20.53		0.01	0.01	20.19		0.01	0.01	20.18		0.01	0.01	20.14		0.01	0.01
Turbidity	NTU	--	8.09		0.1	0.1	6.90		0.1	0.1	2.45		0.1	0.1	1.57		0.1	0.1	4.56		0.1	0.1
Depth to Water*	ft btoc	--	21.14		0.01	0.01	16.63		0.01	0.01	16.29		0.01	0.01	14.14		0.01	0.01	15.85		0.01	0.01
Groundwater Elevation*	ft msl	--	39.67		0.01	0.01	39.51		0.01	0.01	34.07		0.01	0.01	35.55		0.01	0.01	36.55		0.01	0.01
Oxidation Reduction Potential	millivolts	--	21.5		0.1	0.1	43.7		0.1	0.1	117.2		0.1	0.1	49.0		0.1	0.1	42.5		0.1	0.1

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
µS/cm = MicroSiemen per centimeter
SU = Standard Units
C = Degrees Celsius
NTU = Nephelometric Turbidity Unit
ft btoc = feet below top of casing
ft msl = feet above mean sea level

Qualifiers (Qual)
J = Estimated Results
= Concentration greater than Background Threshold Values

Bold font = Detected constituent
* - Groundwater Elevation data collected on March 23, 2022

Table 2
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Background Wells											
			MW-LF-25				MW-LF-25 Duplicate				MW-LF-26			
			Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
		Sample ID:												
		Sample Date:	03/24/2022				03/24/2022				03/24/2022			
CCR Appendix III														
Boron	µg/L	500.0	83.0		4.00	15.0	84.0		4.00	15.0	167		4.00	15.0
Calcium	µg/L	90100	178000		150	500	184000		150	500	161000		150	500
Chloride	mg/L	28.6	18.2		2.68	8.00	19.4		2.68	8.00	136		1.68	5.00
Fluoride	mg/L	0.756	0.610		0.0330	0.100	0.611		0.0330	0.100	0.202		0.0330	0.100
pH	SU	5.16 - 8.33	6.50		0.01	0.01	6.50		0.01	0.01	5.99		0.01	0.01
Sulfate	mg/L	45.2	373		5.32	16.0	404		5.32	16.0	61.9		3.33	10.0
Total Dissolved Solids	mg/L	389	1060		3.40	14.3	1080		3.40	14.3	900		3.40	14.3
Field Parameters														
Conductivity	µS/cm	--	1437.5		0.1	0.1	1437.5		0.1	0.1	1595.7		0.1	0.1
Dissolved Oxygen	mg/L	--	2.28		0.01	0.01	2.28		0.01	0.01	0.50		0.01	0.01
Temperature	C	--	19.77		0.01	0.01	19.77		0.01	0.01	20.49		0.01	0.01
Turbidity	NTU	--	2.54		0.1	0.1	2.54		0.1	0.1	3.12		0.1	0.1
Depth to Water*	ft btoc	--	15.19		0.01	0.01	15.19		0.01	0.01	24.97		0.01	0.01
Groundwater Elevation*	ft msl	--	35.74		0.01	0.01	35.74		0.01	0.01	30.24		0.01	0.01
Oxidation Reduction Potential	millivolts	--	57.0		0.1	0.1	57.0		0.1	0.1	52.9		0.1	0.1

Notes:

MDL = Method Detection Limit
 QL = Quantitation Limit
 mg/L = Milligram per liter
 µg/L = Microgram per liter
 µS/cm = MicroSiemen per centimeter
 SU = Standard Units
 C = Degrees Celsius
 NTU = Nephelometric Turbidity Unit
 ft btoc = feet below top of casing
 ft msl = feet above mean sea level

Qualifiers (Qual)

J = Estimated Results
 = Concentration greater than Background Threshold Values

Bold font = Detected constituent

* - Groundwater Elevation data collected on March 23, 2022

Table 3
Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Background Wells															
			MW-LF-10				MW-LF-11				MW-LF-27				MW-LF-28			
			Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
		Sample ID:	09/21/2022				09/21/2022				09/22/2022				09/22/2022			
		Sample Date:	09/21/2022				09/21/2022				09/22/2022				09/22/2022			
CCR Appendix III																		
Boron	µg/L	500.0	70.8		4.00	15.0	31.9		4.00	15.0	34.7		4.00	15.0	16.1		4.00	15.0
Calcium	µg/L	90100	68700		300	1000	19300		30.0	100	46100		30.0	100	8390		30.0	100
Chloride	mg/L	28.6	17.0		0.335	1.00	6.48		0.0670	0.200	19.3		0.335	1.00	5.87		0.0670	0.200
Fluoride	mg/L	0.756	0.453		0.0330	0.100	0.272		0.0330	0.100	0.223		0.0330	0.100	0.110		0.0330	0.100
pH	SU	5.16 - 8.33	6.68		0.01	0.01	5.80		0.01	0.01	6.21		0.01	0.01	5.86		0.01	0.01
Sulfate	mg/L	45.2	4.62		0.133	0.400	1.56		0.133	0.400	4.69		0.133	0.400	1.51		0.133	0.400
Total Dissolved Solids	mg/L	389	365		2.38	10.0	84.0		2.38	10.0	194		2.38	10.0	40.0		2.38	10.0
Field Parameters																		
Conductivity	µS/cm	--	804.89		0.1	0.1	199.77		0.1	0.1	468.98		0.1	0.1	171.54		0.1	0.1
Dissolved Oxygen	mg/L	--	0.33		0.01	0.01	1.20		0.01	0.01	0.30		0.01	0.01	2.27		0.01	0.01
Temperature	C	--	28.83		0.01	0.01	28.66		0.01	0.01	24.60		0.01	0.01	25.45		0.01	0.01
Turbidity	NTU	--	2.64		0.1	0.1	2.78		0.1	0.1	3.82		0.1	0.1	2.28		0.1	0.1
Depth to Water*	ft btoc	--	7.85		0.01	0.01	11.35		0.01	0.01	8.29		0.01	0.01	10.11		0.01	0.01
Groundwater Elevation*	ft msl	--	44.44		0.01	0.01	40.37		0.01	0.01	44.96		0.01	0.01	41.11		0.01	0.01
Oxidation Reduction Potential	millivolts	--	113.7		0.1	0.1	42.7		0.1	0.1	7.9		0.1	0.1	58.5		0.1	0.1

Notes:

MDL = Method Detection Limit
 QL = Quantitation Limit
 mg/L = Milligram per liter
 µg/L = Microgram per liter
 µS/cm = MicroSiemen per centimeter
 SU = Standard Units
 C = Degrees Celsius
 NTU = Nephelometric Turbidity Unit
 ft btoc = feet below top of casing
 ft msl = feet above mean sea level

Bold font = Detected constituent

* - Groundwater Elevation data collected on September 21, 2022

= Concentration greater than Background Threshold Values

Table 3
Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Goose Creek, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Background Wells											
			MW-LF-25				MW-LF-26				MW-LF-26 Duplicate			
			Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
		Sample ID:												
		Sample Date:	09/21/2022				09/22/2022				09/22/2022			
CCR Appendix III														
Boron	µg/L	500.0	78.7		4.00	15.0	149		4.00	15.0	152		4.00	15.0
Calcium	µg/L	90100	166000		300	1000	166000		300	1000	159000		150	500
Chloride	mg/L	28.6	18.4		2.68	8.00	137		1.34	4.00	138		1.34	4.00
Fluoride	mg/L	0.756	0.990		0.0330	0.100	0.255		0.0330	0.100	0.209		0.0330	0.100
pH	SU	5.16 - 8.33	6.19		0.01	0.01	5.57		0.01	0.01	5.57		0.01	0.01
Sulfate	mg/L	45.2	316		5.32	16.0	53.9		2.66	8.0	53.6		2.66	8.0
Total Dissolved Solids	mg/L	389	956		2.38	10.0	890		2.38	10.0	907		2.38	10.0
Field Parameters														
Conductivity	µS/cm	--	1397		0.1	0.1	1641		0.1	0.1	1641		0.1	0.1
Dissolved Oxygen	mg/L	--	3.08		0.01	0.01	0.40		0.01	0.01	0.40		0.01	0.01
Temperature	C	--	28.29		0.01	0.01	26.50		0.01	0.01	26.50		0.01	0.01
Turbidity	NTU	--	1.77		0.1	0.1	2.76		0.1	0.1	2.76		0.1	0.1
Depth to Water*	ft btoc	--	12.29		0.01	0.01	23.26		0.01	0.01	23.26		0.01	0.01
Groundwater Elevation*	ft msl	--	38.64		0.01	0.01	31.95		0.01	0.01	31.95		0.01	0.01
Oxidation Reduction Potential	millivolts	--	77.3		0.1	0.1	41.6		0.1	0.1	41.6		0.1	0.1

Notes:

MDL = Method Detection Limit

QL = Quantitation Limit

mg/L = Milligram per liter

µg/L = Microgram per liter

µS/cm = MicroSiemen per centimeter

SU = Standard Units

C = Degrees Celsius

NTU = Nephelometric Turbidity Unit

ft btoc = feet below top of casing

ft msl = feet above mean sea level

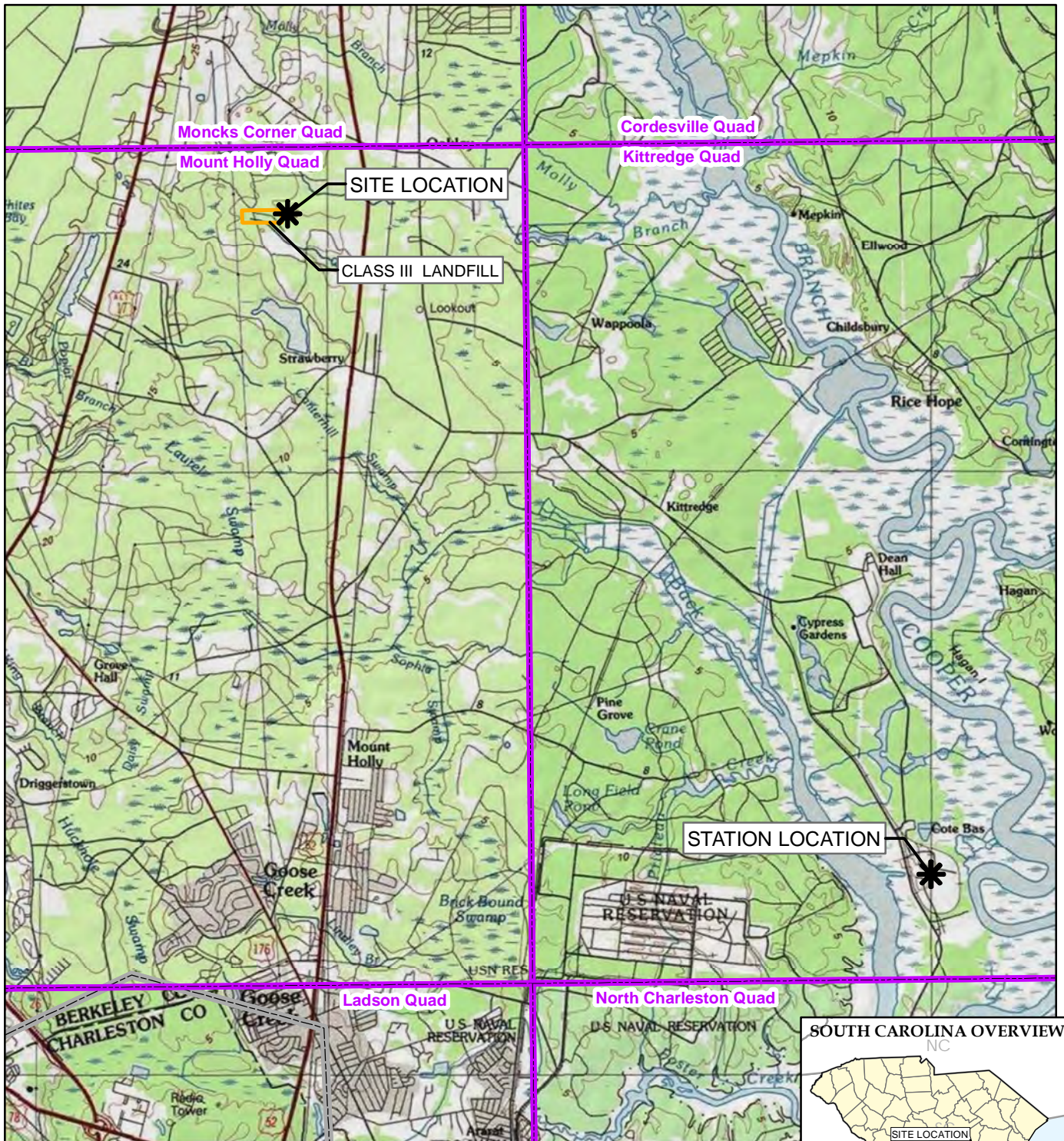
Bold font = Detected constituent

* - Groundwater Elevation data collected on September 21, 2022

= Concentration greater than Background Threshold Values

Figures

TRC - GIS



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.



* SITE LOCATION



USGS 24k QUAD BOUNDARY



COUNTY BOUNDARY



CLASS III LANDFILL BOUNDARY

1" = 8,000' 0 2,000 4,000 8,000
1:96,000 Feet






50 International Drive, Suite 150
Patewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030

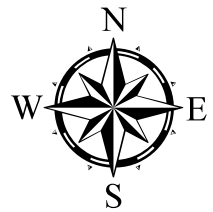
**DOMINION ENERGY SOUTH CAROLINA
WILLIAMS STATION HIGHWAY 52 LANDFILL
MONCK'S CORNER, SOUTH CAROLINA 29461**

**FIGURE 1
SITE LOCATION MAP**


DRAWN BY:	J. YONTS
APPROVED BY:	R. MAYER
PROJECT NO:	416559.0006.0000
FILE NO:	Figure1_Site_Location_Map_CCR.mxd
DATE:	JANUARY 2023

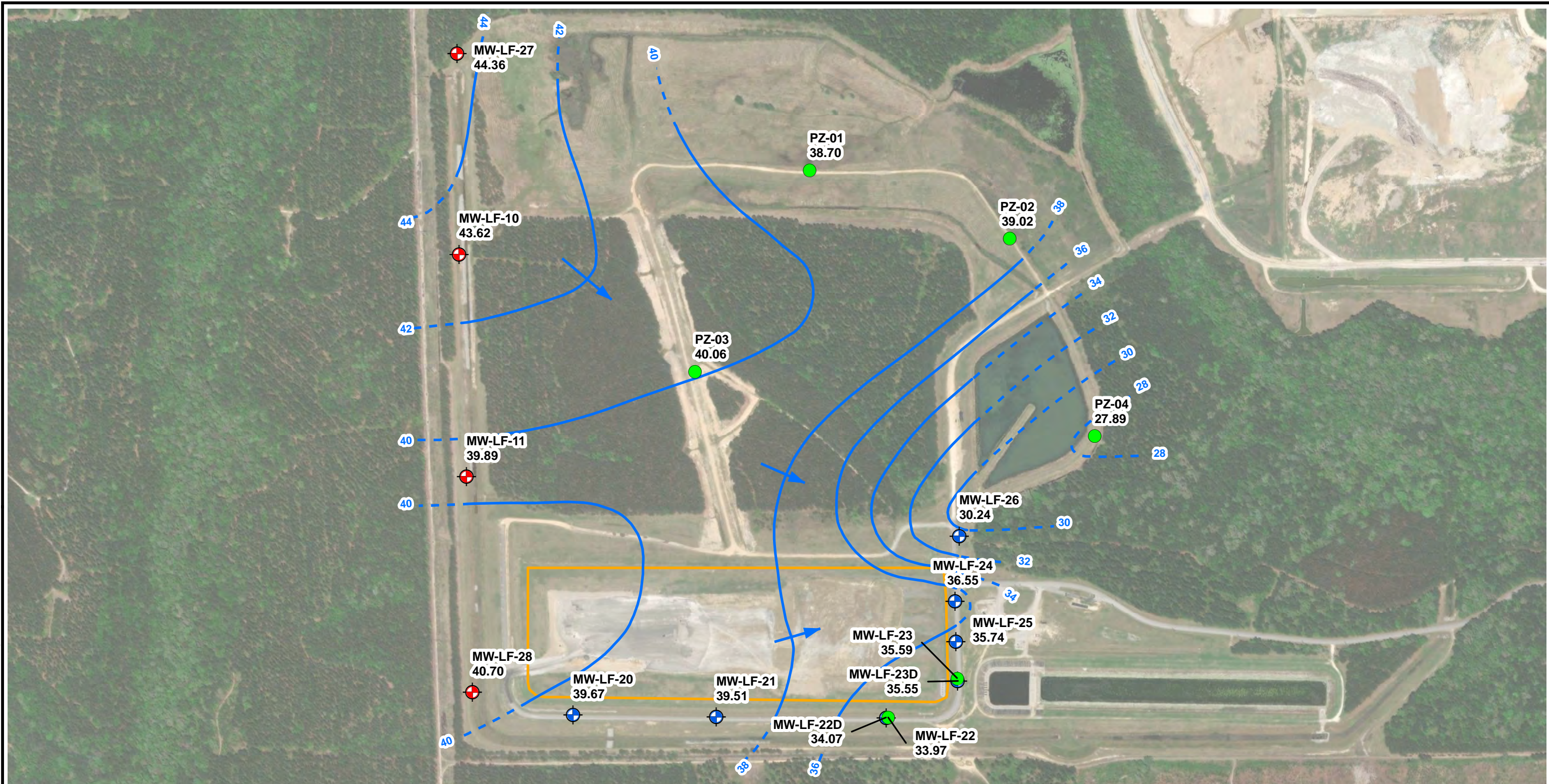


- LEGEND**
-  CCR Background Monitoring Well
 -  CCR Downgradient Monitoring Well
 -  Class III Landfill Boundary









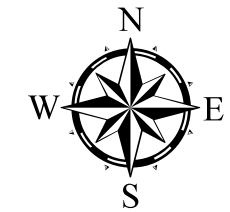
NOTE: Aerial Image from ESRI World Imagery dated April 2022.

PROJECT:		DESC WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL GOOSE CREEK, SOUTH CAROLINA	
TITLE:		CCR RULE COMPLIANCE MONITORING WELL NETWORK	
DRAWN BY:	J. YONITS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL	FIGURE 2	
APPROVED BY:	R. MAYER		
DATE:	JANUARY 2023		
		50 International Drive, Suite 150 Palmetto Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCCompanies.com	
		FILE NO.: Figure2_Williams_HWY52_CCR_LF_Well_Network.mxd	




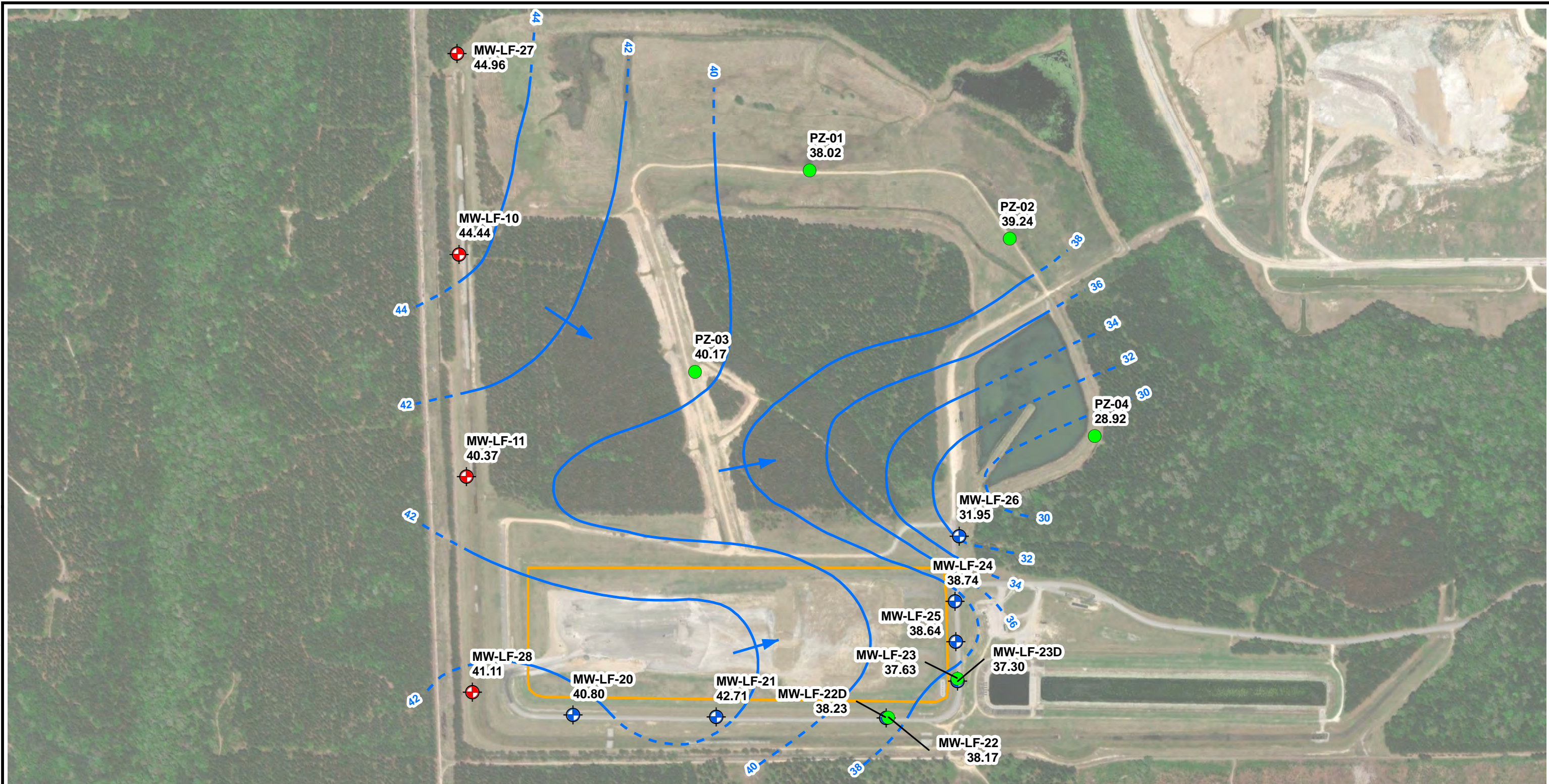
LEGEND

-  CCR Background Monitoring Well
-  CCR Downgradient Monitoring Well
-  Event Piezometer
-  Class III Landfill Boundary
-  Water Table Elevation in feet above mean sea level (2' Contour Intervals) - Dashed where inferred.
-  Approximate Groundwater Flow Direction
- 40.70** Water Elevation (FT MSL)



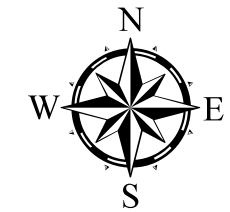
NOTE: Aerial Image from ESRI World Imagery dated April 2022.

PROJECT:		DESC WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL GOOSE CREEK, SOUTH CAROLINA	
TITLE:		GROUNDWATER POTENTIOMETRIC SURFACE MAP - MARCH 23, 2022	
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL	FIGURE 3	
APPROVED BY:	R. MAYER		
DATE:	JANUARY 2023	 50 International Drive, Suite 150 Palmetto Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCCompanies.com	
FILE NO.:	Figure3_Williams_HWY52_CCR_LF_WTL_2201.mxd		




LEGEND

- CCR Background Monitoring Well
- CCR Downgradient Monitoring Well
- Event Piezometer
- Class III Landfill Boundary
- Water Table Elevation in feet above mean sea level (2' Contour Intervals) - Dashed where inferred.
- Approximate Groundwater Flow Direction
- 40.80** Water Elevation (FT MSL)



NOTE: Aerial Image from ESRI World Imagery dated April 2022.

PROJECT:		DESC WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL GOOSE CREEK, SOUTH CAROLINA	
TITLE:		GROUNDWATER POTENTIOMETRIC SURFACE MAP - SEPTEMBER 21, 2022	
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL	FIGURE 4	
APPROVED BY:	R. MAYER		
DATE:	JANUARY 2023	 50 International Drive, Suite 150 Palmetto Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCCompanies.com	
FILE NO.:	Figure4_Williams_HWY52_CCR_LF_WTL_2203.mxd		

Appendix A

September 2021 Alternate Source Demonstration



DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL

BERKELEY COUNTY, SOUTH CAROLINA

EPA CCR RULE COMPLIANCE

ALTERNATE SOURCE DEMONSTRATION REPORT

Second Semiannual 2021 Detection Monitoring Event

April 2022



A handwritten signature in blue ink that reads "Nakia W. Addison".

Nakia W. Addison, P.E.
Senior Engineer

A handwritten signature in blue ink that reads "Richard A. Mayer Jr.".

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

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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 Williams Station (Station) Highway 52 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 values (95 percent upper prediction limit) and the downgradient monitoring results:

- Calcium and total dissolved solids (TDS) (MW-LF-20).
- Calcium and TDS (MW-LF-21).
- TDS (MW-LF-22D).
- Calcium and TDS (MW-LF-23D).
- TDS (MW-LF-24).
- Calcium, fluoride, sulfate, and TDS (MW-LF-25).
- Calcium, chloride, sulfate, and TDS (MW-LF-26).

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

- Natural variation in groundwater quality within the area.

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

Section 1

Introduction

1.1 Background

Dominion Energy South Carolina, Inc. (DESC) operates an offsite Class III Industrial Landfill (Unit) for the disposal of coal combustion residuals (CCR) at the Williams Generating Station (Station). The Unit is located at 2381 Highway 52 in Moncks Corner, Berkley County, South Carolina as shown on **Figure 1**. The existing Unit consists of cells 1 through 4 which were constructed as the first phase of development in 2008. These cells were placed into operation in accordance with an operation plan approval issued by the South Carolina Department of Health and Environmental Control (SCDHEC) in 2010 and operates under SCDHEC Solid Waste Permit No. LF-3-00001.

The Unit receives both fly ash and flue gas desulfurization (FGD) waste from the Station located about 6 miles from the Unit in Goose Creek, South Carolina. The Unit 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 leachate collection system.

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

1.2 Groundwater Monitoring and Statistical Analysis

In accordance with 40 CFR §257.90 through §257.94, DESC installed a groundwater monitoring system for the Unit and has collected samples from the Certified Monitoring Well Network for laboratory analysis for CCR constituents and performed statistical analysis of the collected samples. DESC installed a Certified Monitoring Well Network for the CCR Unit in accordance with 40 CFR §257.90 and §257.91. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**. The Certified Monitoring Well Network consists of 11 wells installed into the subsurface to monitor shallow groundwater as follows:

- Four wells were installed as background monitoring wells and include MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28.
- Seven wells were installed as compliance monitoring wells and include MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26.

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

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

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

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

Pursuant to 40 CFR §257.93(h), statistical analysis of the laboratory analytical data was performed to identify potential SSIs for the second semiannual 2021 detection monitoring event. Data from the second semiannual 2021 detection monitoring event is presented in **Table 1**. A total of 16 SSIs were identified for five Appendix III constituents: calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS).

1.3 Purpose

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

1.4 Site Hydrogeology

The Unit is located within the Ashley-Cooper River Subbasin (Ashley-Combahee-Edisto (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 Cooper geologic formation. This formation varies from a phosphatic, calcareous clay and clayey calcarenite in the upper section underlain by a clayey, very fine-grained limestone (USGS 1996). Groundwater flow beneath the Unit is generally to the east/southeast as depicted on **Figure 3**. Hydraulic conductivity values in the surficial aquifer at the Landfill range from 1.71×10^{-5} cm/s to 8.97×10^{-4} cm/s with an estimated groundwater flow velocities of between 0.001 to 0.157 feet/day (Nautilus 2021).

1.5 General Groundwater Quality

Regionally, groundwater quality in the Ashley-Cooper 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). 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.

Ashley-Cooper River Subbasin Groundwater Water Quality

Constituent	Concentration Range		USEPA
	Low	High	MCL
Calcium (mg/L)	10	250	None
Chloride (mg/L)	2.2	500	250 (Secondary)
Fluoride (mg/L)	0.10	4.0	4.0 (Primary)
Sulfate (mg/L)	1.0	1,000	250 (Secondary)
TDS (mg/L)	20	2,800	500 (Secondary)

Note: mg/L = milligram per liter

As noted in the table above, the natural range of groundwater quality within the Ashley-Cooper River Subbasin approaches the primary MCL for drinking water with respect to fluoride and exceeds the secondary drinking water MCLs for chloride, sulfate, and TDS (SCDNR 2009). A primary or secondary drinking water MCL has not been established for calcium however, the natural range of groundwater quality in the Ashley-Cooper River Subbasin is reported to be in the range of 10 mg/L to 250 mg/L (SCDNR 2009).

Section 2

Alternate Source Demonstration

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the CCR Unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. As discussed previously, the second semiannual 2021 detection monitoring event was performed in September 2021. Statistical analysis of the second semiannual 2021 detection monitoring data was performed pursuant to 40 CFR §257.93(f) and (g) and in accordance with the Statistical Methods Certification (SCE&G 2017) and the Statistical Analysis Plan. Based on either increasing trends at 95% confidence levels using Thiel-Sen's trend test and/or interwell prediction limits statistical analyses, the following 16 SSIs were identified:

- Calcium and TDS (MW-LF-20).
- Calcium and TDS (MW-LF-21).
- TDS (MW-LF-22D).
- Calcium and TDS (MW-LF-23D).
- TDS (MW-LF-24).
- Calcium, fluoride, sulfate, and TDS (MW-LF-25).
- Calcium, chloride, sulfate, and TDS (MW-LF-26).

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 CCR Unit is provided in the subsections below.

2.1 Calcium at MW-LF-20, MW-LF-21, MW-LF-23D, MW-LF-25, and MW-LF-26

The calcium SSIs identified at MW-LF-20, MW-LF-21, MW-LF-23D, MW-LF-25, and MW-LF-26 are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Calcium was detected in MW-LF-20 (142 mg/L), MW-LF-21 (122 mg/L), MW-LF-23D (114 mg/L), MW-LF-25 (175 mg/L), and MW-LF-26 (168 mg/L) during the September 2021 sampling event. These concentrations exceed the background threshold value of 95 mg/L. Reported regional calcium concentrations for groundwater in the Unit area range between 10 mg/L to 250 mg/L (SCDNR 2009). The detected calcium concentrations for MW-LF-20, MW-LF-21, MW-LF-23D, MW-LF-25, and MW-LF-26 fall within the range of natural variation in area groundwater quality.

2.2 Chloride at MW-LF-26

The chloride SSI identified at MW-LF-26 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Chloride was detected in MW-LF-26 at a concentration of 143 mg/L in the September 2021 sample. This concentration exceeds the background threshold value of 28.6 mg/L. Reported regional chloride concentrations for groundwater in the Unit area range between 2.2 mg/L to 500 mg/L (SCDNR 2009). The detected chloride concentration for MW-LF-26 falls within the range of natural variation in area groundwater quality.

2.3 Fluoride at MW-LF-25

The fluoride SSI identified at MW-LF-25 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Fluoride was detected in MW-LF-25 at a concentration of 0.965 mg/L in the September 2021 sample. This concentration exceeds the background threshold value of 0.756 mg/L. Reported regional fluoride concentrations for groundwater in the Unit area range between 0.10 mg/L to 4.0 mg/L (SCDNR 2009). The detected fluoride concentration for MW-LF-25 falls within the range of natural variation in area groundwater quality.

2.4 Sulfate at MW-LF-25 and MW-LF-26

The sulfate SSIs identified at MW-LF-25 and MW-LF-26 are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Sulfate was detected in MW-LF-25 (332 mg/L) and MW-LF-26 (67.6 mg/L) during the September 2021 sampling event. These concentrations exceed the background threshold value of 45.2 mg/L. Reported regional sulfate concentrations for groundwater in the Unit area range between 1.0 mg/L to 1,000 mg/L (SCDNR 2009). The detected sulfate concentrations for MW-LF-25 and MW-LF-26 fall within the range of natural variation in area groundwater.

2.5 TDS at MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26

The TDS SSIs identified at MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26 are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- TDS was detected in MW-LF-20 (630 mg/L), MW-LF-21 (617 mg/L), MW-LF-22D (596 mg/L), MW-LF-23D (499 mg/L), MW-LF-24 (511 mg/L), MW-LF-25 (977 mg/L), and MW-LF-26 (917 mg/L) during the September 2021 sampling event. These concentrations exceed the background threshold value of 389 mg/L. Reported regional TDS concentrations for groundwater in the Unit

area range between 20 mg/L to 2,800 mg/L (SCDNR 2009). The detected calcium concentrations for MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26 fall within the range of natural variation in area groundwater quality.

2.6 Additional Support for ASD

2.6.1 Geochemical Evaluation

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 4**. The following observations were noted:

- With respect to anions (bottom right triangle of Piper diagram), MW-LF-20, MW-LF-21, and MW-LF-23D plotted closely (within the 80 to 100% bicarbonate distribution) with background wells MW-LF-10 and MW-LF-11, along with downgradient wells MW-LF-22D and MW-LF-24.
- With respect to cations (bottom left triangle of Piper diagram), MW-LF-20, MW-LF-21, MW-LF-23D, MW-LF-25, and MW-LF-26 plotted closely (within the 40 to 60% calcium distribution) with background wells MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28 and downgradient well MW-LF-24.
- With respect to the overall hydrochemical distribution (diamond in Piper diagram), MW-LF-20, MW-LF-21, and MW-LF-23D plotted within the same area of the diamond as background wells MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28 within the magnesium bicarbonate 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-20, MW-LF-21, and MW-LF-23D has similarities to that of background wells MW-LF-10 and MW-LF-11. This observation suggests that the source for calcium at MW-LF-20, MW-LF-21, and MW-LF-23D is not from the Unit. The similar geochemical signature of MW-LF-20, MW-LF-21, and MW-LF-23D with background wells MW-LF-10 and MW-LF-11 further suggests that the SSI for calcium is the result of natural variations of calcium in the groundwater at the site.

2.6.2 Coal Ash Indicator Parameters

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 1,710 microgram per liter ($\mu\text{g/L}$) and 4,396 $\mu\text{g/L}$ (Nautilus, 2021). Total lithium was analyzed during

the September 2021 event and was detected at concentrations between 2.02 µg/L (laboratory estimate for MW-LF-28) to 16.2 µg/L (MW-LF-24). Historically, lithium has been detected at concentrations below 2.0 µg/L to a maximum of 39.8 µg/L observed in background well MW-LF-10 in May 2017 (Nautilus, 2021). Naturally occurring concentrations of lithium in South Carolina groundwater generally exhibits a range of between less than 5 µg/L to approximately 60 µg/L (Lindsey et al., 2021). The historical levels of lithium detected are within the range of naturally occurring groundwater concentrations and two orders of magnitude less than what is detected in leachate from the Unit.

The absence of lithium above naturally occurring groundwater levels within the Unit monitoring well network suggests that a release of leachate from the Unit has not occurred.

Section 3

Conclusions

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

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

Section 4 Certification

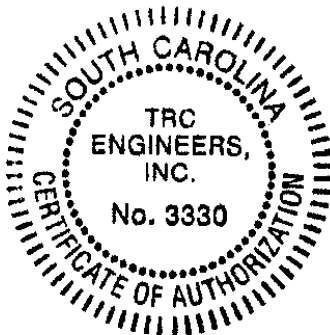
I hereby certify that the alternative source demonstration presented within this document for the DESC Williams Highway 52 Coal Ash Disposal Landfill CCR Unit has been prepared to meet the requirements of Title 40 CFR §257.94(e)2 of the Federal CCR Rule. This document is accurate and has been prepared 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



(SEAL)

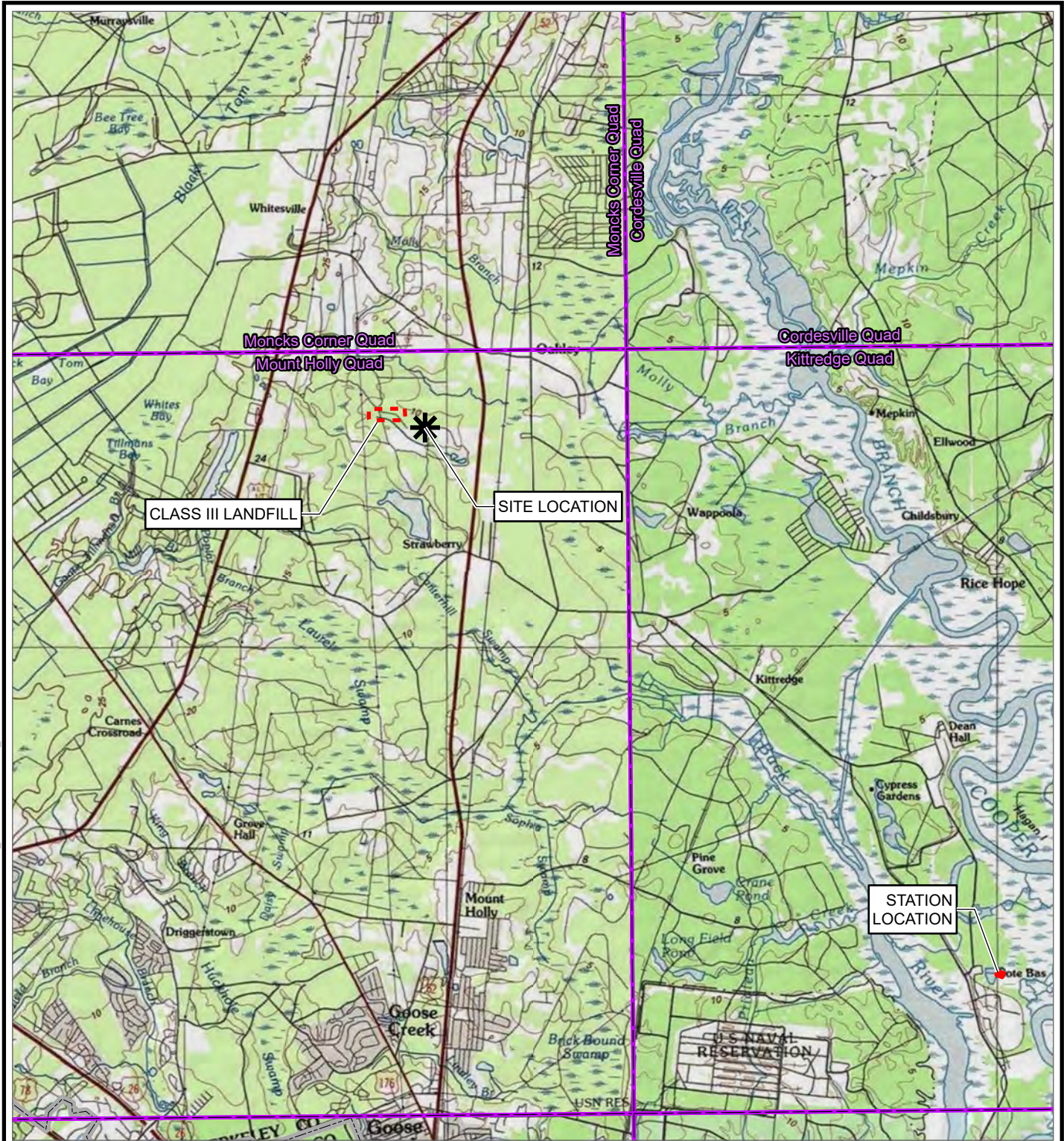
Section 5






References

- Garrett and Moore 2017. Groundwater Monitoring System Certification, Williams Station Landfill, Berkeley County, SC: Garrett & Moore, Inc.
- Lindsey, B.D., Belitz, K., Cravotta, C.A. III, Toccalino, P.L., and Dubrovsky, N.M. 2021. Science of the Total Environment, v. 767. <https://doi.org/10.1016/j.scitotenv.2020.144691>
- Nautilus 2016. Groundwater Sampling and Analysis Plan, Williams Station Landfill. Berkeley County, SC: Nautilus Geologic Consulting, PLLC.
- Nautilus 2021. Alternate Source Demonstration Report, Williams Station Class Three Landfill. Berkeley County, SC: Nautilus Geologic Consulting, PLLC.
- Piper, A.M., 1944. A graphic procedure in the geochemical interpretation of water-analyses. *Eos, Transactions American Geophysical Union*, 25(6), pp.914–928.
- South Atlantic Water Science Center (SAWC), 2016. Atlantic Coastal Plain Physiographic Provinces. <https://www.usgs.gov/media/images/atlantic-coastal-plain-physiographic-provinces>.
- South Carolina Electric & Gas (SCE&G). 2017. Groundwater Monitoring Data Statistical Analysis Plan Certification, SCE&G Williams Station Hwy 52 Class III Landfill. Goose Creek, SC.
- South Carolina Department of Natural Resources (SCDNR), 2009, South Carolina State Water Assessment, 2nd Edition. 408 pp.
- United States Environmental Protection Agency. 2017. Secondary Drinking Water Standards: Guidance for Nuisance Chemicals, March 8, 2017
- U.S. Geological Survey (USGS) Professional Paper: 1410-E, Hydrology of the Southeastern Coastal Plain Aquifer System in South Carolina and Parts of Georgia and North Carolina, 1996.

Figures

COORDINATE SYSTEM: NAD 1983 STATEPLANE SOUTH CAROLINA FIPS 3900 FEET, MAP ROTATION: 0
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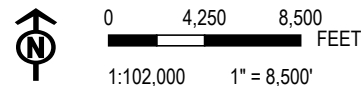
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-  CLASS III LANDFILL BOUNDARY
-  STATION LOCATION
-  COUNTY BOUNDARY
-  USGS 24K QUAD BOUNDARY

PROJECT: **DOMINION ENERGY SOUTH CAROLINA
 WILLIAMS HIGHWAY 52 LANDFILL**
 US-52
 MONCK'S CORNER, SC 29461

TITLE: **SITE LOCATION MAP**

DRAWN BY:	R. BARBER	PROJ. NO.:
CHECKED BY:	A. HORRIE	FIGURE 1
APPROVED BY:	R. MAYER	
DATE:	JANUARY 2022	

BASE MAP: USGS TOPO MAP
 DATA SOURCES: TRC,






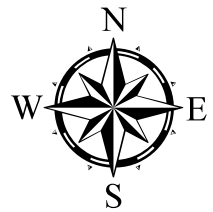
708 HEARTLAND TRAIL
 SUITE 3000
 MADISON, WI 53717
 PHONE: 608.826.3600

FILE: DOMINION_VARIOUS


Plot Date: 4/8/2022 09:58:44 AM by JYONTS -- LAYOUT: ANSI B(11"x17")
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 Coordinate System: NAD 1983 StatePlane West Virginia North FIPS 4701 Feet (Foot US)
 TRC - GIS



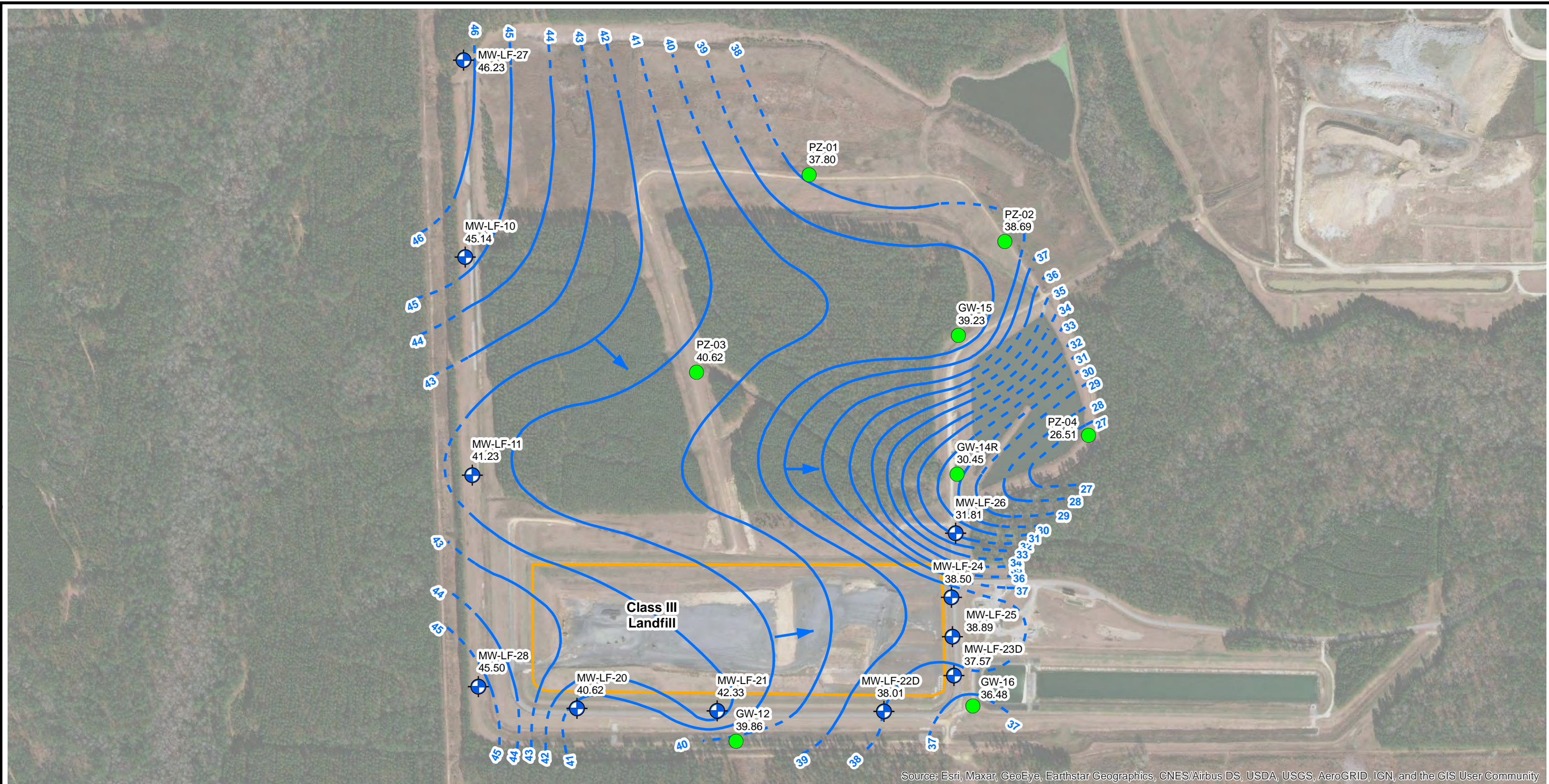
- LEGEND**
-  Monitoring Well
 -  Event Piezometer
 -  Class III Landfill



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






PROJECT:		DESC WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL MONCK'S CORNER, SOUTH CAROLINA	
TITLE:		CCR RULE COMPLIANCE MONITORING WELL NETWORK	
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL	FIGURE 2	
APPROVED BY:	R. MAYER		
DATE:	APRIL 2022	 50 International Drive, Suite 150 Patwood Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCCompanies.com	
FILE NO.:	Figure2_Williams_Hwy52_CCR_LF_Well_Network.mxd		

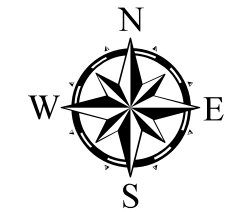
TRC - GIS
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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

-  Monitoring Well
-  Event Piezometer
- 45.50** Water Elevation (FT MSL)
-  Approximate Groundwater Flow Direction
-  Class III Landfill
-  Water Table Elevation in feet above mean sea level (1' Contour Intervals) - Dashed where inferred.



1" = 510'
1:6,120

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


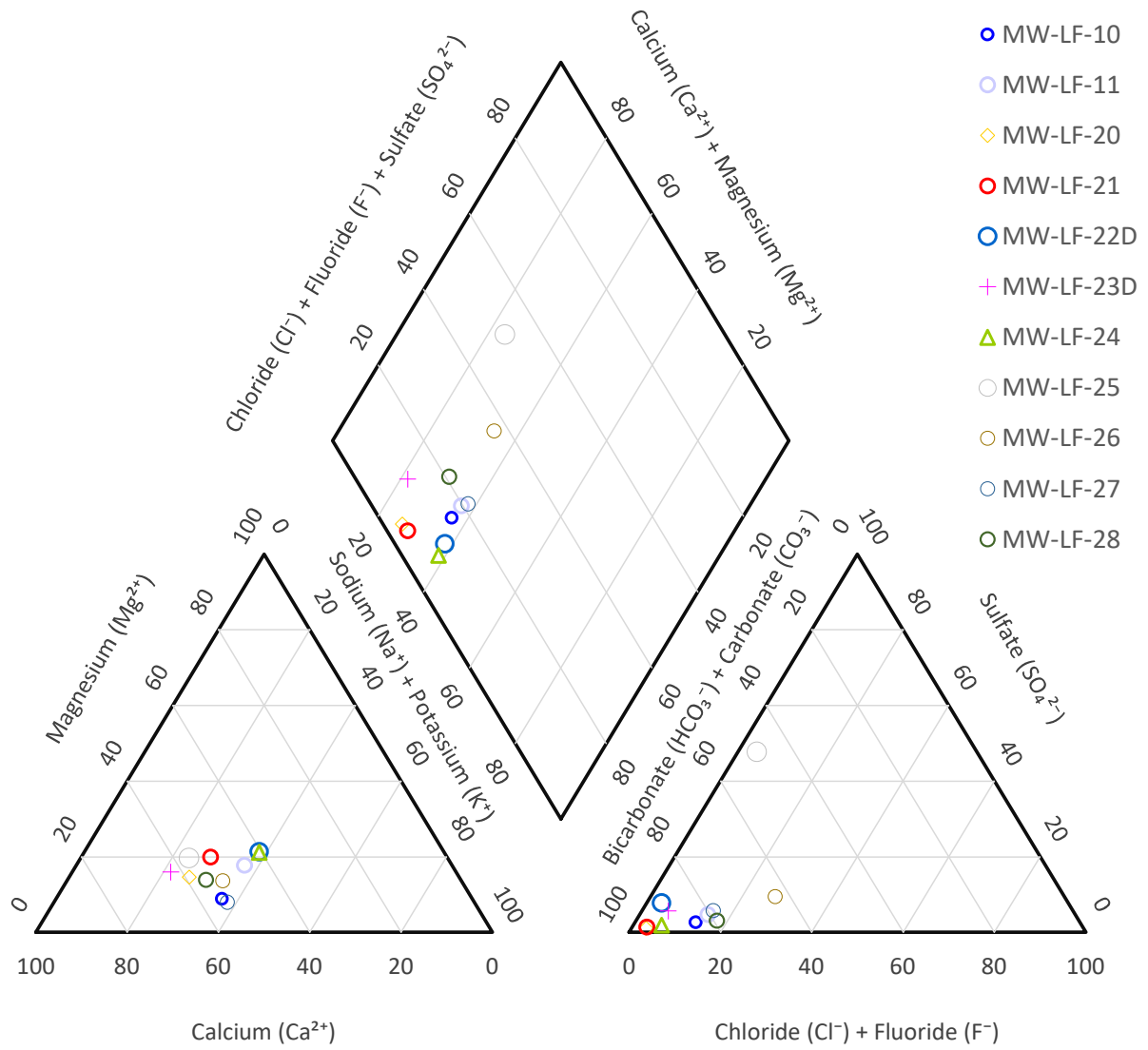
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TITLE:		GROUNDWATER POTENTIOMETRIC SURFACE MAP SEPTEMBER 21, 2021	
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL	FIGURE 3	
APPROVED BY:	R. MAYER		
DATE:	APRIL 2022		
		FILE NO.: Figure4_Williams_Hwy52_CCR_LF_WTL_2103.mxd	

FIGURE 4
DESC Williams Hwy 52 Landfill
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 - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Background Wells																Downgradient Well			
			MW-LF-10				MW-LF-11				MW-LF-27				MW-LF-28				MW-LF-20			
			Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
Sample ID:																						
Sample Date:																						
CCR Appendix III																						
Boron	µg/L	500.0	60.1		4.00	15.0	28.9		4.00	15.0	30.5		4.00	15.0	16.5		4.00	15.0	197		4.00	15.0
Calcium	mg/L	94.6	74.5		0.300	1.00	15.1		0.030	0.100	20.5		0.030	0.100	10.3		0.030	0.100	142		0.300	1.00
Chloride	mg/L	28.6	26.9		0.335	1.00	6.49		0.0670	0.200	10.1		0.134	0.400	5.44		0.0670	0.200	11.5		0.134	0.400
Fluoride	mg/L	0.756	0.458		0.0330	0.100	0.284		0.0330	0.100	0.214		0.0330	0.100	0.0770	J	0.0330	0.100	0.263		0.0330	0.100
pH	SU	5.16 - 8.33	6.82		0.01	0.01	6.03		0.01	0.01	6.43		0.01	0.01	6.03		0.01	0.01	6.66		0.01	0.01
Sulfate	mg/L	45.2	7.66		0.133	0.400	3.01		0.133	0.400	5.30		0.133	0.400	1.35		0.133	0.400	5.69		0.133	0.400
Total Dissolved Solids	mg/L	389	366		3.40	14.3	98.6		3.40	14.3	104		3.40	14.3	54.3		3.40	14.3	630		3.40	14.3
Field Parameters																						
Conductivity	µS/cm	--	669.80		0.1	0.1	170.30		0.1	0.1	221.78		0.1	0.1	104.66		0.1	0.1	1990.7		0.1	0.1
Dissolved Oxygen	mg/L	--	0.39		0.01	0.01	1.78		0.01	0.01	0.68		0.01	0.01	1.19		0.01	0.01	0.23		0.01	0.01
Temperature	C	--	25.62		0.01	0.01	26.88		0.01	0.01	23.35		0.01	0.01	25.41		0.01	0.01	24.89		0.01	0.01
Turbidity	NTU	--	6.65		0.1	0.1	4.96		0.1	0.1	4.03		0.1	0.1	0.75		0.1	0.1	4.05		0.1	0.1
Depth to Water	ft btoc	--	7.15		0.01	0.01	10.49		0.01	0.01	7.02		0.01	0.01	5.72		0.01	0.01	20.19		0.01	0.01
Groundwater Elevation	ft msl	--	45.14		0.01	0.01	41.23		0.01	0.01	46.23		0.01	0.01	45.50		0.01	0.01	40.62		0.01	0.01
Oxidation Reduction Potential	millivolts	--	67.7		0.1	0.1	115.6		0.1	0.1	-1.5		0.1	0.1	57.3		0.1	0.1	-5.2		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
U = Samples reported below their respective MDL
= Concentration greater than Background Threshold Values
Bold font = Detected constituent
* - Groundwater Elevation data collected on September 21, 2021

Table 1
Summary of Second Semiannual 2021 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Downgradient Wells																			
			MW-LF-21				MW-LF-22D				MW-LF-23D				MW-LF-24				MW-LF-25			
			Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
Sample ID: MW-LF-21 MW-LF-22D MW-LF-23D MW-LF-24 MW-LF-25																						
Sample Date: 09/21/2021 09/21/2021 09/21/2021 09/21/2021 09/21/2021																						
CCR Appendix III																						
Boron	µg/L	500.0	199		4.00	15.0	342		20.0	75.0	86.5		4.00	15.0	358		20.0	75.0	85.0		4.00	15.0
Calcium	mg/L	94.6	122		0.300	1.00	84.9		0.150	0.500	114		0.300	1.00	87.9		0.150	0.500	175		0.300	1.00
Chloride	mg/L	28.6	10.8		0.134	0.400	10.2		0.134	0.400	16.0		0.134	0.400	17.4		0.335	1.00	19.0		1.68	5.00
Fluoride	mg/L	0.756	0.260		0.0330	0.100	0.312		0.0330	0.100	0.402		0.0330	0.100	0.548		0.0330	0.100	0.965		0.0330	0.100
pH	SU	5.16 - 8.33	6.64		0.01	0.01	7.00		0.01	0.01	7.07		0.01	0.01	6.67		0.01	0.01	6.74		0.01	0.01
Sulfate	mg/L	45.2	6.98		0.133	0.400	36.0		0.266	0.800	22.4		0.266	0.800	7.58		0.133	0.400	332		3.33	10.0
Total Dissolved Solids	mg/L	389	617		3.40	14.3	596		3.40	14.3	499		3.40	14.3	511		3.40	14.3	977		3.40	14.3
Field Parameters																						
Conductivity	µS/cm	--	1076.3		0.1	0.1	1738.2		0.1	0.1	873.50		0.1	0.1	902.48		0.1	0.1	2461.4		0.1	0.1
Dissolved Oxygen	mg/L	--	0.17		0.01	0.01	0.14		0.01	0.01	0.50		0.01	0.01	0.33		0.01	0.01	0.89		0.01	0.01
Temperature	C	--	25.77		0.01	0.01	24.71		0.01	0.01	25.09		0.01	0.01	24.99		0.01	0.01	24.76		0.01	0.01
Turbidity	NTU	--	5.39		0.1	0.1	1.76		0.1	0.1	1.63		0.1	0.1	2.51		0.1	0.1	2.09		0.1	0.1
Depth to Water	ft btoc	--	13.81		0.01	0.01	12.35		0.01	0.01	12.12		0.01	0.01	13.90		0.01	0.01	12.34		0.01	0.01
Groundwater Elevation	ft msl	--	42.33		0.01	0.01	38.01		0.01	0.01	37.57		0.01	0.01	38.50		0.01	0.01	38.59		0.01	0.01
Oxidation Reduction Potential	millivolts	--	-20.6		0.1	0.1	-44.3		0.1	0.1	-45.5		0.1	0.1	-71.0		0.1	0.1	93.3		0.1	0.1
Alkalinity via SM2320B																						
Alkalinity, Total as CaCO3	mg/L	--	589		1.45	4.00	521		1.45	4.00	445		1.45	4.00	472		1.45	4.00	426		1.45	4.00
Alkalinity, Bicarbonate	mg/L	--	589		1.45	4.00	521		1.45	4.00	445		1.45	4.00	472		1.45	4.00	426		1.45	4.00
Alkalinity, Carbonate	mg/L	--	<1.45	U	1.45	4.00	<1.45	U	1.45	4.00	<1.45	U	1.45	4.00	<1.45	U	1.45	4.00	<1.45	U	1.45	4.00
Total Metals																						
Lithium	ug/L	--	8.55	J	2.00	10.0	15.4		2.00	10.0	9.05	J	2.00	10.0	16.2		2.00	10.0	13.3		2.00	10.0
Magnesium	ug/L	--	28500		10.0	15.0	27200		10.0	15.0	17700		10.0	15.0	28000		10.0	15.0	37000		10.0	15.0
Potassium	ug/L	--	9940		80.0	300	10900		80.0	300	4770		80.0	300	11300		80.0	300	6980		80.0	300
Sodium	ug/L	--	70900		800	2500	85700		400	1250	42300		80.0	250	89000		400	1250	79800		800	2500

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
U = Samples reported below their respective MDL
= Concentration greater than Background Threshold Values
Bold font = Detected constituent
* - Groundwater Elevation data collected on September 21, 2021

Table 1
Summary of Second Semiannual 2021 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Downgradient Wells							
			Sample ID: MW-LF-26 DUP				Sample ID: MW-LF-26			
			Sample Date: 09/21/2021				Sample Date: 09/21/2021			
			Result	Qual	MDL	RL	Result	Qual	MDL	RL
CCR Appendix III										
Boron	µg/L	500.0	143		4.00	15.0	137		4.00	15.0
Calcium	mg/L	94.6	168		0.300	1.00	160		0.300	1.00
Chloride	mg/L	28.6	136		1.34	4.00	143		1.68	5.00
Fluoride	mg/L	0.756	0.247		0.0330	0.100	0.282		0.0330	0.100
pH	SU	5.16 - 8.33	6.17		0.01	0.01	6.17		0.01	0.01
Sulfate	mg/L	45.2	64.3		2.66	8.00	67.6		3.33	10.0
Total Dissolved Solids	mg/L	389	917		3.40	14.3	911		3.40	14.3
Field Parameters										
Conductivity	µS/cm	--	1630.4		0.1	0.1	1630.4		0.1	0.1
Dissolved Oxygen	mg/L	--	0.26		0.01	0.01	0.26		0.01	0.01
Temperature	C	--	25.83		0.01	0.01	25.83		0.01	0.01
Turbidity	NTU	--	1.45		0.1	0.1	1.45		0.1	0.1
Depth to Water	ft btoc	--	23.40		0.01	0.01	23.40		0.01	0.01
Groundwater Elevation	ft msl	--	31.81		0.01	0.01	31.81		0.01	0.01
Oxidation Reduction Potential	millivolts	--	-64		0.1	0.1	-64		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
 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 September 21, 2021

Table 2
Summary of Alternate Source Demonstration Parameters
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Background Wells																Downgradient Well			
			MW-LF-10				MW-LF-11				MW-LF-27				MW-LF-28				MW-LF-20			
			Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
ASD Support Parameters Calcium µg/L 94.6 74.5 0.300 1.00 15.1 0.030 0.100 20.5 0.030 0.100 10.3 0.030 0.100 142 0.300 1.00 Chloride mg/L 28.6 26.9 0.335 1.00 6.49 0.0670 0.200 10.1 0.134 0.400 5.44 0.0670 0.200 11.5 0.134 0.400 Fluoride mg/L 0.756 0.458 0.0330 0.100 0.284 0.0330 0.100 0.214 0.0330 0.100 0.0770 J 0.0330 0.100 0.263 0.0330 0.100 Sulfate mg/L 45.2 7.66 0.133 0.400 3.01 0.133 0.400 5.30 0.133 0.400 1.35 0.133 0.400 5.69 0.133 0.400 Total Dissolved Solids mg/L 389 366 3.40 14.3 98.6 3.40 14.3 104 3.40 14.3 54.3 3.40 14.3 630 3.40 14.3 Alkalinity, Total as CaCO3 mg/L -- 304 1.45 4.00 65.3 1.45 4.00 91.7 1.45 4.00 43.2 1.45 4.00 625 1.45 4.00 Lithium ug/L -- 9.48 J 2.00 10.0 3.77 J 2.00 10.0 2.11 J 2.00 10.0 2.07 J 2.00 10.0 9.14 J 2.00 10.0 Magnesium ug/L -- 7360 10.0 15.0 3580 10.0 15.0 1840 10.0 15.0 1560 10.0 15.0 21400 10.0 15.0 Potassium ug/L -- 5740 80.0 300 2140 80.0 300 2460 80.0 300 1590 80.0 300 8620 80.0 300 Sodium ug/L -- 53300 800 2500 12800 80.0 250 15100 80.0 250 5480 80.0 250 67300 800 2500																						

Notes:
 MDL = Method Detection Limit
 RL = Reporting Limit
 mg/L = Milligram per liter
 µg/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 - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Downgradient Wells																			
			MW-LF-21				MW-LF-22D				MW-LF-23D				MW-LF-24				MW-LF-25			
			Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
ASD Support Parameters																						
Calcium	µg/L	94.6	122		0.300	1.00	84.9		0.150	0.500	114		0.300	1.00	87.9		0.150	0.500	175		0.300	1.00
Chloride	mg/L	28.6	10.8		0.134	0.400	10.2		0.134	0.400	16.0		0.134	0.400	17.4		0.335	1.00	19.0		1.68	5.00
Fluoride	mg/L	0.756	0.260		0.0330	0.100	0.312		0.0330	0.100	0.402		0.0330	0.100	0.548		0.0330	0.100	0.965		0.0330	0.100
Sulfate	mg/L	45.2	6.98		0.133	0.400	36.0		0.266	0.800	22.4		0.266	0.800	7.58		0.133	0.400	332		3.33	10.0
Total Dissolved Solids	mg/L	389	617		3.40	14.3	596		3.40	14.3	499		3.40	14.3	511		3.40	14.3	977		3.40	14.3
Alkalinity, Total as CaCO3	mg/L	--	589		1.45	4.00	521		1.45	4.00	445		1.45	4.00	472		1.45	4.00	426		1.45	4.00
Lithium	ug/L	--	8.55	J	2.00	10.0	15.4		2.00	10.0	9.05	J	2.00	10.0	16.2		2.00	10.0	13.3		2.00	10.0
Magnesium	ug/L	--	28500		10.0	15.0	27200		10.0	15.0	17700		10.0	15.0	28000		10.0	15.0	37000		10.0	15.0
Potassium	ug/L	--	9940		80.0	300	10900		80.0	300	4770		80.0	300	11300		80.0	300	6980		80.0	300
Sodium	ug/L	--	70900		800	2500	85700		400	1250	42300		80.0	250	89000		400	1250	79800		800	2500

Notes:
MDL = Method Detection Limit
RL = Reporting Limit
mg/L = Milligram per liter
µg/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 - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Downgradient Wells							
			Sample ID: MW-LF-26 DUP				Sample ID: MW-LF-26			
			Sample Date: 09/21/2021				Sample Date: 09/21/2021			
Result	Qual	MDL	RL	Result	Qual	MDL	RL			
ASD Support Parameters										
Calcium	µg/L	94.6	168		0.300	1.00	160		0.300	1.00
Chloride	mg/L	28.6	136		1.34	4.00	143		1.68	5.00
Fluoride	mg/L	0.756	0.247		0.0330	0.100	0.282		0.0330	0.100
Sulfate	mg/L	45.2	64.3		2.66	8.00	67.6		3.33	10.0
Total Dissolved Solids	mg/L	389	917		3.40	14.3	911		3.40	14.3
Alkalinity, Total as CaCO3	mg/L		579		1.45	4.00	573		1.45	4.00
Lithium	ug/L	--	4.27	J	2.00	10.0	4.32	J	2.00	10.0
Magnesium	ug/L		26400		10.0	15.0	25400		10.0	15.0
Potassium	ug/L		3270		80.0	300	3200		80.0	300
Sodium	ug/L		124000		800	2500	118000		800	2500

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
 [Red shaded box] = Concentration greater than Background Threshold Values
Bold font = Detected constituent

Appendix B

March 2022 Alternate Source Demonstration



DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL

BERKELEY COUNTY, SOUTH CAROLINA

EPA CCR RULE COMPLIANCE

ALTERNATE SOURCE DEMONSTRATION REPORT

First Semiannual 2022 Detection Monitoring Event

September 2022



A handwritten signature in blue ink, appearing to read "Nakia W. Addison".

Nakia W. Addison, P.E.
Senior Engineer

A handwritten signature in blue ink, appearing to read "Richard A. Mayer Jr.".

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

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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 Williams Station (Station) Highway 52 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 values (95 percent upper prediction limit) and the downgradient monitoring results:

- MW-LF-20: calcium and total dissolved solids (TDS)
- MW-LF-21: calcium and TDS
- MW-LF-22D: TDS
- MW-LF-23D: TDS
- MW-LF-24: calcium and TDS
- MW-LF-25: calcium, sulfate, and TDS
- MW-LF-26: calcium, chloride, sulfate, and TDS

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

- Natural variation in groundwater quality within the area.

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

Section 1

Introduction

1.1 Background

Dominion Energy South Carolina (DESC) operates an offsite Class III Industrial Landfill (Unit) for the disposal of coal combustion residuals (CCR) at the Williams Generating Station (Station). The Unit is located at 2381 Highway 52 in Moncks Corner, Berkley County, South Carolina as shown on **Figure 1**. The existing Unit consists of cells 1 through 4 which were constructed as the first phase of development in 2008. These cells were placed into operation in accordance with an operation plan approval issued by the South Carolina Department of Health and Environmental Control (SCDHEC) in 2010 and operates under SCDHEC Solid Waste Permit No. LF-3-00001.

The Unit receives both fly ash and flue gas desulfurization (FGD) waste from the Station located about 6 miles from the Unit in Goose Creek, South Carolina. The Unit 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 leachate collection system.

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

1.2 Groundwater Monitoring and Statistical Analysis

In accordance with 40 CFR §257.90 through §257.94, DESC installed a groundwater monitoring system for the Unit and has collected samples from the Certified Monitoring Well Network for laboratory analysis for CCR constituents and performed statistical analysis of the collected samples. DESC installed a Certified Monitoring Well Network for the Unit in accordance with 40 CFR §257.90 and §257.91. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**. The Certified Monitoring Well Network consists of 11 wells installed into the subsurface to monitor shallow groundwater as follows:

- Four wells were installed as background monitoring wells and include MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28.
- Seven wells were installed as compliance monitoring wells and include MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26.

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

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

Following completion of quarterly background detection monitoring in July 2017, DESC implemented semiannual detection monitoring per 40 CFR §257.94(b) for the Unit. The second semiannual (initial) detection monitoring event was performed in September 2017. Subsequent detection monitoring events, with associated verification sampling when appropriate, have been performed on a semiannual basis since September 2017. DESC completed the first 2022 semiannual 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 laboratory analytical data were statistically evaluated to identify potential statistically significant increases (SSIs) for Appendix III constituents above background levels. In accordance with 40 CFR §257.93(f)(6), DESC obtained certification by a qualified South Carolina-registered P.E. stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the Unit (SCE&G 2017).

Pursuant to 40 CFR §257.93(h), statistical analysis of the laboratory analytical data was performed to identify potential SSIs for the first semiannual 2022 detection monitoring event. Data from the first semiannual 2022 detection monitoring event is presented in **Table 1**. A total of 15 SSIs were identified for four Appendix III constituents: calcium, chloride, sulfate, and total dissolved solids (TDS).

1.3 Purpose

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the CCR Unit caused the SSIs identified or that the SSIs resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The purpose of this report is to provide written documentation of the successful ASD for the SSIs identified for the first semiannual 2022 detection monitoring event, pursuant to 40 CFR §257.94(e)(2) of the CCR Rule.

1.4 Site Hydrogeology

The Station is located in the outer Coastal Plain of South Carolina. The uppermost aquifer in the Coastal Plain of South Carolina is the unconfined surficial aquifer. In most areas, the surficial aquifer consists of discontinuous layers of sand, clay and locally occurring beds of shell and limestone.

The Unit is located within the Ashley-Cooper River Subbasin (Ashley-Combahee-Edisto (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 Cooper geologic formation. This formation varies from a phosphatic, calcareous clay and clayey calcarenite in the upper section underlain by a clayey, very fine-grained limestone (USGS 1996). According to *State of South Carolina Resources Commission Report Number 139* (1985), the Cooper formation is approximately 130 feet thick beneath the site. This unit functions as a confining layer beneath the overlying surficial aquifer. Groundwater flow beneath the Unit is generally to the east/southeast as depicted on **Figure 3**. Hydraulic conductivity values in the surficial aquifer at the Landfill range from 1.71×10^{-5} cm/s to 8.97×10^{-4} cm/s with an estimated groundwater flow velocities of between 0.001 to 0.157 feet/day (Nautilus 2021).

1.5 General Groundwater Quality

Regionally, groundwater quality in the Ashley-Cooper 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). 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.

Ashley-Cooper River Subbasin Groundwater Water Quality

Constituent	Concentration Range		USEPA
	Low	High	MCL
Calcium (mg/L)	10	250	None
Chloride (mg/L)	2.2	500	250 (Secondary)
Sulfate (mg/L)	1.0	1,000	250 (Secondary)
TDS (mg/L)	20	2,800	500 (Secondary)

Note: mg/L = milligram per liter

As noted in the table above, the natural range of groundwater quality within the Ashley-Cooper River Subbasin exceeds the secondary drinking water MCLs for chloride, sulfate, and TDS (SCDNR 2009). A primary or secondary drinking water MCL has not been established for calcium however, the natural range of groundwater quality in the Ashley-Cooper River Subbasin is reported to be in the range of 10 mg/L to 250 mg/L (SCDNR 2009).

Section 2

Alternate Source Demonstration

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the CCR Unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. As discussed previously, the first semiannual 2022 detection monitoring event was performed in March 2022. 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. Based on either increasing trends at 95% confidence levels using Thiel-Sen's trend test and/or interwell prediction limits statistical analyses, the following SSIs were identified:

- MW-LF-20: calcium and TDS
- MW-LF-21: calcium and TDS
- MW-LF-22D: TDS
- MW-LF-23D: TDS
- MW-LF-24: calcium and TDS
- MW-LF-25: calcium, sulfate, and TDS
- MW-LF-26: calcium, chloride, sulfate, and TDS

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 Calcium at MW-LF-20, MW-LF-21, MW-LF-24, MW-LF-25, and MW-LF-26

The calcium SSIs identified at MW-LF-20, MW-LF-21, MW-LF-24, MW-LF-25, and MW-LF-26 are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Calcium was detected in MW-LF-20 (151 mg/L), MW-LF-21 (134 mg/L), MW-LF-24 (103 mg/L), MW-LF-25 (178 mg/L), and MW-LF-26 (161 mg/L) during the March 2022 sampling event. These concentrations exceed the background threshold value of 94.6 mg/L. Reported regional calcium concentrations for groundwater in the Unit area range between 10 mg/L to 250 mg/L (SCDNR 2009). The detected calcium concentrations for MW-LF-20, MW-LF-21, MW-LF-24, MW-LF-25, and MW-LF-26 fall within the range of natural variation in area groundwater quality.

2.2 Chloride at MW-LF-26

The chloride SSI identified at MW-LF-26 is the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Chloride was detected in MW-LF-26 at a concentration of 136 mg/L in the March 2022 sample. This concentration exceeds the background threshold value of 28.6 mg/L. Reported regional chloride concentrations for groundwater in the Unit area range between 2.2 mg/L to 500 mg/L (SCDNR 2009). The detected chloride concentration for MW-LF-26 falls within the range of natural variation in area groundwater quality.

2.3 Sulfate at MW-LF-25 and MW-LF-26

The sulfate SSIs identified at MW-LF-25 and MW-LF-26 are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Sulfate was detected in MW-LF-25 (373 mg/L) and MW-LF-26 (61.9 mg/L) during the March 2022 sampling event. These concentrations exceed the background threshold value of 45.2 mg/L. Reported regional sulfate concentrations for groundwater in the Unit area range between 1 mg/L to 1,000 mg/L (SCDNR 2009). The detected sulfate concentrations for MW-LF-25 and MW-LF-26 fall within the range of natural variation in area groundwater.

2.4 TDS at MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26

The TDS SSIs identified at MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26 are the result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- TDS was detected in MW-LF-20 (651 mg/L), MW-LF-21 (620 mg/L), MW-LF-22D (579 mg/L), MW-LF-23D (516 mg/L), MW-LF-24 (477 mg/L), MW-LF-25 (1,060 mg/L), and MW-LF-26 (900 mg/L) during the March 2022 sampling event. These concentrations exceed the background threshold value of 389 mg/L. Reported regional TDS concentrations for groundwater in the Unit area range between 20 mg/L to 2,800 mg/L (SCDNR 2009). The detected calcium concentrations for MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26 fall within the range of natural variation in area groundwater quality.

2.5 Additional Support for ASD

2.5.1 Geochemical Evaluation

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 in May 2022 and the sampling event data is 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 May 2022 geochemical data and presented as **Figure 4**. The following observations were noted:

- With respect to anions (bottom right triangle of Piper diagram), MW-LF-20, MW-LF-21, and MW-LF-24 plotted closely (within the 80 to 100% bicarbonate distribution) with background wells MW-LF-10 and MW-LF-11, along with downgradient wells MW-LF-22D and MW-LF-23D.
- With respect to cations (bottom left triangle of Piper diagram), MW-LF-20, MW-LF-21, MW-LF-24, MW-LF-25, and MW-LF-26 plotted closely (within the 40 to 60% calcium distribution) with background wells MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28 and downgradient well MW-LF-23D.
- With respect to the overall hydrochemical distribution (diamond in Piper diagram), MW-LF-20, MW-LF-21, and MW-LF-24 plotted within the same area of the diamond as background wells MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28, along with downgradient wells MW-LF-22D and MW-LF-23D within the magnesium bicarbonate 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-20, MW-LF-21, and MW-LF-24 has similarities to that of background wells MW-LF-10 and MW-LF-11. This observation suggests that the source for calcium at MW-LF-20, MW-LF-21, and MW-LF-24 is not from the Unit. The similar geochemical signature of MW-LF-20, MW-LF-21, and MW-LF-24 with background wells MW-LF-10 and MW-LF-11 further suggests that the SSI for calcium is the result of natural variations of calcium in the groundwater at the site.

2.5.2 Coal Ash Indicator Parameters

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 1,710 microgram per liter ($\mu\text{g/L}$) and 4,396 $\mu\text{g/L}$ (Nautilus, 2021). Total lithium was analyzed during the May 2022 event and was detected at concentrations below 2.00 $\mu\text{g/L}$ (laboratory detection limits for MW-LF-27 and MW-LF-28) to 18.0 $\mu\text{g/L}$ (MW-LF-22D). Historically, lithium has been detected at concentrations below 2.0 $\mu\text{g/L}$ to a maximum of 39.8 $\mu\text{g/L}$ observed in background well MW-LF-10 in May 2017 (Nautilus, 2021). Naturally occurring concentrations of lithium in South Carolina groundwater generally exhibits a range of between less than 5 $\mu\text{g/L}$ to approximately 60 $\mu\text{g/L}$ (Lindsey et al., 2021). The historical levels of

lithium detected are within the range of naturally occurring groundwater concentrations and two orders of magnitude less than what is detected in leachate from the Unit.

The absence of lithium above naturally occurring groundwater levels within the Unit monitoring well network suggests that a release of leachate from the Unit has not occurred.

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 was not due to a release from the CCR Unit to the subsurface.

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

Section 4 Certification

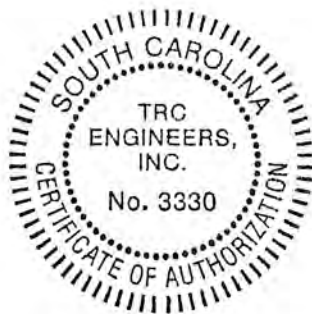
I hereby certify that the alternative source demonstration presented within this document for the DESC Williams Highway 52 Coal Ash Disposal Landfill CCR Unit has been prepared to meet the requirements of Title 40 CFR §257.94(e)2 of the Federal CCR Rule. This document is accurate and has been prepared 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: September 30, 2022



(SEAL)

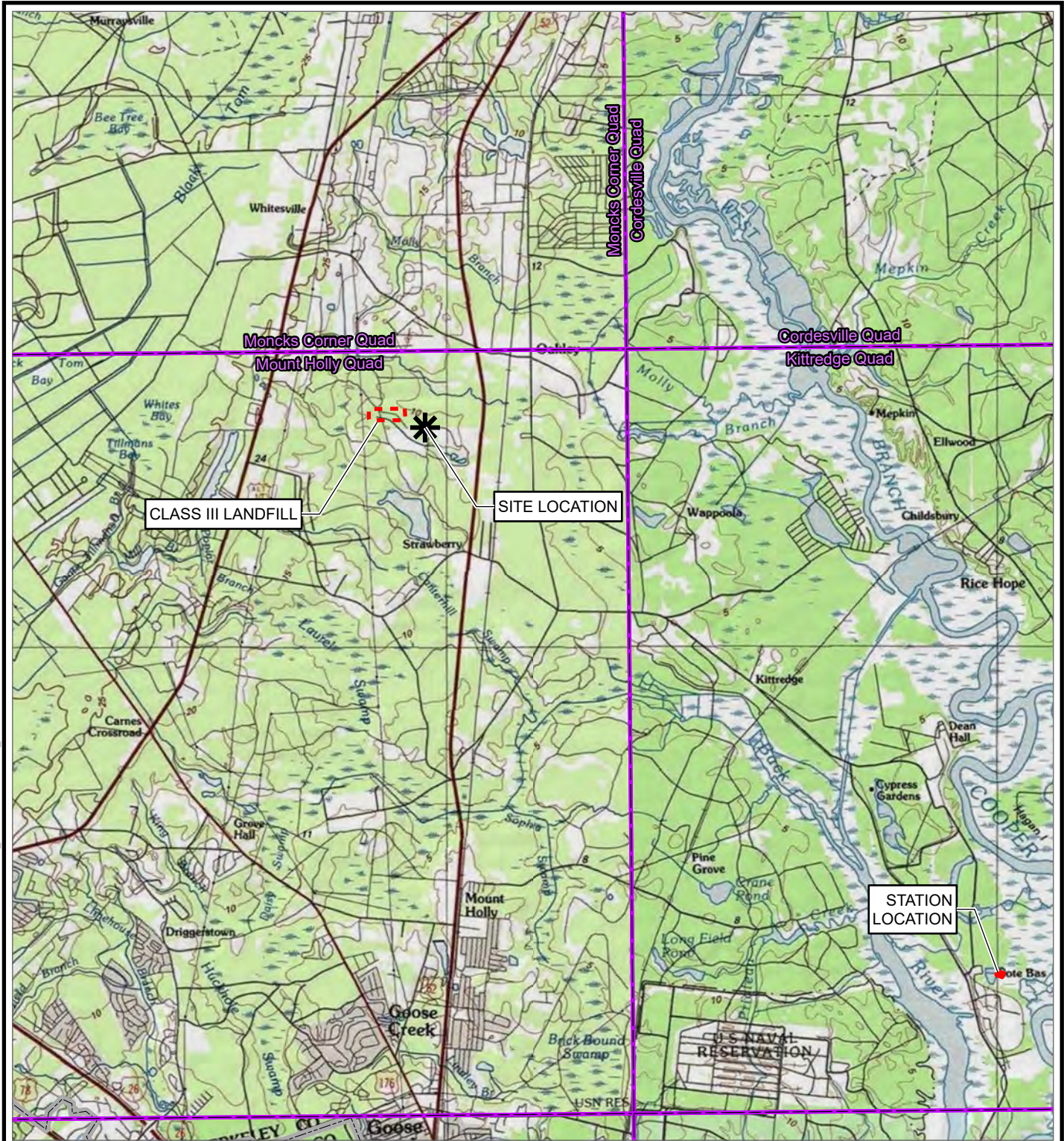
Section 5

References

- Garrett and Moore 2017. Groundwater Monitoring System Certification, Williams Station Landfill, Berkeley County, SC: Garrett & Moore, Inc.
- Lindsey, B.D., Belitz, K., Cravotta, C.A. III, Toccalino, P.L., and Dubrovsky, N.M. 2021. Science of the Total Environment, v. 767. <https://doi.org/10.1016/j.scitotenv.2020.144691>
- Nautilus 2016. Groundwater Sampling and Analysis Plan, Williams Station Landfill. Berkeley County, SC: Nautilus Geologic Consulting, PLLC.
- Nautilus 2021. Alternate Source Demonstration Report, Williams Station Class Three Landfill. Berkeley County, SC: Nautilus Geologic Consulting, PLLC.
- Piper, A.M., 1944. A graphic procedure in the geochemical interpretation of water-analyses. *Eos, Transactions American Geophysical Union*, 25(6), pp.914–928.
- South Atlantic Water Science Center (SAWC), 2016. Atlantic Coastal Plain Physiographic Provinces. <https://www.usgs.gov/media/images/atlantic-coastal-plain-physiographic-provinces>.
- South Carolina Electric & Gas (SCE&G). 2017. Groundwater Monitoring Data Statistical Analysis Plan Certification, SCE&G Williams Station Hwy 52 Class III Landfill. Goose Creek, SC.
- South Carolina Department of Natural Resources (SCDNR), 2009, South Carolina State Water Assessment, 2nd Edition. 408 pp.
- United States Environmental Protection Agency. 2017. Secondary Drinking Water Standards: Guidance for Nuisance Chemicals, March 8, 2017
- U.S. Geological Survey (USGS) Professional Paper: 1410-E, Hydrology of the Southeastern Coastal Plain Aquifer System in South Carolina and Parts of Georgia and North Carolina, 1996.

Figures

COORDINATE SYSTEM: NAD 1983 STATEPLANE SOUTH CAROLINA FIPS 3900 FEET, MAP ROTATION: 0
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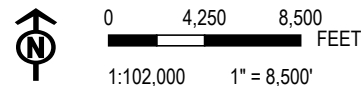
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- CLASS III LANDFILL BOUNDARY
- STATION LOCATION
- COUNTY BOUNDARY
- USGS 24K QUAD BOUNDARY

PROJECT: **DOMINION ENERGY SOUTH CAROLINA
 WILLIAMS HIGHWAY 52 LANDFILL**
 US-52
 MONCK'S CORNER, SC 29461

TITLE: **SITE LOCATION MAP**

DRAWN BY: R. BARBER	PROJ. NO.:
CHECKED BY: A. HORRIE	FIGURE 1
APPROVED BY: R. MAYER	
DATE: SEPTEMBER 2022	

BASE MAP: USGS TOPO MAP
 DATA SOURCES: TRC,






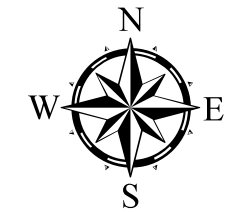
708 HEARTLAND TRAIL
 SUITE 3000
 MADISON, WI 53717
 PHONE: 608.826.3600

FILE: DOMINION_VARIOUS


Plot Date: 9/23/2022 09:34:10 AM by JYONTS -- LAYOUT: ANSIB(11"x17")
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 Map Rotation: 0
 TRC - GIS



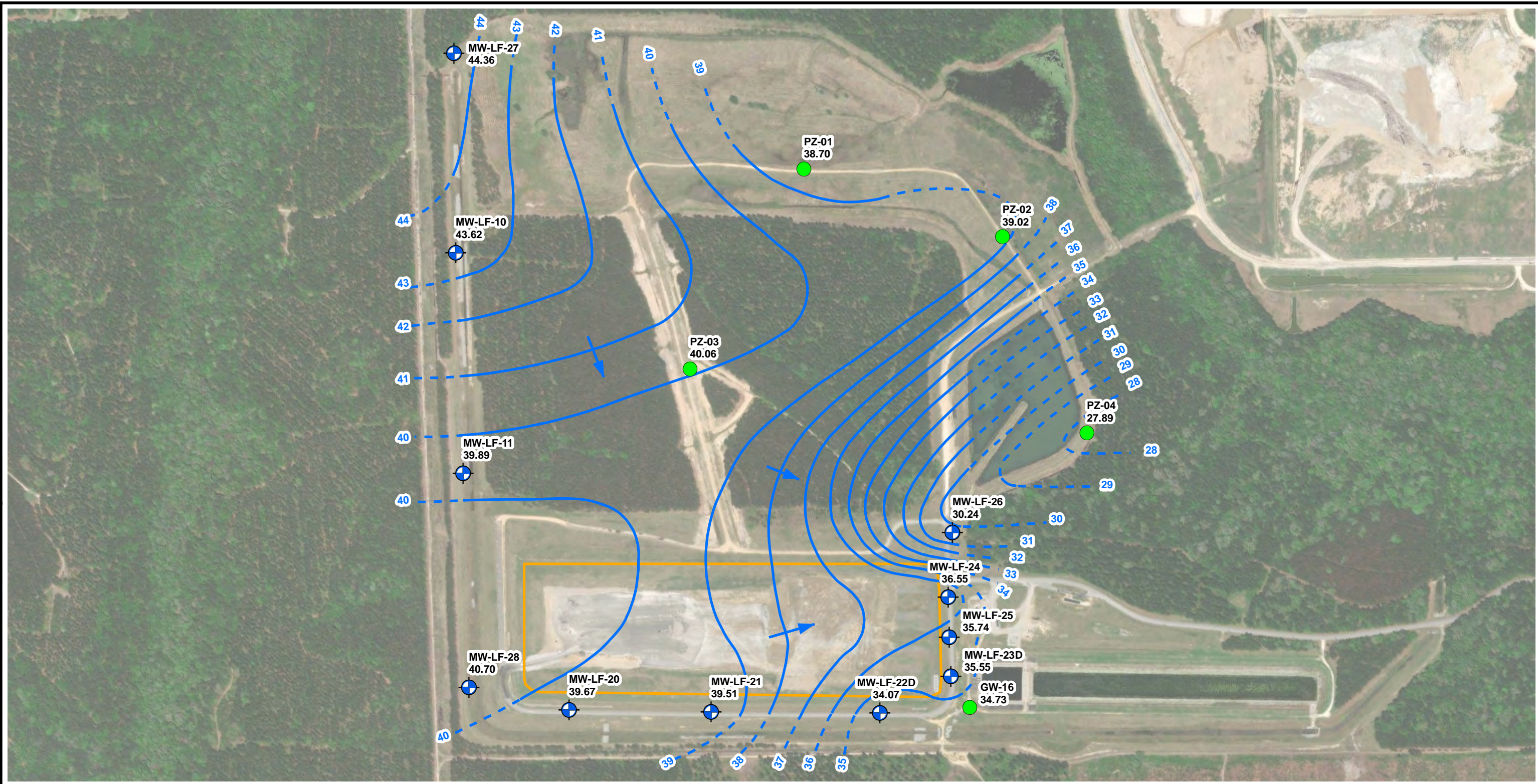
- LEGEND**
-  Monitoring Well
 -  Event Piezometer
 -  Class III Landfill








NOTE: Aerial Image from ESRI World Imagery dated April 2022.

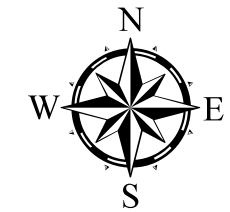
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TITLE:		CCR RULE COMPLIANCE MONITORING WELL NETWORK	
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL	FIGURE 2	
APPROVED BY:	R. MAYER		
DATE:	SEPTEMBER 2022		
		<i>50 International Drive, Suite 150 Patwood Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCCompanies.com</i>	
FILE NO.:	Figure2_Williams_HWY52_CCR_LF_Well_Network.mxd		

Plot Date: 9/23/2022 09:33:56 AM by JYONTS -- LAYOUT: ANS1 B(11"x17")
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 Map Rotation: 0
 Coordinate System: NAD 1983 StatePlane West Virginia North FIPS 4701 Feet (Foot US)
 TRC - GIS



- LEGEND**
-  Monitoring Well
 -  Event Piezometer
 - 40.70** Water Elevation (FT MSL)
 -  Class III Landfill

-  Water Table Elevation in feet above mean sea level (1' Contour Intervals) - Dashed where inferred.
-  Approximate Groundwater Flow Direction



NOTE: Aerial Image from ESRI World Imagery dated April 2022.


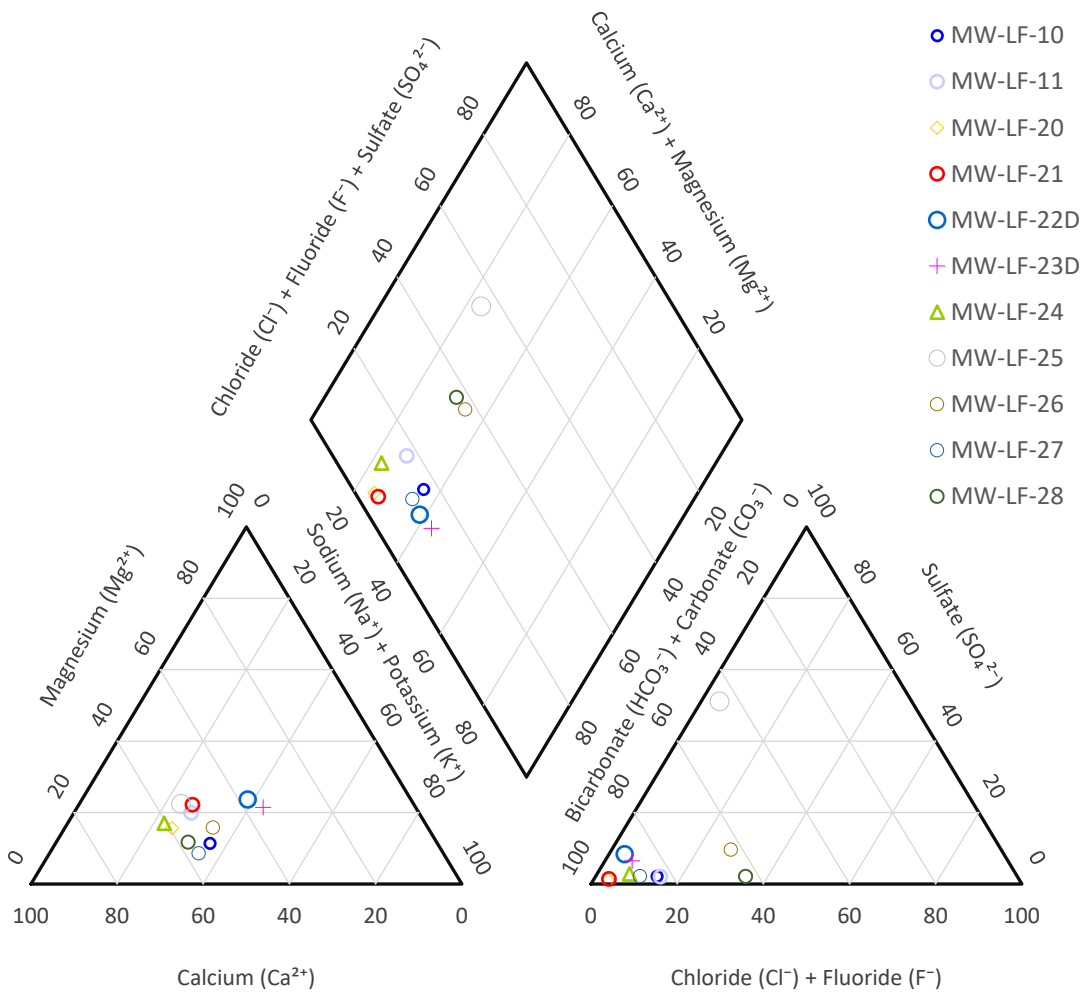
PROJECT:		DESC WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL GOOSE CREEK, SOUTH CAROLINA	
TITLE:		GROUNDWATER POTENTIOMETRIC SURFACE MAP - MARCH 23, 2022	
DRAWN BY:	J. YONTS	PROJ. NO.:	416559.0006.0000
CHECKED BY:	D. SZYNAL	FIGURE 3	
APPROVED BY:	R. MAYER		
DATE:	SEPTEMBER 2022	 <i>50 International Drive, Suite 150 Patwood Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCCompanies.com</i>	
FILE NO.:	Figure3_Williams_HWY52_CCR_LF_WTL_2201.mxd		

FIGURE 4
DESC Williams Hwy 52 Landfill
Class III Landfill
Piper Diagram - May 2022



Tables

Table 1
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Background Wells																Downgradient Wells								
			MW-LF-10				MW-LF-11				MW-LF-27				MW-LF-28				MW-LF-20				MW-LF-21				
			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	500.0	63.4		4.00	15.0	21.8		4.00	15.0	30.3		4.00	15.0	9.17	J	4.00	15.0	206		20	75	208		20	75	
Calcium	mg/L	94.6	66.8		0.150	0.5	17.1		0.030	0.100	28.5		0.030	0.100	10.2		0.030	0.100	151		0.150	0.5	134		0.150	0.5	
Chloride	mg/L	28.6	20.4		0.335	1.00	6.49		0.0670	0.200	7.25		0.067	0.2	5.96		0.0670	0.200	12.5		0.134	0.400	11.5		0.134	0.400	
Fluoride	mg/L	0.756	0.438		0.0330	0.100	0.235		0.0330	0.100	0.242		0.0330	0.100	0.0858	J	0.0330	0.100	0.206		0.0330	0.100	0.228		0.0330	0.100	
pH	SU	5.16 - 8.33	6.87		0.01	0.01	6.01		0.01	0.01	6.36		0.01	0.01	5.82		0.01	0.01	6.32		0.01	0.01	6.48		0.01	0.01	
Sulfate	mg/L	45.2	5.08		0.133	0.400	1.36		0.133	0.400	2.45		0.133	0.400	0.839		0.133	0.400	5.41		0.133	0.400	7.14		0.133	0.400	
Total Dissolved Solids	mg/L	389	350		3.40	14.3	98.6		3.40	14.3	147		3.40	14.3	47.1		3.40	14.3	651		3.40	14.3	620		3.40	14.3	
Field Parameters																											
Conductivity	µS/cm	--	595.12		0.1	0.1	171.97		0.1	0.1	259.28		0.1	0.1	93.62		0.1	0.1	1087.5		0.1	0.1	1044.5		0.1	0.1	
Dissolved Oxygen	mg/L	--	1.52		0.01	0.01	1.83		0.01	0.01	0.35		0.01	0.01	2.72		0.01	0.01	0.27		0.01	0.01	0.69		0.01	0.01	
Temperature	C	--	20.34		0.01	0.01	18.88		0.01	0.01	19.69		0.01	0.01	18.07		0.01	0.01	20.09		0.01	0.01	20.53		0.01	0.01	
Turbidity	NTU	--	2.77		0.1	0.1	2.60		0.1	0.1	6.08		0.1	0.1	2.73		0.1	0.1	8.09		0.1	0.1	6.90		0.1	0.1	
Depth to Water	ft btoc	--	8.67		0.01	0.01	11.83		0.01	0.01	8.89		0.01	0.01	10.52		0.01	0.01	21.14		0.01	0.01	16.63		0.01	0.01	
Groundwater Elevation	ft msl	--	43.62		0.01	0.01	39.88		0.01	0.01	44.36		0.01	0.01	40.70		0.01	0.01	39.67		0.01	0.01	39.51		0.01	0.01	
Oxidation Reduction Potential	millivolts	--	22.7		0.1	0.1	74.7		0.1	0.1	-16.0		0.1	0.1	80.7		0.1	0.1	21.5		0.1	0.1	43.7		0.1	0.1	

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
µS/cm = MicroSiemen per centimeter
SU = Standard Units
C = Degrees Celsius
NTU = Nephelometric Turbidity Unit
ft btoc = feet below top of casing
ft msl = feet above mean sea level
-- = Not applicable

Qualifiers (Qual)
J = Estimated Results
Bold font = Detected constituent
* - Groundwater Elevation data collected on March 23, 2022

Table 1
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

Parameter Name	Units	Background Threshold Values	Downgradient Wells																												
			MW-LF-22D				MW-LF-23D				MW-LF-24				MW-LF-25				MW-LF-25 DUP				MW-LF-26								
			03/24/2022				03/24/2022				03/24/2022				03/24/2022				03/24/2022				03/24/2022								
Result	Qual	MDL	QL	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	500.0	343		20.0	75.0		277		20	75		84.6		4	15		83		4.00	15.0		84		4.00	15.0		167		4.00	15.0
Calcium	mg/L	94.6	85.3		0.150	0.500		65.7		0.150	0.5		103.0		0.150	0.500		178		0.150	0.5		184		0.150	0.5		161		0.300	1.00
Chloride	mg/L	28.6	10.0		0.335	1		16.0		0.134	0.400		19.1		0.335	1.00		18.2		2.68	8		19.4		2.68	8		136		1.68	5.00
Fluoride	mg/L	0.756	0.248		0.0330	0.100		0.327		0.0330	0.100		0.403		0.0330	0.100		0.610		0.0330	0.100		0.611		0.0330	0.100		0.202		0.0330	0.100
pH	SU	5.16 - 8.33	6.80		0.01	0.01		6.92		0.01	0.01		6.20		0.01	0.01		6.50		0.01	0.01		6.5		0.01	0.01		5.99		0.01	0.01
Sulfate	mg/L	45.2	32.9		0.665	2		22.5		0.266	0.800		12.4		0.133	0.400		373		5.32	16		404		5.32	16		61.9		3.33	10.0
Total Dissolved Solids	mg/L	389	579		3.40	14.3		516		3.40	14.3		477		3.40	14.3		1060		3.40	14.3		1080		3.40	14.3		900		3.40	14.3
Field Parameters																															
Conductivity	µS/cm	--	947.94		0.1	0.1		829.54		0.1	0.1		811.08		0.1	0.1		1437.5		0.1	0.1		1437.5		0.1	0.1		1595.7		0.1	0.1
Dissolved Oxygen	mg/L	--	1.15		0.01	0.01		2.05		0.01	0.01		0.28		0.01	0.01		2.28		0.01	0.01		2.28		0.01	0.01		0.50		0.01	0.01
Temperature	C	--	20.19		0.01	0.01		20.18		0.01	0.01		20.14		0.01	0.01		19.77		0.01	0.01		19.77		0.01	0.01		20.49		0.01	0.01
Turbidity	NTU	--	2.45		0.1	0.1		1.57		0.1	0.1		4.56		0.1	0.1		2.28		0.1	0.1		2.28		0.1	0.1		3.12		0.1	0.1
Depth to Water	ft btoc	--	16.29		0.01	0.01		14.14		0.01	0.01		15.85		0.01	0.01		15.19		0.01	0.01		15.19		0.01	0.01		24.97		0.01	0.01
Groundwater Elevation	ft msl	--	34.07		0.01	0.01		35.55		0.01	0.01		36.55		0.01	0.01		35.74		0.01	0.01		35.74		0.01	0.01		30.24		0.01	0.01
Oxidation Reduction Potential	millivolts	--	117.2		0.1	0.1		49.0		0.1	0.1		42.5		0.1	0.1		57.0		0.1	0.1		57.0		0.1	0.1		52.9		0.1	0.1

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
µS/cm = MicroSiemen per centimeter
SU = Standard Units
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NTU = Nephelometric Turbidity Unit
ft btoc = feet below top of casing
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-- = Not applicable

Qualifiers (Qual)
J = Estimated Results
Bold font = Detected constituent
* - Groundwater Elevation data collected on March 23, 2022

Table 2
Summary of Alternate Source Demonstration Parameters
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

		Background Wells																			
Sample ID:		MW-LF-10				MW-LF-11				MW-LF-27				MW-LF-27 DUP				MW-LF-28			
Sample Date:		05/31/2022				05/31/2022				05/26/2022				05/26/2022				05/27/2022			
Parameter Name	Units	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
Total Metals																					
Iron	ug/L	33.7		10.0	20.0	10.0	U	10.0	20.0	594		10.0	20.0	599		10.0	20.0	10.0	U	10.0	20.0
Lithium	ug/L	11.1		2.00	10.0	4.17	J	2.00	10.0	2.00	U	2.00	10.0	2.00	U	2.00	10.0	2.00	U	2.00	10.0
Magnesium	ug/L	8580		10.0	15.0	4650		10.0	15.0	2070		10.0	15.0	2130		10.0	15.0	838		10.0	15.0
Potassium	ug/L	5550		80.0	300	2530		80.0	300	2780		80.0	300	2830		80.0	300	970		80.0	300
Sodium	ug/L	47900		80.0	250	10600		80.0	250	14200		80.0	250	14700		80.0	250	3590		80.0	250
Alkalinity via SM2320B																					
Alkalinity, Total as CaCO3	mg/L	240		1.45	4.00	78.0		1.45	4.00	89.2		1.45	4.00	85.2		1.45	4.00	19.6		1.45	4.00
Alkalinity, Bicarbonate	mg/L	240		1.45	4.00	78.0		1.45	4.00	89.2		1.45	4.00	85.2		1.45	4.00	19.6		1.45	4.00
Alkalinity, Carbonate	mg/L	1.45	U	1.45	4.00	1.45	U	1.45	4.00	1.45	U	1.45	4.00	1.45	U	1.45	4.00	1.45	U	1.45	4.00

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
-- = Not applicable.

Qualifiers (Qual)
J = Estimated Results
U = Samples reported below their respective MDL
Bold font = Detected constituent

Table 2
Summary of Alternate Source Demonstration Parameters
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

		Downgradient Well																			
Sample ID:		MW-LF-20				MW-LF-21				MW-LF-22D				MW-LF-23D				MW-LF-24			
Sample Date:		05/26/2022				05/26/2022				05/26/2022				05/27/2022				05/27/2022			
Parameter Name	Units	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
Total Metals																					
Iron	ug/L	807		10.0	20.0	2040		10.0	20.0	48.2		10.0	20.0	20.3		10.0	20.0	5730		50.0	100
Lithium	ug/L	7.9	J	2.00	10.0	7.19	J	2.00	10.0	18.0		2.00	10.0	14.9	J	2.00	10.0	8.33	J	2.00	10.0
Magnesium	ug/L	24600		10.0	15.0	33500		10.0	15.0	32800		10.0	15.0	25700		10.0	15.0	18900		50.0	75.0
Potassium	ug/L	8750		80.0	300	9970		80.0	300	11900		80.0	300	11400		80.0	300	4510		400	1500
Sodium	ug/L	69000		1600	5000	69600		1600	5000	94100		1600	5000	91200		1600	5000	44500		400	1250
Alkalinity via SM2320B																					
Alkalinity, Total as CaCO3	mg/L	600		1.45	4.00	573		1.45	4.00	479		1.45	4.00	418		1.45	4.00	404		1.45	4.00
Alkalinity, Bicarbonate	mg/L	600		1.45	4.00	573		1.45	4.00	479		1.45	4.00	418		1.45	4.00	404		1.45	4.00
Alkalinity, Carbonate	mg/L	1.45	U	1.45	4.00	1.45	U	1.45	4.00	1.45	U	1.45	4.00	1.45	U	1.45	4.00	1.45	U	1.45	4.00

Notes:
MDL = Method Detection Limit
QL = Quantitation Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
-- = Not applicable.

Qualifiers (Qual)
J = Estimated Results
U = Samples reported below their respective MDL
Bold font = Detected constituent

Table 2
Summary of Alternate Source Demonstration Parameters
Dominion Energy South Carolina - Williams Station Highway 52 Class III Landfill
Moncks Corner, Berkeley County, South Carolina

		Downgradient Well							
		MW-LF-25				MW-LF-26			
		05/27/2022				05/27/2022			
Sample ID:	Sample Date:								
Parameter Name	Units	Result	Qual	MDL	QL	Result	Qual	MDL	QL
Total Metals									
Iron	ug/L	57.1	J	50.0	100	26600		50.0	100
Lithium	ug/L	13.0		2.00	10.0	3.81	J	2.00	10.0
Magnesium	ug/L	45900		50.0	75.0	31300		50.0	75.0
Potassium	ug/L	8190		400	1500	3370		400	1500
Sodium	ug/L	86500		400	1250	127000		400	1250
Alkalinity via SM2320B									
Alkalinity, Total as CaCO3	mg/L	400		1.45	4.00	552		1.45	4.00
Alkalinity, Bicarbonate	mg/L	400		1.45	4.00	552		1.45	4.00
Alkalinity, Carbonate	mg/L	1.45	U	1.45	4.00	1.45	U	1.45	4.00

Notes:

MDL = Method Detection Limit
 QL = Quantitation Limit
 mg/L = Milligram per liter
 µg/L = Microgram per liter
 -- = Not applicable.

Qualifiers (Qual)

J = Estimated Results
 U = Samples reported below their respective MDL
Bold font = Detected constituent

Appendix C

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

Williams Hwy 52 Landfill - CCR Sampling Event

Date(s) Measured: 3.23.22

Well ID	Well Diameter (inches)	Well Total Depth (ft BTOC)	Well Completion	Screen length (ft)	Depth to Water (ft below TOC)	Pump
MW-LF-10	2	20.70	Stickup	10	8.67	Peristaltic
MW-LF-11	2	21.80	Stickup	10	11.83	Peristaltic
MW-LF-20	2	32.82	Stickup	10	21.14	Peristaltic
MW-LF-21	2	28.20	Stickup	10	16.63	Peristaltic
MW-LF-22	2	24.49	Stickup	10	16.36	WL Only
MW-LF-22D	2	33.43	Stickup	15	16.29	Peristaltic
MW-LF-23	2	23.05	Stickup	10	14.40	WL Only
MW-LF-23D	2	33.36	Stickup	15	14.14	Peristaltic
MW-LF-24	2	25.41	Stickup	10	15.85	Peristaltic
MW-LF-25	2	24.21	Stickup	10	15.19	Peristaltic
MW-LF-26	2	33.45	Stickup	10	24.97	Peristaltic
MW-LF-27	2	22.75	Stickup	15	8.89	Peristaltic
MW-LF-28	2	19.34	Stickup	10	10.52	Peristaltic
PZ-01	2	29.89	Stickup	10	5.81	WL Only
PZ-02	2	32.54	Stickup	10	6.65	WL Only
PZ-03	2	32.86	Stickup	10	7.91	WL Only
PZ-04	2	33.22	Stickup	10	11.01	WL Only
PZ-05	2	32.81	Stickup	10	14.50	WL Only



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>AGM</u>	DATE: <u>3-23-22</u>
	BY: <u>RAM</u>	DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-10	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1523</u>	DATE: <u>3-23-22</u>	SAMPLE	TIME: <u>1555</u>	DATE: <u>3-23-22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>6.87</u> SU	CONDUCTIVITY: <u>595.12</u> umhos/cm	
			ORP: <u>22.7</u> mV	DO: <u>1.52</u> mg/L	
DEPTH TO WATER: <u>8.67</u> T/ PVC			TURBIDITY: <u>2.77</u> NTU		
DEPTH TO BOTTOM: 20.70 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>2.0</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>20.34</u> °C OTHER: _____		
VOLUME REMOVED: <u>0.6</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: <u>clear</u> ODOR: <u>none</u>		
COLOR: <u>clear</u> ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> <u>for FBLC-2201 @ 1535</u>		
COMMENTS: <u>Post turb: 2.53</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1525	75	7.20	566.49	22.3	2.59	4.98	23.18	8.98	INITIAL
1530	}	6.97	588.79	22.3	2.01	4.01	20.66	9.61	}
1535		6.89	591.62	22.3	1.99	4.30	20.21	10.31	
1540		6.88	594.27	22.4	1.49	3.59	20.20	10.52	
1545		6.88	593.17	22.4	1.50	4.58	20.27	10.76	
1550		6.88	595.24	22.3	1.52	2.91	20.31	10.81	
1555		6.87	595.12	22.7	1.52	2.77	20.34	10.83	
<u>Post 1608</u>	<u>75</u>	_____	_____	_____	_____	<u>2.53</u>	_____	<u>10.84</u>	_____

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>AGM</u>	DATE: <u>3-24-22</u>
	BY: <u>RAM</u>	DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-11	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0948</u>	DATE: <u>3-24-22</u>	SAMPLE	TIME: <u>0920</u>	DATE: <u>3-24-22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>6.01</u> SU	CONDUCTIVITY: <u>171.97</u> umhos/cm	ORP: <u>74.7</u> mV	DO: <u>1.83</u> mg/L	
DEPTH TO WATER: <u>11.82</u> T/ PVC	TURBIDITY: <u>2.60</u> NTU		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
DEPTH TO BOTTOM: <u>21.80</u> T/ PVC	WELL VOLUME: <u>1.7</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	TEMPERATURE: <u>18.88</u> °C	OTHER: _____		
VOLUME REMOVED: <u>0.5</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	COLOR: <u>clear</u>	ODOR: <u>none</u>	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
COLOR: <u>clear</u>	ODOR: <u>none</u>	FILTRATE COLOR: _____	FILTRATE ODOR: _____		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-			
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER		COMMENTS: <u>post turb 12.43</u>			

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0850	65	5.97	186.31	108.0	4.20	7.05	19.68	11.91	INITIAL
0855	}	5.95	178.38	85.9	2.25	5.81	18.96	11.95	}
0900		6.00	176.74	78.8	2.14	4.72	18.92	11.96	
0905		6.01	174.21	76.1	2.02	5.13	18.92	12.11	
0910		6.01	173.26	75.4	1.94	3.93	18.96	12.16	
0915		6.01	172.32	76.9	1.94	3.23	18.96	12.20	
0926		6.01	171.97	74.7	1.83	2.60	18.88	12.24	
0931	65	—————				2.43	—————	12.26	—————

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____											
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED			NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
				<input type="checkbox"/> Y	<input type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
				<input type="checkbox"/> Y	<input type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>BJM</u>	DATE: <u>3-24-22</u>
	BY: <u>RAM</u>	DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-20	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0900</u>	DATE: <u>3-24-22</u>	SAMPLE	TIME: <u>1040</u>	DATE: <u>3-24-22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>6.32</u> SU	CONDUCTIVITY: <u>1087.5</u> umhos/cm	ORP: <u>21.5</u> mV	DO: <u>0.27</u> mg/L	
DEPTH TO WATER: <u>21.14</u> T/ PVC	TURBIDITY: <u>8.09</u> NTU		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
DEPTH TO BOTTOM: 32.82 T/ PVC	WELL VOLUME: <u>1.9</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	TEMPERATURE: <u>20.09</u> °C	OTHER: _____		
VOLUME REMOVED: <u>1.9</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	COLOR: <u>clear</u>	ODOR: <u>none</u>	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
COLOR: <u>Slightly hazy</u>	ODOR: <u>none</u>	FILTRATE COLOR: _____	FILTRATE ODOR: _____		
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-	DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER		
COMMENTS: <u>Post turb: 4.82 @ 1046 - DTW=24.38</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)	
0905	75	6.30	1095.5	90.3	1.04	38.8	20.13	21.40	INITIAL	
0910		6.32	1088.9	74.5	0.99	26.0	20.06	21.77		
0915		6.32	1088.2	67.8	0.38	20.8	20.03	22.05		
0950		6.33	1088.5	46.5	0.30	14.9	19.95	23.33		
0955		6.33	1090.6	45.1	0.28	18.7	19.99	23.45		
1000		6.32	1088.5	39.0	0.29	16.3	20.05	23.51		
1025		6.32	1089.9	30.1	0.28	9.26	20.04	23.96		
1030		6.33	1088.7	28.8	0.26	9.54	20.14	24.06		
1035		6.32	1086.9	23.4	0.26	10.15	20.12	24.14		
1040		6.32	1087.5	21.5	0.27	8.09	20.09	24.22		1.9

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>BJM</u>	DATE: <u>3.24.22</u>
	BY: <u>RAM</u>	DATE: <u>3.28.22</u>

SAMPLE ID: MW-LF-21	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1120</u>	DATE: <u>3.24.22</u>	SAMPLE	TIME: <u>1155</u>	DATE: <u>3.24.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>6.48</u> SU		CONDUCTIVITY: <u>1044.5</u> umhos/cm		
	ORP: <u>43.7</u> mV		DO: <u>0.69</u> mg/L		
DEPTH TO WATER: <u>16.63</u> T/ PVC			TURBIDITY: <u>6.90</u> NTU		
DEPTH TO BOTTOM: <u>28.20</u> T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>1.9</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>20.53</u> °C OTHER: _____		
VOLUME REMOVED: <u>0.6</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: <u>Clear</u> ODOR: <u>none</u>		
COLOR: <u>Clear w/ Orange Flakes</u> ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			COMMENTS: <u>Post turb: 5.70</u>		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
<u>1125</u>	<u>75</u>	<u>6.49</u>	<u>1035.8</u>	<u>29.0</u>	<u>1.26</u>	<u>18.6</u>	<u>20.04</u>	<u>17.01</u>	INITIAL
<u>1130</u>	↓	<u>6.48</u>	<u>1022.5</u>	<u>33.0</u>	<u>0.89</u>	<u>18.0</u>	<u>20.09</u>	<u>17.40</u>	↓
<u>1135</u>	↓	<u>6.47</u>	<u>1043.9</u>	<u>35.3</u>	<u>0.68</u>	<u>7.80</u>	<u>20.25</u>	<u>17.84</u>	↓
<u>1140</u>	↓	<u>6.48</u>	<u>1041.2</u>	<u>37.6</u>	<u>0.74</u>	<u>7.94</u>	<u>21.20</u>	<u>18.04</u>	↓
<u>1145</u>	↓	<u>6.47</u>	<u>1040.4</u>	<u>39.1</u>	<u>0.66</u>	<u>6.93</u>	<u>20.48</u>	<u>18.29</u>	↓
<u>1150</u>	↓	<u>6.48</u>	<u>1026.2</u>	<u>40.4</u>	<u>0.69</u>	<u>6.55</u>	<u>20.44</u>	<u>18.35</u>	↓
<u>1155</u>	↓	<u>6.48</u>	<u>1044.5</u>	<u>43.7</u>	<u>0.69</u>	<u>6.90</u>	<u>20.53</u>	<u>18.42</u>	<u>0.6</u>
<u>Post 1203</u>	<u>75</u>	—	—	—	—	<u>5.70</u>	—	<u>18.56</u>	—

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>Agm</u>	DATE: <u>3-24-22</u>
	BY: <u>RAM</u>	DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-22D	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>11:55</u>	DATE: <u>3-24-22</u>	SAMPLE	TIME: <u>12:30</u>	DATE: <u>3-24-22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>6.80</u> SU	CONDUCTIVITY: <u>947.94</u> umhos/cm	
			ORP: <u>117.2</u> mV	DO: <u>1.15</u> mg/L	
DEPTH TO WATER: <u>16.31</u> T/ PVC			TURBIDITY: <u>2.45</u> NTU		
DEPTH TO BOTTOM: <u>33.43</u> T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>16</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>20.19</u> °C OTHER: _____		
VOLUME REMOVED: <u>0.5</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: <u>clear</u> ODOR: <u>none</u>		
COLOR: <u>clear</u> ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
COMMENTS: <u>Post to rd: 2.13</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1200	60	6.55	944.57	125.1	3.13	5.04	20.09	16.64	INITIAL
1205	}	6.75	949.53	121.3	1.17	3.48	20.34	17.41	}
1210		6.77	946.98	120.7	1.21	2.85	20.38	17.71	
1215		6.79	944.75	119.5	1.22	2.63	20.06	18.10	
1220		6.79	948.40	118.9	1.21	2.45	20.02	18.48	
1225		6.80	948.09	118.2	1.17	2.87	20.15	18.61	
1230		6.80	947.94	117.2	1.15	2.45	20.19	18.96	
1241	60					2.13	—	19.02	—

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Station Hwy 52 ccr	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: BSM	DATE: 3.24.22
	BY: CAM	DATE: 3.28.22

SAMPLE ID: MW-LF-23D	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1235	DATE: 3.24.22	SAMPLE	TIME: 1310	DATE: 3.24.22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> BAILER	Alexis peri.		PH: 6.92 SU	CONDUCTIVITY: 829.54 umhos/cm	
			ORP: 49.0 mV	DO: 2.05 mg/L	
DEPTH TO WATER: 14.14 T/ PVC			TURBIDITY: 1.57 NTU		
DEPTH TO BOTTOM: 33.36 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: 3.1 <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			TEMPERATURE: 20.18 °C OTHER:		
VOLUME REMOVED: 0.6 <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			COLOR: clear ODOR: none		
COLOR: clear ODOR: none			FILTRATE (0.45 um) <input type="checkbox"/> YES <input type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: FILTRATE ODOR:		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input checked="" type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
COMMENTS: Post turb: 1.30 (MS/MSD)					

TIME	PURGE RATE (GPM or ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1240	75	6.95	702.97	45.7	2.62	3.13	20.03	14.40	INITIAL
1245		6.93	831.50	47.4	2.25	3.20	19.77	15.40	
1250		6.93	828.56	47.6	2.23	1.31	19.91	15.88	
1255		6.92	829.18	48.4	2.17	1.17	19.93	16.31	
1300		6.92	828.86	48.5	2.10	1.23	20.15	16.85	
1305		6.92	814.52	49.0	2.08	1.32	20.19	17.36	
1310		6.92	829.54	49.0	2.05	1.57	20.18	17.85	0.6
post 1316	75	—	—	—	—	1.30	—	17.97	—

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10% COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250ml	HPLC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
2	250ml	HPLC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
2	250ml	HPLC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JMB</u>	DATE: <u>3-24-2022</u>
	BY: <u>RAM</u>	DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-24	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1110</u>	DATE: <u>3-24-2022</u>	SAMPLE	TIME: <u>1220</u>	DATE: <u>3-24-2022</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>6.20</u> SU	CONDUCTIVITY: <u>811.08</u> umhos/cm	
			ORP: <u>42.5</u> mV	DO: <u>0.28</u> mg/L	
DEPTH TO WATER: <u>15.79</u> T/ PVC			TURBIDITY: <u>4.56</u> NTU		
DEPTH TO BOTTOM: 25.41 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>1.6</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>20.14</u> °C OTHER: _____		
VOLUME REMOVED: <u>2.1</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: <u>clear</u> ODOR: <u>none</u>		
COLOR: <u>clear</u> ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: <u>—</u> FILTRATE ODOR: <u>—</u>		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
COMMENTS: <u>post turb! 4.12 at 1232</u> WT: 16.90					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1111	125	6.40	829.66	47.2	3.25	23.3	20.22	15.97	INITIAL
1125	125	6.16	822.95	49.2	0.46	14.1	20.25	16.34	}
1135	125	6.14	813.96	49.6	0.38	10.27	20.24	16.60	
1145	85	6.15	808.17	48.9	0.36	9.01	20.31	16.70	
1155		6.14	802.35	46.8	0.33	7.51	20.35	16.74	
1200		6.16	797.41	45.9	0.33	6.16	20.42	16.77	
1205		6.17	802.65	45.0	0.31	5.75	20.31	16.80	
1210		6.16	797.27	44.0	0.30	4.97	20.24	16.82	
1215		6.19	799.84	43.2	0.30	4.65	20.22	16.84	
1220		6.20	811.08	42.5	0.28	4.56	20.14	16.87	
								2.1	

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JMB</u>	DATE: <u>3-24-2022</u> BY: <u>RAM</u> DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-25	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0950</u>	DATE: <u>3-24-2022</u>	SAMPLE	TIME: <u>1025</u>	DATE: <u>3/24/2022</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>6.50</u> SU	CONDUCTIVITY: <u>1,437.5</u> umhos/cm	
			ORP: <u>57.0</u> mV	DO: <u>2.28</u> mg/L	
DEPTH TO WATER: <u>15.22</u> T/ PVC			TURBIDITY: <u>2.54</u> NTU		
DEPTH TO BOTTOM: <u>24.21</u> T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>1.5</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>19.77</u> °C OTHER: _____		
VOLUME REMOVED: <u>0.4</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: <u>clear</u> ODOR: <u>none</u>		
COLOR: <u>clear</u> ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DUP- <u>WS2-CCR-22101</u>		
COMMENTS: <u>FBLK-WS2-CCR-22102 collected at 1028</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
<u>0954</u>	<u>70</u>	<u>6.52</u>	<u>1,431.8</u>	<u>50.9</u>	<u>2.64</u>	<u>2.88</u>	<u>20.24</u>	<u>15.34</u>	INITIAL
<u>1010</u>		<u>6.51</u>	<u>1,438.4</u>	<u>56.1</u>	<u>2.14</u>	<u>2.93</u>	<u>20.08</u>	<u>15.72</u>	
<u>1015</u>		<u>6.51</u>	<u>1,433.8</u>	<u>56.2</u>	<u>2.21</u>	<u>2.54</u>	<u>20.00</u>	<u>15.81</u>	
<u>1020</u>		<u>6.51</u>	<u>1,434.9</u>	<u>56.6</u>	<u>2.26</u>	<u>2.31</u>	<u>19.86</u>	<u>15.85</u>	
<u>1025</u>		<u>6.50</u>	<u>1,437.5</u>	<u>57.0</u>	<u>2.28</u>	<u>2.54</u>	<u>19.77</u>	<u>15.89</u>	
<hr/>									<u>0.4</u>
<u>post 1048</u>						<u>2.78</u>		<u>15.94</u>	

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>1</u>	<u>250 mL</u>	<u>PLASTIC</u>	<u>B</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>1</u>	<u>250 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>1</u>	<u>125 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JMB</u>	DATE: <u>3-24-2022</u>
	BY: <u>RAM</u>	DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-26	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0840</u>	DATE: <u>3-24-2022</u>	SAMPLE	TIME: <u>0915</u>	DATE: <u>3-24-2022</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>5.99</u> SU	CONDUCTIVITY: <u>1,595.7</u> umhos/cm	
DEPTH TO WATER: <u>24.98</u> T/ PVC			ORP: <u>52.9</u> mV	DO: <u>0.50</u> mg/L	
DEPTH TO BOTTOM: 33.45 T/ PVC			TURBIDITY: <u>3.12</u> NTU		
WELL VOLUME: <u>1.4</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
VOLUME REMOVED: <u>0.6</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>20.49</u> °C	OTHER: _____	
COLOR: <u>clear</u> ODOR: <u>none</u>			COLOR: <u>clear</u>	ODOR: <u>none</u>	
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	FILTRATE COLOR: _____	
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			FILTRATE ODOR: _____	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____	
COMMENTS: _____					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0844	60	5.95	1,631.9	123.9	0.71	6.12	20.04	25.13	INITIAL
0906	↓	5.98	1,615.9	67.8	0.43	4.91	20.16	25.31	↓
0905	↓	5.98	1,593.5	62.2	0.47	3.81	20.24	25.35	↓
0910	↓	5.99	1,587.2	56.7	0.50	3.56	20.43	25.40	↓
0915	↓	5.99	1,595.7	52.9	0.50	3.12	20.49	25.45	↓
post 0933	↓	—————				3.70	—————	25.58	0.6

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>BJM</u> DATE: <u>3.23.22</u>	BY: <u>RAM</u> DATE: <u>3.28.22</u>

SAMPLE ID: MW-LF-27	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1525</u>	DATE: <u>3.23.22</u>	SAMPLE	TIME: <u>1655</u>	DATE: <u>3.23.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>6.36</u> SU CONDUCTIVITY: <u>259.28</u> umhos/cm		
DEPTH TO WATER: <u>8.89</u> T/ PVC			ORP: <u>-16.0</u> mV DO: <u>0.35</u> mg/L		
DEPTH TO BOTTOM: 22.75 T/ PVC			TURBIDITY: <u>6.08</u> NTU		
WELL VOLUME: <u>2.2</u> LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
VOLUME REMOVED: <u>3.4</u> LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>19.69</u> °C OTHER: _____		
COLOR: <u>Slightly hazy</u> ODOR: <u>none</u>			COLOR: <u>clear</u> ODOR: <u>none</u>		
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
COMMENTS: <u>Post turb: 5.12 @ 1659 WL = 8.97</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)	
1530	150	6.40	386.48	10.8	1.39	26.5	22.11	8.97	INITIAL	
1535		6.39	394.30	-10.5	1.24	22.0	20.65			
1540		6.45	393.02	-30.6	1.21	24.0	20.13			
1600		6.44	365.39	-34.0	0.89	15.4	19.81			
1605		6.43	363.27	-33.5	0.86	14.8	19.79			
1635		6.38	270.95	-20.5	0.41	8.27	19.77			
1640		6.38	271.85	-19.9	0.40	8.16	19.78			
1645		6.36	265.41	-17.3	0.36	6.19	19.67			
1650		6.35	261.68	-16.2	0.35	6.18	19.68			
1655		6.36	259.28	-16.0	0.35	6.08	19.69			3.4

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>AGM</u>	DATE: <u>3-24-22</u>
	BY: <u>RAM</u>	DATE: <u>3-28-22</u>

SAMPLE ID: MW-LF-28	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1000</u>	DATE: <u>3-24-22</u>	SAMPLE	TIME: <u>1130</u>	DATE: <u>3-24-22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>5.82</u> SU		CONDUCTIVITY: <u>93.62</u> umhos/cm		
	ORP: <u>80.7</u> mV		DO: <u>2.72</u> mg/L		
DEPTH TO WATER: <u>1055</u> T/ PVC	TURBIDITY: <u>2.73</u> NTU				
DEPTH TO BOTTOM: <u>19.34</u> T/ PVC	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY				
WELL VOLUME: <u>1.5</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	TEMPERATURE: <u>18.07</u> °C		OTHER: _____		
VOLUME REMOVED: <u>1.9</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	COLOR: <u>clear</u>		ODOR: <u>none</u>		
COLOR: <u>clear</u>	ODOR: <u>none</u>		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		FILTRATE COLOR: _____		FILTRATE ODOR: _____	
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____			
COMMENTS: <u>Post turb 3.57</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1005	85	6.11	145.75	73.5	3.72	9.74	19.16	1056	INITIAL
1010	}	6.02	141.79	72.0	2.35	3.69	18.24	10.57	}
1015		5.99	134.10	71.5	2.37	2.56	19.22	10.58	
1020		6.00	138.85	72.5	2.36	2.46	18.06	10.60	
1025		5.98	136.36	73.9	2.36	2.42	18.07	10.61	
1030		5.98	119.39	72.1	2.40	2.89	18.14	10.61	
1035		5.97	123.89	72.8	2.45	2.73	18.17		
1040		5.92	105.42	73.2	2.59	2.81	18.12		
1045		5.92	112.13	74.8	2.55	2.98	18.03		
1050		5.92	107.13	74.3	2.56	3.49	18.03		

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JB / BM / (AM)
PROJECT NO.: 416559.0006.0000	SERIAL #: 851425	DATE: 3-23-22

PH CALIBRATION CHECK

pH 7 (LOT #): 21010066 (EXP. DATE): 08/2022	pH 4 / 10 (LOT #): 21080189 (EXP. DATE): 06/2022	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD		
6.59 / 7.00	4.23 / 4.00	<input type="checkbox"/> WITHIN RANGE	0819
7.00 / 7.00	4.00 / 4.00	<input checked="" type="checkbox"/> WITHIN RANGE	0821
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

Post

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
4.30 / 4.49	21.37	<input type="checkbox"/> WITHIN RANGE	0824
4.49 / 4.49		<input checked="" type="checkbox"/> WITHIN RANGE	0827
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

Post

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140143 (EXP. DATE): 04/2023	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
216.1 / 228	22.58	<input type="checkbox"/> WITHIN RANGE	0832
228.1 / 228	22.44	<input checked="" type="checkbox"/> WITHIN RANGE	0834
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

Post

D.O. CALIBRATION CHECK

CALIBRATION READING (mg/L)	CAL. RANGE	TIME
Baro: 763 mmHg Temp: 21.83°C Actual: 8.73 calc: 8.9	<input checked="" type="checkbox"/> WITHIN RANGE	0830
	<input type="checkbox"/> WITHIN RANGE	
	<input type="checkbox"/> WITHIN RANGE	
	<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): 20480085 (0.0 NTU) (EXP. DATE): June 2022	(LOT #): 20510114 (1.00 NTU) (EXP. DATE): June 2022		
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
1.92 / 0	0 / 0	<input checked="" type="checkbox"/> WITHIN RANGE	0837
2.87 / 1	0.88 / 1	<input type="checkbox"/> WITHIN RANGE	
11.52 / 10	9.81 / 10	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input checked="" type="checkbox"/> AUTOCAL SOLUTION	<input type="checkbox"/> STANDARD SOLUTION (S)
(LOT #): 21470032 (EXP. DATE): 04/2022	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input checked="" type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input checked="" type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

LaMotte 2020t turbidimeter
Lot # for 10.00 NTU cal standard = 20500177 exp 6/22
710-0711

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

NONE

NONE

[Signature]
SIGNED

3-28-2022
DATE

J. Yonts

3/28/2022

CHECKED BY

DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Williams Station	MODEL: AQUA TROLL 400	SAMPLER: <input checked="" type="radio"/> B / BM / AM
PROJECT NO.: 416559.0006.0000	SERIAL #: 728566	DATE: 3-24-2022

PH CALIBRATION CHECK

pH 7 (LOT #): 21010066 (EXP. DATE): 08/2022	pH 4 / 10 (LOT #): 21080189 (EXP. DATE): 06/2022	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD		
pre 6.79 / 7.00	9.73 / 10.00	<input type="checkbox"/> WITHIN RANGE	0800
pre /	4.66 / 4.00	<input type="checkbox"/> WITHIN RANGE	
post 7.01 / 7.00	10.05 / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	0802
post /	3.96 / 4.00	<input checked="" type="checkbox"/> WITHIN RANGE	0808

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
pre 4594 / 4490	21.06	<input type="checkbox"/> WITHIN RANGE	0809
post 4490 / 4490	21.06	<input checked="" type="checkbox"/> WITHIN RANGE	0811
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140143 (EXP. DATE): 04/2023	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
pre 189.8 / 228	21.05	<input type="checkbox"/> WITHIN RANGE	0812
post 228.8 / 228	21.11	<input checked="" type="checkbox"/> WITHIN RANGE	0814
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING (mg/L)	CAL. RANGE	TIME
Baro: 759.54 mm Hg Temp: 19.81 °C Calc: 9.2 mg/L Act: 9.07 mg/L	<input checked="" type="checkbox"/> WITHIN RANGE	0757
	<input type="checkbox"/> WITHIN RANGE	
	<input type="checkbox"/> WITHIN RANGE	
	<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): 20480085 (0.0 NTU) (EXP. DATE): June 2022	(LOT #): 20510114 (1.00 NTU) (EXP. DATE): June 2022		
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
0.00 / 0.00	0.00 / 0.00	<input checked="" type="checkbox"/> WITHIN RANGE	0759
1.22 / 1.00	0.99 / 1.00	<input checked="" type="checkbox"/> WITHIN RANGE	0801
8.37 / 10.00	9.99 / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	0805
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input checked="" type="checkbox"/> AUTOCAL SOLUTION	<input type="checkbox"/> STANDARD SOLUTION (S)
(LOT #): 21470032 (EXP. DATE): 04/2022	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input checked="" type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input checked="" type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

LaMotte 2020t turbidimeter
Lot # for 10.00 NTU cal standard = 20500177 exp 6/22

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

NONE	NONE
------	------

SIGNED: [Signature] DATE: 3-28-22

CHECKED BY: J. Yonts DATE: 3/28/2022



April 04, 2022

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

Re: CCR Groundwater Monitoring - Level 1 Package
Work Order: 574319

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 24, 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

Purchase Order: 50149867
Chain of Custody: 2022147
Enclosures



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Case Narrative

**Receipt Narrative
for
Dominion Energy (50149867)
SDG: 574319**

April 04, 2022

Laboratory Identification:

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

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on March 24, 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.

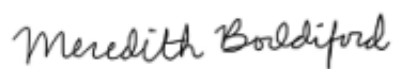
Sample Identification: The laboratory received the following samples:

<u>Laboratory ID</u>	<u>Client ID</u>
574319001	MW-LF-10-2022Q1
574319002	MW-LF-11-2022Q1
574319003	MW-LF-20-2022Q1
574319004	MW-LF-21-2022Q1
574319005	DU-W52-CCR-22101
574319006	FBLK-W52-CCR-22101
574319007	MW-LF-22D-2022Q1
574319008	MW-LF-23D-2022Q1
574319009	MW-LF-24-2022Q1
574319010	MW-LF-25-2022Q1
574319011	MW-LF-26-2022Q1
574319012	MW-LF-27-2022Q1
574319013	MW-LF-28-2022Q1
574319014	FBLK-W52-CCR-22102

Case Narrative:

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

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.

A handwritten signature in black ink that reads "Meredith Boddiford". The script is cursive and fluid.

Meredith Boddiford
Project Manager

Chain of Custody and Supporting Documentation

Project # 416559.0006.0000.3.2
 GEL Quote #: 2022147
 SOC Number (0): 2022147
 PO Number: PO 50149867
 Client Name: Dominion Energy
 Project/Site Name: Williams Station Hwy 52 Landfill CCR 2022Q1
 Address: Goose Creek, South Carolina
 Collected By: J. Bradley / B. Medlin
 Send Results To: AReed@envstd.com
 *For composites - indicate start and stop date/time.
 Sample ID
 MW-LF-10-2022Q1
 MW-LF-11-2022Q1
 MW-LF-20-2022Q1
 MW-LF-21-2022Q1
 DU-W52-CCR-22101
 FBLK-W52-CCR-22101
 MW-LF-22D-2022Q1
 MW-LF-23D-2022Q1
 MS/MSD

GEL Laboratories LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178
 Chain of Custody and Analytical Request
 GEL Work Order Number: Meredith Bodiford
 Phone # 803-258-1528
 Fax #
 GEL Project Manager: Meredith Bodiford
 Total number of containers requested (6)
 (Fill in the number of containers for each test)

Sample ID	Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code (b)	Field Filtered (c)	Sample Matrix (d)	Radioactive (f) (Yes, please supply isotopic info.)	Should this sample be considered:	Sample Analysis Requested (e)		Preservative Type (g)	Comments	
								Total number of containers	(7) Known or possible hazards			
MW-LF-10-2022Q1	3-23-2022	1555	N	N	GW	N		3	1	I		Note: extra sample is required for sample specific QC
MW-LF-11-2022Q1	3-24-2022	0920	N	N	GW	N		3	1	I		
MW-LF-20-2022Q1	3-24-2022	1040	N	N	GW	N		3	1	I		
MW-LF-21-2022Q1	3-24-2022	1155	N	N	GW	N		3	1	I		see attached work order for details
DU-W52-CCR-22101	3-24-2022	/	FD	N	GW	N		3	1	I		
FBLK-W52-CCR-22101	3-23-2022	1535	FB	N	AQ	N		3	1	I		
MW-LF-22D-2022Q1	3-24-2022	1230	N	N	GW	N		3	1	I		
MW-LF-23D-2022Q1	3-24-2022	1310	N	N	GW	N		6	2	2		

Chain of Custody Signatures
 Relinquished By (Signed) Date Time Received by (signed) Date Time
 1. *Janet Bradley* 3-24-2022 1517 1. *CAF* 7/24/22 1517
 2. _____
 3. _____
 TAT Requested: Normal: X Rush: _____ Specify: _____
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR).
 1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc. Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urne, F=Feecal, N=Nasal
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, IIX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7.) KNOWN OR POSSIBLE HAZARDS
 Characteristic Hazards
 FL = Flammable/Ignitable
 CO = Corrosive
 RE = Reactive
 TSCA Regulated
 PCB = Polychlorinated biphenyls
 Listed Waste
 LW = Listed Waste
 (F, K, P and U-listed wastes.)
 Waste code(s):
 Other
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 Chain of Custody and Analytical Request
 GEL Work Order Number: Meredith Boddiford
 Phone # 803-258-1528
 Fax #
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (e)	Field Filtered (f)	Sample Matrix (g)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (h) (Fill in the number of containers for each test)	Preservative Type (i)	Comments
						Radioactive (R) (yes, please supply isotope info.)	(?) Known or possible Hazards				
MW-LF-24-2022Q1	3-24-2022	1220	N	N	GW	N	N	3	1		Note: extra sample is required for sample specific QC
MW-LF-25-2022Q1	3-24-2022	1025	N	N	GW	N	N	3	1		
MW-LF-26-2022Q1	3-24-2022	0915	N	N	GW	N	N	3	1		see attached work order for details
MW-LF-27-2022Q1	3-23-2022	1655	N	N	GW	N	N	3	1		
MW-LF-28-2022Q1	3-24-2022	1130	N	N	GW	N	N	3	1		
FBLK-W52-CCR-22102	3-24-2022	1028	FB	N	AQ	N	N	3	1		

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>Jed Beasley</i>	3-24-2022	1517	<i>J</i>	3/24/22	1517

Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks:
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).

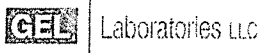
1) Chain of Custody Number = Client Determined
 2) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
 5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sulfuric Acid, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
 7) **KNOWN OR POSSIBLE HAZARDS**

Characteristic Hazards	Listed Waste	Other
FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW = Listed Waste Waste code(s):	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:

RCRA Metals
 As = Arsenic Hg = Mercury
 Ba = Barium Se = Selenium
 Cd = Cadmium Ag = Silver
 Cr = Chromium MR = Misc. RCRA metals
 Pb = Lead

TSCA Regulated
 PCB = Polychlorinated biphenyls

MB



SAMPLE RECEIPT & REVIEW FORM

Client: <u>DMNN</u>		SDG/AR/COC/Work Order: <u>574314</u> <u>574319</u>	
Received By: <u>BE</u>		Date Received: <u>3-24-22</u>	
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier <u>Other</u>	
Suspected Hazard Information		Yes	No
*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.			
A) Shipped as a DOT Hazardous?			Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?			COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?			Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>00</u> CPM mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?			COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?			If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria		Yes	NA
		Yes	No
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	
		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	
		Circle Applicable: Client contacted and provided COC COC created upon receipt	
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	
		Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>3</u>	
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	
		Temperature Device Serial #: <u>IR2-21</u> Secondary Temperature Device Serial # (If Applicable):	
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	
		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	
		Sample ID's and Containers Affected:	
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	
		If Preservation added, Lot#: _____ If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:	
8	Samples received within holding time?	<input checked="" type="checkbox"/>	
		ID's and tests affected:	
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	
		ID's and containers affected:	
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	
		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)	
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	
		Circle Applicable: No container count on COC Other (describe)	
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	
		Circle Applicable: Not relinquished Other (describe)	
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials AM Date 3/25/22 Page 1 of 7

Laboratory Certifications

List of current GEL Certifications as of 04 April 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	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
Dominion Energy
SDG #: 574319

Product: Determination of Metals by ICP-MS

Analytical Method: EPA 200.8 SC_NPDES

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2245625

Preparation Method: EPA 200.2

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

Preparation Batch: 2245624

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
574319001	MW-LF-10-2022Q1
574319002	MW-LF-11-2022Q1
574319003	MW-LF-20-2022Q1
574319004	MW-LF-21-2022Q1
574319005	DU-W52-CCR-22101
574319006	FBLK-W52-CCR-22101
574319007	MW-LF-22D-2022Q1
574319008	MW-LF-23D-2022Q1
574319009	MW-LF-24-2022Q1
574319010	MW-LF-25-2022Q1
574319011	MW-LF-26-2022Q1
574319012	MW-LF-27-2022Q1
574319013	MW-LF-28-2022Q1
574319014	FBLK-W52-CCR-22102
1205050174	Method Blank (MB)ICP-MS
1205050175	Laboratory Control Sample (LCS)
1205050178	574319008(MW-LF-23D-2022Q1L) Serial Dilution (SD)
1205050181	574319013(MW-LF-28-2022Q1L) Serial Dilution (SD)
1205050176	574319008(MW-LF-23D-2022Q1D) Sample Duplicate (DUP)
1205050179	574319013(MW-LF-28-2022Q1D) Sample Duplicate (DUP)
1205050177	574319008(MW-LF-23D-2022Q1S) Matrix Spike (MS)
1205050180	574319013(MW-LF-28-2022Q1S) 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.

Technical Information

Sample Dilutions

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. Samples 574319001 (MW-LF-10-2022Q1), 574319003 (MW-LF-20-2022Q1), 574319004 (MW-LF-21-2022Q1), 574319005 (DU-W52-CCR-22101), 574319007 (MW-LF-22D-2022Q1), 574319008 (MW-LF-23D-2022Q1), 574319009 (MW-LF-24-2022Q1), 574319010 (MW-LF-25-2022Q1) and 574319011 (MW-LF-26-2022Q1) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	574319									
	001	003	004	005	007	008	009	010	011	
Boron	1X	5X	5X	1X	5X	5X	1X	1X	1X	
Calcium	5X	5X	5X	5X	5X	5X	5X	5X	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.

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.

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: 574319 GEL Work Order: 574319

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- B Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
- 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: Edmund Frampton

Date: 01 APR 2022

Title: Group Leader

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319001

BASIS: As Received

DATE COLLECTED 23-MAR-22

CLIENT ID: MW-LF-10-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	63.4	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 18:29	220330-1	2245625
7440-70-2	Calcium	66800	ug/L		150	500	500	5	MS	SKJ	03/30/22 18:31	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319002

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-11-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	21.8	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 18:33	220330-1	2245625
7440-70-2	Calcium	17100	ug/L		30.0	100	100	1	MS	SKJ	03/30/22 18:33	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319003

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-20-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	206	ug/L		20.0	75.0	75.0	5	MS	SKJ	03/30/22 18:35	220330-1	2245625
7440-70-2	Calcium	151000	ug/L		150	500	500	5	MS	SKJ	03/30/22 18:35	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319004

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-21-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	208	ug/L		20.0	75.0	75.0	5	MS	SKJ	03/30/22 18:37	220330-1	2245625
7440-70-2	Calcium	134000	ug/L		150	500	500	5	MS	SKJ	03/30/22 18:37	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319005

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: DU-W52-CCR-22101

LEVEL: Low

DATE RECEIVED 24-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	84.0	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 18:42	220330-1	2245625
7440-70-2	Calcium	184000	ug/L		150	500	500	5	MS	SKJ	03/30/22 18:44	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319006

BASIS: As Received

DATE COLLECTED 23-MAR-22

CLIENT ID: FBLK-W52-CCR-22101

LEVEL: Low

DATE RECEIVED 24-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	4.00	ug/L	U	4.00	15.0	15.0	1	MS	SKJ	03/30/22 18:46	220330-1	2245625
7440-70-2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	SKJ	03/30/22 18:46	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319007

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-22D-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	343	ug/L		20.0	75.0	75.0	5	MS	SKJ	03/30/22 18:48	220330-1	2245625
7440-70-2	Calcium	85300	ug/L		150	500	500	5	MS	SKJ	03/30/22 18:48	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319008

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-23D-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	277	ug/L		20.0	75.0	75.0	5	MS	SKJ	03/30/22 19:00	220330-1	2245625
7440-70-2	Calcium	65700	ug/L		150	500	500	5	MS	SKJ	03/30/22 19:00	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319009

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-24-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	84.6	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 19:10	220330-1	2245625
7440-70-2	Calcium	103000	ug/L		150	500	500	5	MS	SKJ	03/30/22 19:20	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319010

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-25-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	83.0	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 19:12	220330-1	2245625
7440-70-2	Calcium	178000	ug/L		150	500	500	5	MS	SKJ	03/30/22 19:22	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319011

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-26-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	167	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 19:18	220330-1	2245625
7440-70-2	Calcium	161000	ug/L		150	500	500	5	MS	SKJ	03/30/22 19:24	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319012

BASIS: As Received

DATE COLLECTED 23-MAR-22

CLIENT ID: MW-LF-27-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	30.3	ug/L		4.00	15.0	15.0	1	MS	SKJ	03/30/22 19:26	220330-1	2245625
7440-70-2	Calcium	28500	ug/L		30.0	100	100	1	MS	SKJ	03/30/22 19:26	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319013

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: MW-LF-28-2022Q1

LEVEL: Low

DATE RECEIVED 24-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	9.17	ug/L	J	4.00	15.0	15.0	1	MS	SKJ	03/30/22 19:38	220330-1	2245625
7440-70-2	Calcium	10200	ug/L		30.0	100	100	1	MS	SKJ	03/30/22 19:38	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 574319

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:574319014

BASIS: As Received

DATE COLLECTED 24-MAR-22

CLIENT ID: FBLK-W52-CCR-22102

LEVEL: Low

DATE RECEIVED 24-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	4.00	ug/L	U	4.00	15.0	15.0	1	MS	SKJ	03/30/22 19:48	220330-1	2245625
7440-70-2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	SKJ	03/30/22 19:48	220330-1	2245625

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245625	2245624	EPA 200.2	50	mL	50	mL	03/25/22	LG2

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 574319

Contract: DMNN00101

Lab Code: GEL

Instrument ID: ICPMS11

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M*</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01	Boron	99.8	ug/L	100	ug/L	99.8	90.0 – 110.0	MS	30-MAR-22 18:05	220330-1
	Calcium	4870	ug/L	5000	ug/L	97.3	90.0 – 110.0	MS	30-MAR-22 18:05	220330-1
CCV01	Boron	96.9	ug/L	100	ug/L	96.9	90.0 – 110.0	MS	30-MAR-22 18:15	220330-1
	Calcium	5070	ug/L	5000	ug/L	101.3	90.0 – 110.0	MS	30-MAR-22 18:15	220330-1
CCV02	Boron	101	ug/L	100	ug/L	100.8	90.0 – 110.0	MS	30-MAR-22 18:21	220330-1
	Calcium	5030	ug/L	5000	ug/L	100.5	90.0 – 110.0	MS	30-MAR-22 18:21	220330-1
CCV03	Boron	97.9	ug/L	100	ug/L	97.9	90.0 – 110.0	MS	30-MAR-22 18:38	220330-1
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	MS	30-MAR-22 18:38	220330-1
CCV04	Boron	95.8	ug/L	100	ug/L	95.8	90.0 – 110.0	MS	30-MAR-22 18:56	220330-1
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 – 110.0	MS	30-MAR-22 18:56	220330-1
CCV05	Boron	99.4	ug/L	100	ug/L	99.4	90.0 – 110.0	MS	30-MAR-22 19:14	220330-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	MS	30-MAR-22 19:14	220330-1
CCV06	Boron	94.3	ug/L	100	ug/L	94.3	90.0 – 110.0	MS	30-MAR-22 19:34	220330-1
	Calcium	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	MS	30-MAR-22 19:34	220330-1
CCV07	Boron	93.6	ug/L	100	ug/L	93.6	90.0 – 110.0	MS	30-MAR-22 19:56	220330-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	MS	30-MAR-22 19:56	220330-1

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS
-2b-
CRDL Standard for ICP & ICPMS

SDG No: 574319

Contract: DMNN00101

Lab Code: GEL

Instrument ID: ICPMS11

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M*</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01	Boron	16.3	ug/L	15	ug/L	108.6	70.0 – 130.0	MS	30-MAR-22 18:09	220330-1
	Calcium	223	ug/L	200	ug/L	111.6	70.0 – 130.0	MS	30-MAR-22 18:09	220330-1
CRDL02	Boron	14.7	ug/L	15	ug/L	98.2	70.0 – 130.0	MS	30-MAR-22 18:50	220330-1
	Calcium	227	ug/L	200	ug/L	113.4	70.0 – 130.0	MS	30-MAR-22 18:50	220330-1
CRDL03	Boron	14.3	ug/L	15	ug/L	95	70.0 – 130.0	MS	30-MAR-22 19:28	220330-1
	Calcium	223	ug/L	200	ug/L	111.7	70.0 – 130.0	MS	30-MAR-22 19:28	220330-1
CRDL04	Boron	12.4	ug/L	15	ug/L	82.5	70.0 – 130.0	MS	30-MAR-22 19:50	220330-1
	Calcium	227	ug/L	200	ug/L	113.3	70.0 – 130.0	MS	30-MAR-22 19:50	220330-1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 574319

Contract: DMNN00101

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M*</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
ICB01	Boron	4.78	+/-7.5	B	4.0	15.0	LIQ	MS	30-MAR-22 18:07	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 18:07	220330-1
CCB01	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	30-MAR-22 18:17	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 18:17	220330-1
CCB02	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	30-MAR-22 18:23	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 18:23	220330-1
CCB03	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	30-MAR-22 18:40	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 18:40	220330-1
CCB04	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	30-MAR-22 18:58	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 18:58	220330-1
CCB05	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	30-MAR-22 19:16	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 19:16	220330-1
CCB06	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	30-MAR-22 19:36	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 19:36	220330-1
CCB07	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	30-MAR-22 19:58	220330-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	30-MAR-22 19:58	220330-1

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 574319
Contract: DMNN00101
Matrix: GW

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M*</u>	<u>MDL</u>	<u>RDL</u>
1205050174	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:

MS EPA 200.8 SC_NPDES

METALS
-4-
Interference Check Sample

SDG No: 574319

Contract: DMNN00101

Lab Code: GEL

Instrument: ICPMS11

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Boron	3.41	ug/L					30-MAR-22 18:11	220330-1
	Calcium	102000	ug/L	100000	ug/L	102	80.0 - 120.0	30-MAR-22 18:11	220330-1
ICSAB01									
	Boron	22.1	ug/L	20	ug/L	111	80.0 - 120.0	30-MAR-22 18:13	220330-1
	Calcium	102000	ug/L	100000	ug/L	102	80.0 - 120.0	30-MAR-22 18:13	220330-1
ICSA02									
	Boron	0.763	ug/L					30-MAR-22 18:52	220330-1
	Calcium	99300	ug/L	100000	ug/L	99.3	80.0 - 120.0	30-MAR-22 18:52	220330-1
ICSAB02									
	Boron	20.2	ug/L	20	ug/L	101	80.0 - 120.0	30-MAR-22 18:54	220330-1
	Calcium	98700	ug/L	100000	ug/L	98.7	80.0 - 120.0	30-MAR-22 18:54	220330-1
ICSA03									
	Boron	0.949	ug/L					30-MAR-22 19:30	220330-1
	Calcium	99000	ug/L	100000	ug/L	99	80.0 - 120.0	30-MAR-22 19:30	220330-1
ICSAB03									
	Boron	20.4	ug/L	20	ug/L	102	80.0 - 120.0	30-MAR-22 19:32	220330-1
	Calcium	96600	ug/L	100000	ug/L	96.6	80.0 - 120.0	30-MAR-22 19:32	220330-1
ICSA04									
	Boron	0.112	ug/L					30-MAR-22 19:52	220330-1
	Calcium	99100	ug/L	100000	ug/L	99.1	80.0 - 120.0	30-MAR-22 19:52	220330-1
ICSAB04									
	Boron	19.9	ug/L	20	ug/L	99.5	80.0 - 120.0	30-MAR-22 19:54	220330-1
	Calcium	101000	ug/L	100000	ug/L	101	80.0 - 120.0	30-MAR-22 19:54	220330-1

METALS

-5a-

Matrix Spike Summary

SDG NO. 574319 Client ID: MW-LF-23D-2022Q1S

Contract: DMNN00101 Level: Low

Matrix: GROUND WATER % Solids:

Sample ID: 574319008 Spike ID: 1205050177

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M*</u>
Boron	ug/L	75-125	382		277		100	106		MS
Calcium	ug/L		67700		65700		2000	103	N/A	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-5a-

Matrix Spike Summary

SDG NO. 574319 Client ID: MW-LF-28-2022Q1S

Contract: DMNN00101 Level: Low

Matrix: GROUND WATER % Solids:

Sample ID: 574319013 Spike ID: 1205050180

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M*</u>
Boron	ug/L	75-125	109		9.17	B	100	100		MS
Calcium	ug/L		12000		10200		2000	92.7	N/A	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

Metals
-6-
Duplicate Sample Summary

SDG No.: 574319

Lab Code: GEL

Contract: DMNN00101

Client ID: MW-LF-23D-2022Q1D

Matrix: GROUND WATER

Level: Low

Sample ID: 574319008

Duplicate ID: 1205050176

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Boron	ug/L	+/-150	277		293		5.7		MS
Calcium	ug/L	+/-20%	65700		66400		1.07		MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

Metals
-6-
Duplicate Sample Summary

SDG No.: 574319

Lab Code: GEL

Contract: DMNN00101

Client ID: MW-LF-28-2022Q1D

Matrix: GROUND WATER

Level: Low

Sample ID: 574319013

Duplicate ID: 1205050179

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Boron	ug/L	+/-30	9.17	B	9.32	B	1.67		MS
Calcium	ug/L	+/-20%	10200		10100		.565		MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 574319

Contract: DMNN00101

Aqueous LCS Source: Enviromental Express

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M*</u>
1205050175	Boron	ug/L	100	102		102	85-115	MS
	Calcium	ug/L	2000	2120		106	85-115	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 574319 Client ID: MW-LF-23D-2022Q1L

Contract: DMNN00101

Matrix: LIQUID Level: Low

Sample ID: 574319008 Serial Dilution ID: 1205050178

<u>Analyte</u>	<u>Initial Value</u> ug/L	<u>C</u>	<u>Serial Value</u> ug/L	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M*</u>
Boron	55.3		80.9		46.238			MS
Calcium	13100		13400		2.299		10	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 574319 Client ID: MW-LF-28-2022Q1L

Contract: DMNN00101

Matrix: LIQUID Level: Low

Sample ID: 574319013 Serial Dilution ID: 1205050181

<u>Analyte</u>	<u>Initial Value</u> ug/L	<u>C</u>	<u>Serial Value</u> ug/L	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M*</u>
Boron	9.17	B	20	U	96.76			MS
Calcium	10200		10200		.296		10	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 574319

Method Type: MS

Contract: DMNN00101

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 2245624							
1205050174	MB for batch 2245624	MB	G	25-MAR-22	50mL	50mL	
1205050175	LCS for batch 2245624	LCS	G	25-MAR-22	50mL	50mL	
1205050177	MW-LF-23D-2022Q1S	MS	G	25-MAR-22	50mL	50mL	
1205050180	MW-LF-28-2022Q1S	MS	G	25-MAR-22	50mL	50mL	
1205050176	MW-LF-23D-2022Q1D	DUP	G	25-MAR-22	50mL	50mL	
1205050179	MW-LF-28-2022Q1D	DUP	G	25-MAR-22	50mL	50mL	
574319001	MW-LF-10-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319002	MW-LF-11-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319003	MW-LF-20-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319004	MW-LF-21-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319005	DU-W52-CCR-22101	SAMPLE	G	25-MAR-22	50mL	50mL	
574319006	FBLK-W52-CCR-22101	SAMPLE	G	25-MAR-22	50mL	50mL	
574319007	MW-LF-22D-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319008	MW-LF-23D-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319009	MW-LF-24-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319010	MW-LF-25-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319011	MW-LF-26-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319012	MW-LF-27-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	
574319013	MW-LF-28-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL	

EPA

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 574319

Method Type: MS

Contract: DMNN00101

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
574319014	FBLK-W52-CCR-22102	SAMPLE	G	25-MAR-22	50mL	50mL	

General Chem Analysis

Case Narrative

**General Chemistry
Technical Case Narrative
Dominion Energy
SDG #: 574319**

Product: Ion Chromatography

Analytical Method: EPA 300.0

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

Analytical Batch: 2245819

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
574319001	MW-LF-10-2022Q1
574319002	MW-LF-11-2022Q1
574319003	MW-LF-20-2022Q1
574319004	MW-LF-21-2022Q1
574319005	DU-W52-CCR-22101
574319006	FBLK-W52-CCR-22101
574319007	MW-LF-22D-2022Q1
574319008	MW-LF-23D-2022Q1
574319009	MW-LF-24-2022Q1
574319010	MW-LF-25-2022Q1
574319011	MW-LF-26-2022Q1
574319012	MW-LF-27-2022Q1
574319013	MW-LF-28-2022Q1
574319014	FBLK-W52-CCR-22102
1205050541	Method Blank (MB)
1205050542	Laboratory Control Sample (LCS)
1205050543	574314001(GW-16-2022Q1) Sample Duplicate (DUP)
1205050544	574314001(GW-16-2022Q1) Post Spike (PS)
1205050545	574319008(MW-LF-23D-2022Q1) Sample Duplicate (DUP)
1205050546	574319008(MW-LF-23D-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.

Quality Control (QC) Information

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

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

Analyte	Sample	Value
Chloride	1205050546 (MW-LF-23D-2022Q1PS)	121* (90%-110%)
Sulfate	1205050546 (MW-LF-23D-2022Q1PS)	113* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205050543 (GW-16-2022Q1DUP), 1205050544 (GW-16-2022Q1PS), 1205050545 (MW-LF-23D-2022Q1DUP), 1205050546 (MW-LF-23D-2022Q1PS), 574319001 (MW-LF-10-2022Q1), 574319003 (MW-LF-20-2022Q1), 574319004 (MW-LF-21-2022Q1), 574319005 (DU-W52-CCR-22101), 574319007 (MW-LF-22D-2022Q1), 574319008 (MW-LF-23D-2022Q1), 574319009 (MW-LF-24-2022Q1), 574319010 (MW-LF-25-2022Q1) and 574319011 (MW-LF-26-2022Q1) 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.

Analyte	574319									
	001	003	004	005	007	008	009	010	011	
Chloride	5X	2X	2X	40X	5X	2X	5X	40X	25X	
Sulfate	1X	1X	1X	40X	5X	2X	1X	40X	25X	

Miscellaneous Information

Additional Comments

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

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batches: 2247318 and 2247555

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

GEL Sample ID#	Client Sample Identification
574319001	MW-LF-10-2022Q1
574319002	MW-LF-11-2022Q1
574319003	MW-LF-20-2022Q1
574319004	MW-LF-21-2022Q1
574319005	DU-W52-CCR-22101
574319006	FBLK-W52-CCR-22101
574319007	MW-LF-22D-2022Q1
574319008	MW-LF-23D-2022Q1
574319009	MW-LF-24-2022Q1
574319010	MW-LF-25-2022Q1
574319011	MW-LF-26-2022Q1
574319012	MW-LF-27-2022Q1
574319013	MW-LF-28-2022Q1
574319014	FBLK-W52-CCR-22102
1205053607	Method Blank (MB)
1205053608	Laboratory Control Sample (LCS)
1205053609	574166001(NonSDG) Sample Duplicate (DUP)
1205053610	574314001(GW-16-2022Q1) Sample Duplicate (DUP)
1205053611	574324001(NonSDG) Sample Duplicate (DUP)
1205053612	574361001(NonSDG) Sample Duplicate (DUP)
1205054038	Method Blank (MB)
1205054039	Laboratory Control Sample (LCS)
1205054040	574319008(MW-LF-23D-2022Q1) Sample Duplicate (DUP)
1205054041	574456004(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	1205053612 (Non SDG 574361001DUP)	5.71* (0%-5%)

Miscellaneous Information

Additional Comments

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

Certification Statement

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

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Qualifier Definition Report for

DMNN001 Dominion Energy (50149867)

Client SDG: 574319 GEL Work Order: 574319

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: 06 APR 2022

Title: Team Leader

Sample Data Summary

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-10-2022Q1	Project: DMNN00101
Sample ID: 574319001	Client ID: DMNN001
Matrix: GW	
Collect Date: 23-MAR-22 15:55	
Receive Date: 24-MAR-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.438	0.0330	0.100	mg/L		1	LXA2	03/25/22	1746	2245819	1
Sulfate		5.08	0.133	0.400	mg/L		1					
Chloride		20.4	0.335	1.00	mg/L		5	LXA2	03/26/22	0841	2245819	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		350	3.40	14.3	mg/L			KLP1	03/30/22	1510	2247318	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-11-2022Q1	Project: DMNN00101
Sample ID: 574319002	Client ID: DMNN001
Matrix: GW	
Collect Date: 24-MAR-22 09:20	
Receive Date: 24-MAR-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.49	0.0670	0.200	mg/L		1	LXA2	03/25/22	1816	2245819	1
Fluoride		0.235	0.0330	0.100	mg/L		1					
Sulfate		1.36	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		98.6	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-20-2022Q1	Project:	DMNN00101
Sample ID:	574319003	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	24-MAR-22 10:40		
Receive Date:	24-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.206	0.0330	0.100	mg/L		1	LXA2	03/25/22	1847	2245819	1
Sulfate		5.41	0.133	0.400	mg/L		1					
Chloride		12.5	0.134	0.400	mg/L		2	LXA2	03/26/22	0912	2245819	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		651	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-21-2022Q1	Project: DMNN00101
Sample ID: 574319004	Client ID: DMNN001
Matrix: GW	
Collect Date: 24-MAR-22 11:55	
Receive Date: 24-MAR-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.228	0.0330	0.100	mg/L		1	LXA2	03/25/22	1918	2245819	1
Sulfate		7.14	0.133	0.400	mg/L		1					
Chloride		11.5	0.134	0.400	mg/L		2	LXA2	03/26/22	0942	2245819	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		620	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: DU-W52-CCR-22101

Project: DMNN00101

Sample ID: 574319005

Client ID: DMNN001

Matrix: GW

Collect Date: 24-MAR-22 12:00

Receive Date: 24-MAR-22

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.611	0.0330	0.100	mg/L		1	LXA2	03/25/22	1949	2245819	1
Chloride		19.4	2.68	8.00	mg/L		40	LXA2	03/26/22	1013	2245819	2
Sulfate		404	5.32	16.0	mg/L		40					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1080	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: FBLK-W52-CCR-22101	Project: DMNN00101
Sample ID: 574319006	Client ID: DMNN001
Matrix: GW	
Collect Date: 23-MAR-22 15:35	
Receive Date: 24-MAR-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.154	0.0670	0.200	mg/L		1	LXA2	03/25/22	2020	2245819	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	3.40	14.3	mg/L			KLP1	03/30/22	1510	2247318	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-22D-2022Q1	Project:	DMNN00101
Sample ID:	574319007	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	24-MAR-22 12:30		
Receive Date:	24-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.248	0.0330	0.100	mg/L		1	LXA2	03/25/22	2051	2245819	1
Chloride		10.0	0.335	1.00	mg/L		5	LXA2	03/26/22	1044	2245819	2
Sulfate		32.9	0.665	2.00	mg/L		5					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		579	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-23D-2022Q1
Sample ID: 574319008
Matrix: GW
Collect Date: 24-MAR-22 13:10
Receive Date: 24-MAR-22
Collector: Client

Project: DMNN00101
Client ID: DMNN001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.327	0.0330	0.100	mg/L		1	LXA2	03/25/22	2122	2245819	1
Chloride		16.0	0.134	0.400	mg/L		2	LXA2	03/26/22	1521	2245819	2
Sulfate		22.5	0.266	0.800	mg/L		2					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		516	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-24-2022Q1 Project: DMNN00101
Sample ID: 574319009 Client ID: DMNN001
Matrix: GW
Collect Date: 24-MAR-22 12:20
Receive Date: 24-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.403	0.0330	0.100	mg/L		1	LXA2	03/26/22	0027	2245819	1
Sulfate		12.4	0.133	0.400	mg/L		1					
Chloride		19.1	0.335	1.00	mg/L		5	LXA2	03/26/22	1653	2245819	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		477	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-25-2022Q1	Project: DMNN00101
Sample ID: 574319010	Client ID: DMNN001
Matrix: GW	
Collect Date: 24-MAR-22 10:25	
Receive Date: 24-MAR-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.610	0.0330	0.100	mg/L		1	LXA2	03/26/22	0058	2245819	1
Chloride		18.2	2.68	8.00	mg/L		40	LXA2	03/26/22	1724	2245819	2
Sulfate		373	5.32	16.0	mg/L		40					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		1060	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-26-2022Q1	Project:	DMNN00101
Sample ID:	574319011	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	24-MAR-22 09:15		
Receive Date:	24-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.202	0.0330	0.100	mg/L		1	LXA2	03/26/22	0129	2245819	1
Chloride		136	1.68	5.00	mg/L		25	LXA2	03/26/22	1755	2245819	2
Sulfate		61.9	3.33	10.0	mg/L		25					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		900	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-27-2022Q1	Project: DMNN00101
Sample ID: 574319012	Client ID: DMNN001
Matrix: GW	
Collect Date: 23-MAR-22 16:55	
Receive Date: 24-MAR-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		7.25	0.0670	0.200	mg/L		1	LXA2	03/26/22	0159	2245819	1
Fluoride		0.242	0.0330	0.100	mg/L		1					
Sulfate		2.45	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		147	3.40	14.3	mg/L			KLP1	03/30/22	1510	2247318	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-28-2022Q1

Project: DMNN00101

Sample ID: 574319013

Client ID: DMNN001

Matrix: GW

Collect Date: 24-MAR-22 11:30

Receive Date: 24-MAR-22

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.96	0.0670	0.200	mg/L		1	LXA2	03/26/22	0230	2245819	1
Fluoride	J	0.0858	0.0330	0.100	mg/L		1					
Sulfate		0.839	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		47.1	3.40	14.3	mg/L			KLP1	03/30/22	1510	2247318	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	SM 2540C		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: April 6, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	FBLK-W52-CCR-22102	Project:	DMNN00101
Sample ID:	574319014	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	24-MAR-22 10:28		
Receive Date:	24-MAR-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.117	0.0670	0.200	mg/L		1	LXA2	03/26/22	0301	2245819	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	3.40	14.3	mg/L			KLP1	03/31/22	1356	2247555	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	SM 2540C		

Notes:

Column headers are defined as follows:

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

Quality Control Summary

GEL LABORATORIES LLC

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

QC Summary

Report Date: April 6, 2022

Page 1 of 4

Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia

Contact: Kelly Hicks

Workorder: 574319

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2245819										
QC1205050543	574314001	DUP									
Chloride		36.1		36.0	mg/L	0.178		(0%-20%)	LXA2	03/26/22	04:03
Fluoride		0.303		0.297	mg/L	2.17	^	(+/-2)		03/25/22	12:37
Sulfate		44.0		43.7	mg/L	0.75		(0%-20%)		03/26/22	04:03
QC1205050545	574319008	DUP									
Chloride		16.0		15.9	mg/L	0.896		(0%-20%)		03/26/22	15:51
Fluoride		0.327		0.327	mg/L	0.0917	^	(+/-2)		03/25/22	21:52
Sulfate		22.5		22.4	mg/L	0.606		(0%-20%)		03/26/22	15:51
QC1205050542	LCS										
Chloride	5.00			4.72	mg/L			94.5 (90%-110%)		03/25/22	11:35
Fluoride	2.50			2.31	mg/L			92.4 (90%-110%)			
Sulfate	10.0			9.61	mg/L			96.1 (90%-110%)			
QC1205050541	MB										
Chloride			U	ND	mg/L					03/25/22	11:05
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205050544	574314001	PS									
Chloride	5.00	3.61		8.98	mg/L			108 (90%-110%)		03/26/22	04:34

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QC Summary

Workorder: 574319

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2245819										
Fluoride	2.50	0.303		2.69	mg/L		95.3	(90%-110%)	LXA2	03/25/22	13:08
Sulfate	10.0	4.40		14.7	mg/L		103	(90%-110%)		03/26/22	04:34
QC1205050546	574319008	PS									
Chloride	5.00	8.00		14.0	mg/L		121 *	(90%-110%)		03/26/22	16:22
Fluoride	2.50	0.327		2.69	mg/L		94.4	(90%-110%)		03/25/22	22:23
Sulfate	10.0	11.3		22.5	mg/L		113 *	(90%-110%)		03/26/22	16:22
Solids Analysis											
Batch	2247318										
QC1205053609	574166001	DUP									
Total Dissolved Solids		2010		2000	mg/L	0.641		(0%-5%)	KLP1	03/30/22	15:10
QC1205053610	574314001	DUP									
Total Dissolved Solids		630		631	mg/L	0.227		(0%-5%)		03/30/22	15:10
QC1205053611	574324001	DUP									
Total Dissolved Solids		346		346	mg/L	0		(0%-5%)		03/30/22	15:10
QC1205053612	574361001	DUP									
Total Dissolved Solids		257		243	mg/L	5.71 *		(0%-5%)		03/30/22	15:10
QC1205053608	LCS										
Total Dissolved Solids	300			289	mg/L		96.2	(95%-105%)		03/30/22	15:10
QC1205053607	MB										
Total Dissolved Solids			U	ND	mg/L					03/30/22	15:10

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QC Summary

Workorder: 574319

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2247555										
QC1205054040	574319008	DUP									
Total Dissolved Solids		516		524	mg/L	1.65		(0%-5%)	KLP1	03/31/22	13:56
QC1205054041	574456004	DUP									
Total Dissolved Solids		2570		2600	mg/L	1.16		(0%-5%)		03/31/22	13:56
QC1205054039	LCS										
Total Dissolved Solids	300			300	mg/L		100	(95%-105%)		03/31/22	13:56
QC1205054038	MB										
Total Dissolved Solids			U	ND	mg/L					03/31/22	13:56

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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QC Summary

Workorder: 574319

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



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

**Williams Power Station Groundwater Sampling
Samples Collected between: 3/21/2022 and 3/24/2022**

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:

574319

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	Analyte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Uncertainty	Unit
FBLK-W52-CCR-22101	Field Blank	FB	EPA 300.0	Chloride	N	0.154	J	RL	0.0670	0.200		mg/L
MW-LF-28-2022Q1	MW-LF-28	N	EPA 200.8	Boron	T	9.17	J	RL	4.00	15.0		ug/L
MW-LF-28-2022Q1	MW-LF-28	N	EPA 300.0	Fluoride	N	0.0858	J	RL	0.0330	0.100		mg/L
FBLK-W52-CCR-22102	Field Blank	FB	EPA 300.0	Chloride	N	0.117	J	RL	0.0670	0.200		mg/L

Data Qualifiers

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 Codes and Explanations

BE	Equipment blank contamination.
BF	Field blank contamination.
BL	Laboratory blank contamination.
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
H	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
T	Temperature preservation issue.
X	Percent solids < 50%.
Y	Chemical yield outside of acceptance limits
ZZ	Other

Lab Sample ID	574319001
Sys Sample Code	MW-LF-10-2022Q1
Sample Name	MW-LF-10-2022Q1
Sample Date	3/23/2022 3:55:00 PM
Location	W52-GW-10 / GW-10
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	63.4				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	66800				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.438				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	5.08				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	20.4				0.335	0.335	1.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	350				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319002
Sys Sample Code	MW-LF-11-2022Q1
Sample Name	MW-LF-11-2022Q1
Sample Date	3/24/2022 9:20:00 AM
Location	W52-MW-LF-11 / MW-LF-11
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	21.8				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	17100				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	6.49				0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.235				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	1.36				0.133	0.133	0.400	Y	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	98.6				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319003
Sys Sample Code	MW-LF-20-2022Q1
Sample Name	MW-LF-20-2022Q1
Sample Date	3/24/2022 10:40:00 AM
Location	W52-MW-LF-20 / MW-LF-20
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	T	ug/L	206				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	151000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.206				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	5.41				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	12.5				0.134	0.134	0.400	Y	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	651				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319004
Sys Sample Code	MW-LF-21-2022Q1
Sample Name	MW-LF-21-2022Q1
Sample Date	3/24/2022 11:55:00 AM
Location	W52-MW-LF-21 / MW-LF-21
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	T	ug/L	208				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	134000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.228				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	7.14				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	11.5				0.134	0.134	0.400	Y	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	620				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319005
Sys Sample Code	DU-W52-CCR-22101
Sample Name	DU-W52-CCR-22101
Sample Date	3/24/2022 12:00:00 PM
Location	W52-MW-LF-25 / MW-LF-25
Sample Type	FD
Matrix	GW
Parent Sample	MW-LF-25-2022Q1

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	84.0				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	184000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.611				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	19.4				2.68	2.68	8.00	Y	Yes	40	NA
	Sulfate	14808-79-8	N	mg/L	404				5.32	5.32	16.0	Y	Yes	40	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1080				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319006
Sys Sample Code	FBLK-W52-CCR-22101
Sample Name	FBLK-W52-CCR-22101
Sample Date	3/23/2022 3:35:00 PM
Location	WMS-FB / Field 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	T	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	T	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	0.154	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
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA

Lab Sample ID	574319007
Sys Sample Code	MW-LF-22D-2022Q1
Sample Name	MW-LF-22D-2022Q1
Sample Date	3/24/2022 12:30:00 PM
Location	W52-MW-LF-22D / MW-LF-22D
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	T	ug/L	343				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	85300				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.248				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	10.0				0.335	0.335	1.00	Y	Yes	5	NA
	Sulfate	14808-79-8	N	mg/L	32.9				0.665	0.665	2.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	579				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319008
Sys Sample Code	MW-LF-23D-2022Q1
Sample Name	MW-LF-23D-2022Q1
Sample Date	3/24/2022 1:10:00 PM
Location	W52-MW-LF-23D / MW-LF-23D
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	T	ug/L	277				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	65700				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.327				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	16.0				0.134	0.134	0.400	Y	Yes	2	NA
	Sulfate	14808-79-8	N	mg/L	22.5				0.266	0.266	0.800	Y	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	516				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319009
Sys Sample Code	MW-LF-24-2022Q1
Sample Name	MW-LF-24-2022Q1
Sample Date	3/24/2022 12:20:00 PM
Location	W52-MW-LF-24 / MW-LF-24
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	T	ug/L	84.6				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	103000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.403				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	12.4				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	19.1				0.335	0.335	1.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	477				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319010
Sys Sample Code	MW-LF-25-2022Q1
Sample Name	MW-LF-25-2022Q1
Sample Date	3/24/2022 10:25:00 AM
Location	W52-MW-LF-25 / MW-LF-25
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	T	ug/L	83.0				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	178000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.610				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	18.2				2.68	2.68	8.00	Y	Yes	40	NA
	Sulfate	14808-79-8	N	mg/L	373				5.32	5.32	16.0	Y	Yes	40	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	1060				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319011
Sys Sample Code	MW-LF-26-2022Q1
Sample Name	MW-LF-26-2022Q1
Sample Date	3/24/2022 9:15:00 AM
Location	W52-MW-LF-26 / MW-LF-26
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	T	ug/L	167				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	161000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.202				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	136				1.68	1.68	5.00	Y	Yes	25	NA
	Sulfate	14808-79-8	N	mg/L	61.9				3.33	3.33	10.0	Y	Yes	25	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	900				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319012
Sys Sample Code	MW-LF-27-2022Q1
Sample Name	MW-LF-27-2022Q1
Sample Date	3/23/2022 4:55:00 PM
Location	W52-MW-LF-27 / MW-LF-27
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	T	ug/L	30.3				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	28500				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	7.25				0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.242				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	2.45				0.133	0.133	0.400	Y	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	147				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319013
Sys Sample Code	MW-LF-28-2022Q1
Sample Name	MW-LF-28-2022Q1
Sample Date	3/24/2022 11:30:00 AM
Location	W52-MW-LF-28 / MW-LF-28
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	T	ug/L	9.17	J	RL		4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	10200				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.96				0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.0858	J	RL		0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.839				0.133	0.133	0.400	Y	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	47.1				3.40	3.40	14.3	Y	Yes	1	NA

Lab Sample ID	574319014
Sys Sample Code	FBLK-W52-CCR-22102
Sample Name	FBLK-W52-CCR-22102
Sample Date	3/24/2022 10:28:00 AM
Location	WMS-FB / Field 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	T	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	T	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	0.117	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
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA

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

9/21/22

Generating Station	Well Number	Alternate Well Number 1	Measured Well Depth (ft bTOC)	Time Gauged	Water Level Measurements (ft. bTOC)	Water Elevations (ft.)
Williams Hwy 52	GW-12	--	21.39	1034	12.50	
Williams Hwy 52	GW-13	--	21.08	1030	5.32	
Williams Hwy 52	GW-14	--	19.66	1002	6.72	
Williams Hwy 52	GW-14R	--	27.29	1005	10.42	
Williams Hwy 52	GW-15	--	17.86	1008	9.01	
Williams Hwy 52	GW-16	--	36.80	1049	10.87	
Williams Hwy 52	GW-17	--	28.40	1050	10.59	
Williams Hwy 52	GW-18	--	39.10	1052	12.20	
Williams Hwy 52	GW-19	--	38.66	1054	13.35	
Williams Hwy 52	MW-LF-10	GW-10	20.70	1035	7.85	
Williams Hwy 52	MW-LF-11	GW-11	21.80	1038	11.35	
Williams Hwy 52	MW-LF-20	GW-20	32.82	1004	20.01	
Williams Hwy 52	MW-LF-21	GW-21	28.20	1007	13.43	
Williams Hwy 52	MW-LF-22	GW-22	24.49	1013	12.16	
Williams Hwy 52	MW-LF-22D	GW-22D	33.43	1011	12.13	
Williams Hwy 52	MW-LF-23	GW-23	23.05	1017	12.36	
Williams Hwy 52	MW-LF-23D	GW-23D	33.36	1015	12.39	
Williams Hwy 52	MW-LF-24	GW-24	25.41	1025	13.66	
Williams Hwy 52	MW-LF-25	GW-25	24.21	1018	12.92	
Williams Hwy 52	MW-LF-26	GW-26	33.45	1022	13.66 23.26	
Williams Hwy 52	MW-LF-27	--	22.75	1032	8.29	
Williams Hwy 52	MW-LF-28	--	19.34	1038	10.11	
Williams Hwy 52	PZ-01	--	29.89	1025	6.49	
Williams Hwy 52	PZ-02	--	32.54	1028	6.43	
Williams Hwy 52	PZ-03	--	32.86	1022	7.80	
Williams Hwy 52	PZ-04	--	33.22	1012	9.98	
Williams Hwy 52	PZ-05	--	32.81	-	NM	

Notes:

AMSL = Above Mean Sea Level

ft bgs = feet below ground surface



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: JAY	DATE: 9/21/22
	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-LF-10	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1322	DATE: 9/21/22	SAMPLE	TIME: 1407	DATE: 9/21/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 6.68 SU		CONDUCTIVITY: 804.89 umhos/cm		
DEPTH TO WATER: 7.83 T/ PVC	ORP: 113.7 mV		DO: 0.33 mg/L		
DEPTH TO BOTTOM: 20.70 T/ PVC	TURBIDITY: 2.64 NTU				
WELL VOLUME: 2.12 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	TEMPERATURE: 28.83 °C		OTHER:		
VOLUME REMOVED: 0.87 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS	COLOR: clear		ODOR: None		
COLOR: clear	ODOR: None		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR:		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			FILTRATE ODOR:		
			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DU-		
			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1327	75	6.65	798.44	120.7	1.89	21.3	29.80	8.18	INITIAL
1337	50	6.71	799.55	118.4	0.50	6.54	29.02	8.80	*cant maintain
1342	50	6.70	816.02	117.1	0.40	4.01	28.54	9.10	drawdown
1347	50	6.70	808.83	116.0	0.37	3.81	29.01	9.28	
1352	50	6.69	807.75	115.2	0.37	3.41	29.17	9.40	
1357	50	6.69	800.98	114.6	0.34	2.79	28.83	9.51	
1402	50	6.68	806.11	114.4	0.34	2.59	28.78	9.60	
1407	50	6.68	804.89	113.7	0.33	2.64	28.83	9.69	Sample time
1429	50					2.85		9.98	Post

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JMB</u>	DATE: <u>9/21/22</u>
	BY: <u>JMB</u>	DATE: <u>9-23-22</u>

SAMPLE ID: MW-LF-11	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1327</u>	DATE: <u>9/21/2022</u>	SAMPLE	TIME: <u>1450</u>	DATE: <u>9/21/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>5.80</u> SU	CONDUCTIVITY: <u>199.77</u> umhos/cm	
DEPTH TO WATER: <u>11.28</u> T/ PVC			ORP: <u>42.7</u> mV	DO: <u>1.20</u> mg/L	
DEPTH TO BOTTOM: 21.80 T/ PVC			TURBIDITY: <u>2.78</u> NTU		
WELL VOLUME: <u>1.72</u> LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
VOLUME REMOVED: <u>2.6</u> LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>28.66</u> °C	OTHER: _____	
COLOR: <u>clear</u>			COLOR: <u>clear</u>	ODOR: <u>none</u>	
ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			FILTRATE ODOR: _____		
			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DU- _____		
			COMMENTS: _____		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1331	65	6.69	466.48	60.3	0.78	5.98	30.35	11.50	INITIAL
1345		6.73	457.57	46.2	0.37	3.39	28.82	11.51	
1350		6.65	402.19	39.7	0.48	4.23	29.42	11.51	
1355		6.53	371.91	36.8	0.37	3.41	29.61	11.51	
1400		6.43	347.29	35.1	0.44	2.78	29.50	11.52	
1405		6.35	315.00	33.8	0.56	2.59	29.57	11.52	
1410		6.22	281.44	33.1	0.83	2.33	29.29	11.53	
1415		6.10	252.80	32.9	1.02	2.35	29.35	11.53	
1420		6.03	236.26	33.7	1.11	2.28	29.56	11.53	
1425		5.96	219.35	35.1	1.22	2.36	29.38	11.53	

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____											
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED			NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
				<input type="checkbox"/> Y	<input type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
				<input type="checkbox"/> Y	<input type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: JAV	DATE: 9/22/22
	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-LF-20	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1044	DATE: 9/22/22	SAMPLE	TIME: 1127	DATE: 9/22/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: 6.28 SU CONDUCTIVITY: 1369.8 umhos/cm		
DEPTH TO WATER: 19.95 T/ PVC			ORP: 48.9 mV DO: 0.86 mg/L		
DEPTH TO BOTTOM: 32.82 T/ PVC			TURBIDITY: 2.93 NTU		
WELL VOLUME: 2.12 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
VOLUME REMOVED: 1.24 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: 27.26 °C OTHER: _____		
COLOR: Clear ODOR: None			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DU- _____		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1047	75	6.24	1384.0	89.4	1.26	3.97	27.06	20.34	INITIAL
1057	75	6.25	1371.1	78.5	0.60	4.07	26.76	20.90	*cant maintain
1102	50	6.26	1367.1	70.9	0.28	3.88	26.61	21.28	draw down
1107	50	6.28	1366.0	61.8	0.90	3.14	26.69	22.73	
1112	50	6.27	1365.8	68.1	1.02	3.89	26.81	22.94	
1117	30	6.28	1372.1	52.8	0.91	3.51	26.97	23.28	
1122	30	6.28	1372.8	50.3	0.87	3.16	27.16	23.59	
1127	30	6.28	1369.8	48.9	0.86	2.93	27.26	23.85	
1204	30					3.05		24.19	

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: JAY	DATE: 9/21/22
	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-LF-21	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1552	DATE: 9/21/22	SAMPLE	TIME: 1632	DATE: 9/21/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: 6.30 SU	CONDUCTIVITY: 1274.9 umhos/cm	
DEPTH TO WATER: 13.41 T/ PVC			ORP: 31.9 mV	DO: 0.26 mg/L	
DEPTH TO BOTTOM: 28.20 T/ PVC			TURBIDITY: 2.64 NTU		
WELL VOLUME: 2.44 LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: 28.59 °C OTHER: _____		
VOLUME REMOVED: 1.25 LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			COLOR: Clear ODOR: None		
COLOR: Clear ODOR: None			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input checked="" type="checkbox"/> MS/MSD <input type="checkbox"/> DU- _____		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1557	100	6.24	1289.2	82.4	0.38	5.58	29.25	13.96	INITIAL
1602	100	6.28	1299.2	58.0	0.25	3.86	28.93	14.91	
1607	50	6.29	1292.2	48.7	0.48	2.95	28.97	15.35	
1612	50/75	6.28	1321.2	43.6	0.51	3.12	29.59	15.70	
1617	75	6.29	1291.7	37.1	0.26	2.81	29.45	16.20	
1622	75	6.29	1289.3	35.8	0.25	2.88	29.05	16.60	
1627	75	6.30	1279.4	32.4	0.26	2.59	28.55	17.09	
1632	75	6.30	1274.9	31.9	0.26	2.64	28.59	17.52	Sample time
1704	75					4.03		18.58	Post

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: JMB	DATE: 9/22/22
	BY: JMB	DATE: 9.23.22

SAMPLE ID: MW-LF-22D	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1131	DATE: 9/22/2022	SAMPLE	TIME: 1205	DATE: 9/22/2022
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: 6.32 SU	CONDUCTIVITY: 1,042 umhos/cm	
			ORP: 52.9 mV	DO: 0.30 mg/L	
DEPTH TO WATER: 12.14 T/ PVC			TURBIDITY: 2.56 NTU		
DEPTH TO BOTTOM: 33.43 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: 3.51 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: 30.94 °C OTHER:		
VOLUME REMOVED: 0.6 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: clear ODOR: none		
COLOR: clear ODOR: none			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: FILTRATE ODOR:		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DU-		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1133	90	6.32	1,016	55.9	0.62	5.29	28.96	12.55	INITIAL
1150	65	6.33	1,039	54.0	0.28	3.07	30.61	15.00	
1155		6.33	1,041	53.8	0.27	2.21	30.61	15.20	
1200		6.33	1,045	53.6	0.29	2.44	30.70	15.42	
1205		6.32	1,042	52.9	0.30	2.56	30.94	15.60	
post 1217						2.74		17.24	0.6

Could not maintain drawdown

post

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JAY</u>	DATE: <u>9/21/22</u>
	BY: <u>JMB</u>	DATE: <u>9-23-22</u>

SAMPLE ID: MW-LF-23D	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1440</u>	DATE: <u>9/21/22</u>	SAMPLE	TIME: <u>1522</u>	DATE: <u>9/21/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>6.70</u> SU	CONDUCTIVITY: <u>1051.2</u> umhos/cm	
DEPTH TO WATER: <u>12.43</u> T/ PVC			ORP: <u>108.6</u> mV	DO: <u>0.45</u> mg/L	
DEPTH TO BOTTOM: 33.36 T/ PVC			TURBIDITY: <u>1.99</u> NTU		
WELL VOLUME: <u>3.45</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
VOLUME REMOVED: <u>0.7</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>28.93</u> °C	OTHER: _____	
COLOR: <u>clear</u> ODOR: <u>none</u>			COLOR: <u>clear</u>	ODOR: <u>None</u>	
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	FILTRATE COLOR: _____	
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			FILTRATE ODOR: _____	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DU- _____	
COMMENTS: <u>FBLK-W52-CCR-22301 @ 1555</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1447	50	6.71	1049.2	115.7	1.17	5.08	30.62	12.92	INITIAL
1452	50	6.71	1052.2	115.1	0.83	2.29	29.60	13.55	* can't maintain
1457	50	6.71	1059.1	113.4	0.64	2.65	29.48	14.11	stand down
1502	50	6.71	1049.9	112.6	0.50	2.31	29.17	14.52	
1512	50	6.70	1053.4	109.6	0.49	2.03	29.17	15.60	
1517	50	6.70	1051.9	108.8	0.46	2.44	28.99	16.03	
1522	50	6.70	1051.2	108.6	0.45	1.99	28.93	16.51	Sample time
1545	50	_____	_____	_____	_____	2.64	_____	_____	Post

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JMB</u>	DATE: <u>9/22/22</u>
	BY: <u>JMB</u>	DATE: <u>9-23-22</u>

SAMPLE ID: MW-LF-24	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1014</u>	DATE: <u>9/22/22</u>	SAMPLE	TIME: <u>1050</u>	DATE: <u>9/22/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>5.88</u> SU	CONDUCTIVITY: <u>865.02</u> umhos/cm	
			ORP: <u>57.4</u> mV	DO: <u>0.37</u> mg/L	
DEPTH TO WATER: <u>13.75</u> T/ PVC			TURBIDITY: <u>2.18</u> NTU		
DEPTH TO BOTTOM: 25.41 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>1.92</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>26.78</u> °C		
VOLUME REMOVED: <u>0.5</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: <u>clear</u> ODOR: <u>none</u>		
COLOR: <u>clear</u> ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			COMMENTS: <u>FBLK - W52 - CCR collected @ 1105</u>		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
1020	65	5.54	710.39	44.4	0.50	5.42	27.24	14.36	INITIAL
1035		5.76	829.63	40.3	0.39	4.95	26.88	14.59	
1040		5.81	849.41	39.4	0.40	3.71	26.87	14.61	
1045		5.84	849.92	38.4	0.36	2.98	26.73	14.66	
1050		5.88	865.02	37.4	0.37	2.18	26.78	14.71	
1055		—————							
1100		—————				1.74	—————	14.76	0.5

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JMB</u>	DATE: <u>9/21/22</u>
	BY: <u>JMB</u>	DATE: <u>9.23.22</u>

SAMPLE ID: MW-LF-25	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1524</u>	DATE: <u>9/21/22</u>	SAMPLE	TIME: <u>1620</u>	DATE: <u>9/21/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>6.19</u> SU	CONDUCTIVITY: <u>1,397</u> umhos/cm	
			ORP: <u>77.3</u> mV	DO: <u>3.08</u> mg/L	
DEPTH TO WATER: <u>12.97</u> T/ PVC			TURBIDITY: <u>1.77</u> NTU		
DEPTH TO BOTTOM: 24.21 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>1.85</u> LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>28.29</u> °C OTHER: _____		
VOLUME REMOVED: <u>1.1</u> LITERS <input type="checkbox"/> <input checked="" type="checkbox"/> GALLONS			COLOR: <u>clear</u> ODOR: <u>none</u>		
COLOR: <u>clear</u> ODOR: <u>none</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			COMMENTS: <u>post turb: 1.56 time: 1635 DTW: 15.45</u>		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
<u>1526</u>	<u>80</u>	<u>6.18</u>	<u>1,480</u>	<u>79.1</u>	<u>0.71</u>	<u>3.15</u>	<u>28.35</u>	<u>13.35</u>	INITIAL
<u>1540</u>	<u>70</u>	<u>6.24</u>	<u>1,457</u>	<u>76.9</u>	<u>0.96</u>	<u>3.16</u>	<u>28.85</u>	<u>14.39</u>	
<u>1545</u>		<u>6.22</u>	<u>1,444</u>	<u>76.0</u>	<u>1.51</u>	<u>2.73</u>	<u>28.63</u>	<u>14.41</u>	
<u>1550</u>		<u>6.20</u>	<u>1,425</u>	<u>75.6</u>	<u>2.18</u>	<u>2.01</u>	<u>28.63</u>	<u>14.51</u>	
<u>1555</u>		<u>6.19</u>	<u>1,419</u>	<u>75.6</u>	<u>2.48</u>	<u>3.16</u>	<u>28.50</u>	<u>14.61</u>	
<u>1600</u>		<u>6.19</u>	<u>1,399</u>	<u>75.2</u>	<u>2.95</u>	<u>1.57</u>	<u>28.63</u>	<u>14.69</u>	
<u>1605</u>		<u>6.19</u>	<u>1,393</u>	<u>75.5</u>	<u>3.38</u>	<u>1.53</u>	<u>28.68</u>	<u>14.84</u>	
<u>1610</u>		<u>6.18</u>	<u>1,393</u>	<u>75.9</u>	<u>3.32</u>	<u>1.55</u>	<u>28.67</u>	<u>14.94</u>	
<u>1615</u>		<u>6.18</u>	<u>1,399</u>	<u>76.6</u>	<u>3.27</u>	<u>1.52</u>	<u>28.45</u>	<u>15.04</u>	
<u>1620</u>		<u>6.19</u>	<u>1,397</u>	<u>77.3</u>	<u>3.08</u>	<u>1.77</u>	<u>28.29</u>	<u>15.10</u>	<u>1.1</u>

DTW: 15.45

Drawdown could not be maintained

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>2</u>	<u>250 mL</u>	<u>PLASTIC</u>	<u>B</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>2</u>	<u>250 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>1</u>	<u>125 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: JMB	DATE: 9/22/22
	BY: JMB	DATE: 9-23-22

SAMPLE ID: MW-LF-26	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0830	DATE: 9/22/22	SAMPLE	TIME: 0910	DATE: 9/22/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: 5.57 SU	CONDUCTIVITY: 1,641 umhos/cm	
			ORP: 41.6 mV	DO: 0.40 mg/L	
DEPTH TO WATER: 23.22 T/ PVC			TURBIDITY: 2.76 NTU		
DEPTH TO BOTTOM: 33.45 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: 1.69 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: 26.50 °C OTHER:		
VOLUME REMOVED: 0.3 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: clear ODOR: none		
COLOR: clear ODOR: none			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: FILTRATE ODOR:		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DU- W52-CCR-22301		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0837	50	5.45	1,628	82.3	0.51	5.13	25.13	23.56	INITIAL
0850		5.54	1,636	59.6	0.46	4.21	25.42	23.66	
0855		5.55	1,636	54.1	0.44	3.19	25.78	23.71	
0900		5.56	1,630	49.8	0.44	3.03	26.05	23.76	
0905		5.57	1,633	45.4	0.41	2.98	26.35	23.81	
0910		5.57	1,641	41.6	0.40	2.76	26.50	23.86	
post 1001						2.75		24.19	0.3

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: <u>JAY</u>	DATE: <u>9/22/22</u>
	BY: <u>JMB</u>	DATE: <u>9-23-22</u>

SAMPLE ID: MW-LF-27	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0800</u>	DATE: <u>9/22/22</u>	SAMPLE	TIME: <u>0902</u>	DATE: <u>9/22/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>6.21</u> SU		CONDUCTIVITY: <u>468.98</u> umhos/cm		
	ORP: <u>7.9</u> mV		DO: <u>0.30</u> mg/L		
DEPTH TO WATER: <u>8.32</u> T/ PVC			TURBIDITY: <u>3.82</u> NTU		
DEPTH TO BOTTOM: <u>22.75</u> T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>2.38</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: <u>24.60</u> °C		
VOLUME REMOVED: <u>1.0</u> <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: <u>clear</u>		
COLOR: <u>Clear</u> ODOR: <u>None</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			FILTRATE ODOR: _____		
			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DU- _____		
COMMENTS: <u>Post turb. at 0919 = 3.82 NTU</u>					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
817	75	6.21	664.98	103.2	1.04	13.2	24.15	8.49	INITIAL
822	75	6.31	607.14	76.2	0.50	11.9	23.94	8.53	
827	75	6.34	566.64	50.0	0.36	9.21	24.02	8.54	
832	75	6.21	510.83	37.4	0.32	6.13	24.02	8.54	
837	75	6.18	490.77	27.7	0.31	4.80	24.16	8.54	
842	75	6.19	481.50	23.2	0.30	4.75	24.45	8.54	
847	75	6.20	475.45	15.8	0.36	4.39	24.44	8.55	
852	75	6.20	472.34	10.1	0.30	4.22	24.58	8.55	
857	75	6.21	471.49	8.8	0.30	3.75	24.39	8.55	
902	75	6.21	468.98	7.9	0.30	3.82	24.60	8.55	

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____											
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED			NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: Williams Hwy 52 - LF CCR	PREPARED	CHECKED
PROJECT NUMBER: 416559.0006.0000.3.2	BY: JAV	DATE: 9/22/22
	BY: JNB	DATE: 9-23-22

SAMPLE ID: MW-LF-28	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0924	DATE: 9/22/22	SAMPLE	TIME: 1022	DATE: 9/22/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: 5.86 SU	CONDUCTIVITY: 171.54 umhos/cm	
			ORP: 58.5 mV	DO: 2.27 mg/L	
DEPTH TO WATER: 10.13 T/ PVC			TURBIDITY: 2.28 NTU		
DEPTH TO BOTTOM: 19.34 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: 1.62 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			TEMPERATURE: 25.45 °C OTHER: _____		
VOLUME REMOVED: 1.32 <input type="checkbox"/> LITERS <input checked="" type="checkbox"/> GALLONS			COLOR: clear ODOR: None		
COLOR: clear ODOR: None			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: _____ FILTRATE ODOR: _____		
DISPOSAL METHOD: <input type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GALLONS)
0927	150	6.67	492.00	57.2	2.24	2.70	26.46	10.24	INITIAL
0932	100	6.74	475.98	29.8	0.32	2.90	25.10	10.22	
0937	100	6.42	321.93	18.9	0.97	2.79	25.06	10.23	
0942	100	6.08	201.91	23.9	1.84	2.54	25.10	10.23	
0947	100	5.88	170.27	36.6	2.19	2.19	25.19	10.24	
0952	100	5.89	175.93	42.4	2.19	2.55	25.19	10.24	
0957	100	5.87	167.46	49.5	2.31	2.74	25.24	10.25	
1002	100	5.85	168.97	51.3	2.29	2.25	25.27	10.25	
1007	100	5.85	170.12	53.7	2.29	2.19	25.37	10.25	
1012	100	5.85	170.32	56.8	2.27	2.32	25.36	10.25	

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 <= 5 TEMP.: +/- 3%

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
2	250 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
2	250 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
1	125 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
				<input type="checkbox"/> Y	<input type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: _____	DATE SHIPPED: _____	AIRBILL NUMBER: _____
COC NUMBER: _____	SIGNATURE: _____	DATE SIGNED: _____



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Williams Station	MODEL: AQUA TROLL 400	SAMPLER: (JY)/JB
PROJECT NO.: 416559.0006.0000	SERIAL #: 909268	DATE: 9/21/22

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD		
6.96 / 7.00	/	<input checked="" type="checkbox"/> WITHIN RANGE	832
9.77 / 10.00	9.99 / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	834
4.37 / 4.00	4.02 / 4.00	<input checked="" type="checkbox"/> WITHIN RANGE	837
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022	TEMPERATURE 23.5°C (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
4335.8 / 4490	23.51	<input type="checkbox"/> WITHIN RANGE	
4488.8 / 4490	23.48	<input checked="" type="checkbox"/> WITHIN RANGE	839
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
231.6 / 228	23.43	<input type="checkbox"/> WITHIN RANGE	
226.2 / 228	23.46	<input checked="" type="checkbox"/> WITHIN RANGE	840
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 762.45 mmHg	<input checked="" type="checkbox"/> WITHIN RANGE	830
Temp. = 23.73°C	<input type="checkbox"/> WITHIN RANGE	
Measured = 8.63 mg/L	<input type="checkbox"/> WITHIN RANGE	
Calculated = 8.6 mg/L	<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023	(LOT #): 21320048 (1.00 NTU) (EXP. DATE): 04/2023		
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
-0.02 / 0.00	/	<input checked="" type="checkbox"/> WITHIN RANGE	841
0.94 / 1.00	/	<input checked="" type="checkbox"/> WITHIN RANGE	842
9.87 / 10.00	/	<input checked="" type="checkbox"/> WITHIN RANGE	842
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input checked="" type="checkbox"/> AUTOCAL SOLUTION	<input type="checkbox"/> STANDARD SOLUTION (S)
(LOT #): 21470032 (EXP. DATE): 04/2022	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input checked="" type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input checked="" type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

LaMotte 2020we turbidimeter
Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

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SIGNED _____

9/21/22
DATE

CHECKED BY

9-23-22
DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Williams Station	MODEL: AQUA TROLL 400	SAMPLER: JY / <u>B</u>
PROJECT NO.: 416559.0006.0000	SERIAL #: <u>851425</u>	DATE: <u>9/21/22</u>

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD		
<u>6.86</u> / 7.00	<u>9.45</u> / 10.00	<input type="checkbox"/> WITHIN RANGE	<u>0812</u>
/	<u>4.73</u> / 4.00	<input type="checkbox"/> WITHIN RANGE	<u>0820</u>
<u>6.99</u> / 7.00	<u>10.02</u> / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0819</u>
/	<u>3.98</u> / 4.00	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0823</u>

post
post

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
<u>4368</u> / 4490	<u>25.04</u>	<input type="checkbox"/> WITHIN RANGE	<u>0825</u>
<u>4491</u> / 4490	<u>25.02</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0826</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
<u>238.1</u> / 228	<u>24.94</u>	<input type="checkbox"/> WITHIN RANGE	<u>0827</u>
<u>229.1</u> / 228	<u>24.98</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0828</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = <u>761.66 mmHg</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0808</u>
Temp. = <u>24.17 °C</u>	<input type="checkbox"/> WITHIN RANGE	
Measured = <u>8.41 mg/L</u>	<input type="checkbox"/> WITHIN RANGE	
Calculated = <u>8.4 mg/L</u>	<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023	(LOT #): 21320048 (1.00 NTU) (EXP. DATE): 04/2023		
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
<u>0.01</u> / 0.00	<u>0.01</u> / 0.00	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0831</u>
<u>1.65</u> / 1.00	<u>1.58</u> / 1.00	<input type="checkbox"/> WITHIN RANGE	<u>0833</u>
<u>7.49</u> / 10.00	<u>10.02</u> / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0832</u>
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input checked="" type="checkbox"/> AUTOCAL SOLUTION	<input type="checkbox"/> STANDARD SOLUTION (S)
(LOT #): 21470032 (EXP. DATE): 04/2022	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input checked="" type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input checked="" type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

LaMotte 2020we turbidimeter
Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

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Jacob Bradley
SIGNED

9-23-22
DATE

Jacob Bradley
CHECKED BY
R. Mayer

9-23-22
DATE
9/23/2022



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Williams Station - Highway 52	MODEL: AQUA TROLL 400	SAMPLER: JY/JB
PROJECT NO.: 416559.0006.0000	SERIAL #: 909268	DATE: 9/22/22

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD		
6.88 / 7.00	7.00 / 7.00	<input checked="" type="checkbox"/> WITHIN RANGE	804
9.76 / 10.00	10.02 / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	808
4.35 / 4.00	3.99 / 4.00	<input checked="" type="checkbox"/> WITHIN RANGE	810
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022	TEMPERATURE 22.5°C (*CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
4421.0 / 4490	24.51	<input checked="" type="checkbox"/> WITHIN RANGE	0811
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
226.5 / 22.8	24.51	<input checked="" type="checkbox"/> WITHIN RANGE	813
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 759.53 mmHg	<input checked="" type="checkbox"/> WITHIN RANGE	802
Temp. = 24.43 °C	<input type="checkbox"/> WITHIN RANGE	
Measured = 8.43 mg/L	<input type="checkbox"/> WITHIN RANGE	
Calculated = 8.4 mg/L	<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023	(LOT #): 21320048 (1.00 NTU) (EXP. DATE): 04/2023		
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
0.00 / 0.00	/	<input checked="" type="checkbox"/> WITHIN RANGE	806
0.99 / 1.00	/	<input checked="" type="checkbox"/> WITHIN RANGE	807
9.88 / 10.00	/	<input checked="" type="checkbox"/> WITHIN RANGE	807
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input checked="" type="checkbox"/> AUTOCAL SOLUTION	<input type="checkbox"/> STANDARD SOLUTION (S)
(LOT #): 21470032 (EXP. DATE): 04/2022	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input checked="" type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input checked="" type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

LaMotte 2020we turbidimeter
 Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

[Signature]
SIGNED

9/22/22
DATE

[Signature]
CHECKED BY

9-23-22
DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Williams Station - Highway 52	MODEL: AQUA TROLL 400	SAMPLER: JY / (B)
PROJECT NO.: 416559.0006.0000	SERIAL #: 851425	DATE: 9/22/2022

PH CALIBRATION CHECK

pH 7 (LOT #): 21380102 (EXP. DATE): 04/2023	pH 4 / 10 (LOT #): 21470032 (EXP. DATE): 04/2023	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD		
6.89 / 7.00	9.17 / 10.00	<input type="checkbox"/> WITHIN RANGE	0808
/	4.80 / 14.00	<input type="checkbox"/> WITHIN RANGE	0814
7.00 / 7.00	10.06 / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	0812
/	3.99 / 14.00	<input checked="" type="checkbox"/> WITHIN RANGE	0816

post post

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 21470032 (EXP. DATE): 04/2022	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
4577 / 4490	25.96	<input type="checkbox"/> WITHIN RANGE	0817
4492 / 4490	26.10	<input checked="" type="checkbox"/> WITHIN RANGE	0819
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 21140147 (EXP. DATE): 04/2023	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD			
237.2 / 228	26.00	<input type="checkbox"/> WITHIN RANGE	0821
228.1 / 228	26.06	<input checked="" type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CALIBRATION READING	CAL. RANGE	TIME
Barometer = 758.83 mmHg	<input checked="" type="checkbox"/> WITHIN RANGE	0805
Temp. = 24.43°C	<input type="checkbox"/> WITHIN RANGE	
Measured = 8.33 mg/L	<input type="checkbox"/> WITHIN RANGE	
Calculated = 8.3 mg/L	<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): 21380129 (0.0 NTU) (EXP. DATE): 04/2023	(LOT #): 21320048 (1.00) NTU (EXP. DATE): 04/2023		
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
0.09 / 0.00	0.00 / 0.00	<input checked="" type="checkbox"/> WITHIN RANGE	0823
1.50 / 1.00	1.50 / 1.00	<input type="checkbox"/> WITHIN RANGE	0825
7.97 / 10.00	9.94 / 10.00	<input checked="" type="checkbox"/> WITHIN RANGE	0827
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input checked="" type="checkbox"/> AUTOCAL SOLUTION	<input type="checkbox"/> STANDARD SOLUTION (S)
(LOT #): 21470032 (EXP. DATE): 04/2022	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input checked="" type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input checked="" type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

LaMotte 2020we turbidimeter
Lot # for 10.00 NTU cal standard = 21400081 exp 04/2023

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

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Sarah Bradley
SIGNED

9-23-22
DATE

Sarah Bradley
CHECKED BY

R. Mayer

9-23-22
DATE

9/23/2022



October 05, 2022

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

Re: CCR Groundwater Monitoring - Level 1 Package
Work Order: 594161

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 22, 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

Purchase Order: 50149867
Chain of Custody: 20220922
Enclosures



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Case Narrative

**Receipt Narrative
for
Dominion Energy (50149867)
SDG: 594161**

October 05, 2022

Laboratory Identification:

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

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on September 22, 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.

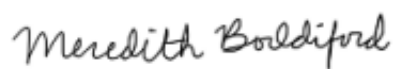
Sample Identification: The laboratory received the following samples:

<u>Laboratory ID</u>	<u>Client ID</u>
594161001	MW-LF-10-2022Q3
594161002	MW-LF-11-2022Q3
594161003	MW-LF-20-2022Q3
594161004	MW-LF-21-2022Q3
594161005	MW-LF-22D-2022Q3
594161006	MW-LF-23D-2022Q3
594161007	DU-W52-CCR-22301
594161008	FBLK-W52-CCR-22301
594161009	MW-LF-24-2022Q3
594161010	MW-LF-25-2022Q3
594161011	MW-LF-26-2022Q3
594161012	MW-LF-27-2022Q3
594161013	MW-LF-28-2022Q3
594161014	FBLK-W52-CCR-22302

Case Narrative:

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

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.

A handwritten signature in black ink that reads "Meredith Boddiford". The script is cursive and fluid.

Meredith Boddiford
Project Manager

Chain of Custody and Supporting Documentation

Page: 2 of 2
 Project # 416559.0006.0000.3.2
 GEL Quote #:
 594161
 Project # 416559.0006.0000.3.2
 GEL Quote #:
 594161
 Project # 416559.0006.0000.3.2
 GEL Quote #:
 594161



GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number: 207143

GEL Project Manager: Meredith Boddiford

Client Name: Dominion Energy

Sample Analysis Requested (6) (Fill in the number of containers for each test)

Phone # 803-258-1528

<-- Preservative Type (6)

Project/Site Name: Williams Station Hwy 52 Landfill CCR 2022Q3

Comments
 Note: extra sample is required for sample specific QC

Address: Goose Creek, South Carolina

Total number of containers

Collected By: J. Yonis / J. Bradley

Send Results To: AReed@envstnd.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Radioactive (if yes, please supply isotopic info.)	(7) Known or possible Hazards	Total number of containers	TDS SM2540C	Cl, FL, SO4 EPA 300.0	Total Metals - B, Ca Ni EPA 200.8	Preservative Type (6)
MW-LF-24-2022Q3	9/22/2022	1050	N	N	GW	N		3	X	X	X	
MW-LF-25-2022Q3	9/21/2022	1620	N	N	GW	N		3	X	X	X	
MW-LF-26-2022Q3	9/22/2022	0910	N	N	GW	N		3	X	X	X	
MW-LF-27-2022Q3	9/22/2022	0902	N	N	GW	N		3	X	X	X	
MW-LF-28-2022Q3	9/22/2022	1022	N	N	GW	N		3	X	X	X	
FBLK-W52-CCR-22302	9/22/2022	1105	FB	N	AQ	N		3	X	X	X	

Chain of Custody Signatures

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<i>Jed Budby</i>	9/22/22	<i>JTB</i>	9/22/22	1345

TAT Requested: Normal: Rush: Specify: _____

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

1.) Chain of Custody Number = Client Determined

2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4.) Matrix Codes: DW = Drinking Water, GW = Groundwater, SW = Surface Water, WW = Waste Water, ML = Misc. Liquid, SO = Soil, SD = Sediment, SL = Sludge, SS = Solid Waste, O = Oil, F = Filter, P = Urine, F = Fecal, N = Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank

KNOWN OR POSSIBLE HAZARDS

Characteristic Hazards	Listed Waste	Other
FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW = Listed Waste F, K, P and U-listed wastes.) Waste code(s):	OT = Other / Unknown (i.e.: High low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:
TSCA Regulated PCB = Polychlorinated biphenyls		

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

594154, M.B

Client: DIVINN	SDG/AR/COC/Work Order: 594158, 594163, 594149, 594160, 594161		
Received By: SD	Date Received: 9-22-22		
Enter one tracking number per line below.	IR temperature gun # B Daily Calibration performed? Y/N		
Enter courier if applicable and no tracking available.	Uncorrected temperature readings are to the 0.1 degree with final recorded temperatures rounded to the 0.5 degree. Provide individual container details when a cooler requiring 0 <= 6.0C is identified as out of specification.		
WMSFGDCRASD	Uncorrected Temp: 2.1	IR Correction Factor: +/- 0.0	Final Recorded Temp: 2.0 Within 0.0-6.0C? Y
WMS52CCRLEASD	Uncorrected Temp: 1.2	IR Correction Factor: +/- 0	Final Recorded Temp: 1.0 Within 0.0-6.0C? Y
WMS52NPDES	Uncorrected Temp: 4.9	IR Correction Factor: +/- 0.0	Final Recorded Temp: 5.0 Within 0.0-6.0C? Y
WMSFGDNDDES	Uncorrected Temp: 3.5	IR Correction Factor: +/- 0.0	Final Recorded Temp: 3.5 Within 0.0-6.0C? Y
MWSFGDCCR	Uncorrected Temp:	IR Correction Factor: +/-	Final Recorded Temp: Within 0.0-6.0C? Y/N

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below: PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
4 Samples requiring cold preservation were unpacked directly into cold storage?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Uncorrected Temp: Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/N NA Response = Samples are for radiochemistry testing only
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservative added, Lot#:
6 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
7 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and tests affected:
8 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and containers affected:
9 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
10 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
11 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials **AD** Date **9/23/22** Page ___ of ___

Laboratory Certifications

List of current GEL Certifications as of 05 October 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-137
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
Dominion Energy
SDG #: 594161

Product: Determination of Metals by ICP-MS
Analytical Method: EPA 200.8 SC_NPDES
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2320391

Preparation Method: EPA 200.2
Preparation Procedure: GL-MA-E-016 REV# 18
Preparation Batch: 2320390

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
594161001	MW-LF-10-2022Q3
594161002	MW-LF-11-2022Q3
594161003	MW-LF-20-2022Q3
594161004	MW-LF-21-2022Q3
594161005	MW-LF-22D-2022Q3
594161006	MW-LF-23D-2022Q3
594161007	DU-W52-CCR-22301
594161008	FBLK-W52-CCR-22301
594161009	MW-LF-24-2022Q3
594161010	MW-LF-25-2022Q3
594161011	MW-LF-26-2022Q3
594161012	MW-LF-27-2022Q3
594161013	MW-LF-28-2022Q3
594161014	FBLK-W52-CCR-22302
1205198952	Method Blank (MB)ICP-MS
1205198953	Laboratory Control Sample (LCS)
1205198956	594161004(MW-LF-21-2022Q3L) Serial Dilution (SD)
1205198959	594161013(MW-LF-28-2022Q3L) Serial Dilution (SD)
1205198954	594161004(MW-LF-21-2022Q3D) Sample Duplicate (DUP)
1205198957	594161013(MW-LF-28-2022Q3D) Sample Duplicate (DUP)
1205198955	594161004(MW-LF-21-2022Q3S) Matrix Spike (MS)
1205198958	594161013(MW-LF-28-2022Q3S) Matrix Spike (MS)

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

Data Summary:

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

Calibration Information

ICSA/ICSAB Statement

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

Technical Information

Sample Dilutions

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. Samples 594161001 (MW-LF-10-2022Q3), 594161003 (MW-LF-20-2022Q3), 594161004 (MW-LF-21-2022Q3), 594161005 (MW-LF-22D-2022Q3), 594161006 (MW-LF-23D-2022Q3), 594161007 (DU-W52-CCR-22301), 594161009 (MW-LF-24-2022Q3), 594161010 (MW-LF-25-2022Q3) and 594161011 (MW-LF-26-2022Q3) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	594161								
	001	003	004	005	006	007	009	010	011
Boron	1X	5X	5X	5X	5X	1X	1X	1X	1X
Calcium	10X	5X	5X	5X	5X	5X	5X	10X	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.

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.

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: 594161 GEL Work Order: 594161

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- B Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
- 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: 03 OCT 2022

Title: Team Leader

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161001

BASIS: As Received

DATE COLLECTED 21-SEP-22

CLIENT ID: MW-LF-10-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	70.8	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 23:34	220929-5	2320391
7440-70-2	Calcium	68700	ug/L		300	1000	1000	10	MS	PRB	09/29/22 11:56	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161002

BASIS: As Received

DATE COLLECTED 21-SEP-22

CLIENT ID: MW-LF-11-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	31.9	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 11:58	220929-1	2320391
7440-70-2	Calcium	19300	ug/L		30.0	100	100	1	MS	PRB	09/29/22 11:58	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161003

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: MW-LF-20-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	228	ug/L		20.0	75.0	75.0	5	MS	PRB	09/29/22 12:00	220929-1	2320391
7440-70-2	Calcium	149000	ug/L		150	500	500	5	MS	PRB	09/29/22 12:00	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID: 594161004

BASIS: As Received

DATE COLLECTED 21-SEP-22

CLIENT ID: MW-LF-21-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	211	ug/L		20.0	75.0	75.0	5	MS	PRB	09/29/22 12:02	220929-1	2320391
7440-70-2	Calcium	116000	ug/L		150	500	500	5	MS	PRB	09/29/22 12:02	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID: 594161005

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: MW-LF-22D-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	347	ug/L		20.0	75.0	75.0	5	MS	PRB	09/29/22 12:15	220929-1	2320391
7440-70-2	Calcium	83300	ug/L		150	500	500	5	MS	PRB	09/29/22 12:15	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161006

BASIS: As Received

DATE COLLECTED 21-SEP-22

CLIENT ID: MW-LF-23D-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	292	ug/L		20.0	75.0	75.0	5	MS	PRB	09/29/22 12:17	220929-1	2320391
7440-70-2	Calcium	68100	ug/L		150	500	500	5	MS	PRB	09/29/22 12:17	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161007

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: DU-W52-CCR-22301

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	152	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 23:36	220929-5	2320391
7440-70-2	Calcium	159000	ug/L		150	500	500	5	MS	PRB	09/29/22 12:19	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161008

BASIS: As Received

DATE COLLECTED 21-SEP-22

CLIENT ID: FBLK-W52-CCR-22301

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	4.00	ug/L	U	4.00	15.0	15.0	1	MS	PRB	09/29/22 12:21	220929-1	2320391
7440-70-2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	PRB	09/29/22 12:21	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161009

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: MW-LF-24-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	87.7	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 23:38	220929-5	2320391
7440-70-2	Calcium	110000	ug/L		150	500	500	5	MS	PRB	09/29/22 12:23	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161010

BASIS: As Received

DATE COLLECTED 21-SEP-22

CLIENT ID: MW-LF-25-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	78.7	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 23:40	220929-5	2320391
7440-70-2	Calcium	166000	ug/L		300	1000	1000	10	MS	PRB	09/29/22 12:25	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161011

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: MW-LF-26-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	149	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 23:42	220929-5	2320391
7440-70-2	Calcium	166000	ug/L		300	1000	1000	10	MS	PRB	09/29/22 12:27	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161012

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: MW-LF-27-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	34.7	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 12:28	220929-1	2320391
7440-70-2	Calcium	46100	ug/L		30.0	100	100	1	MS	PRB	09/29/22 12:28	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161013

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: MW-LF-28-2022Q3

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	16.1	ug/L		4.00	15.0	15.0	1	MS	PRB	09/29/22 12:34	220929-1	2320391
7440-70-2	Calcium	8390	ug/L		30.0	100	100	1	MS	PRB	09/29/22 12:34	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 594161

CONTRACT: DMNN00101

METHOD TYPE: EPA

SAMPLE ID:594161014

BASIS: As Received

DATE COLLECTED 22-SEP-22

CLIENT ID: FBLK-W52-CCR-22302

LEVEL: Low

DATE RECEIVED 22-SEP-22

MATRIX: GW

%SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	4.00	ug/L	U	4.00	15.0	15.0	1	MS	PRB	09/29/22 12:44	220929-1	2320391
7440-70-2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	PRB	09/29/22 12:44	220929-1	2320391

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2320391	2320390	EPA 200.2	50	mL	50	mL	09/27/22	PC1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 594161

Contract: DMNN00101

Lab Code: GEL

Instrument ID: ICPMS15

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M*</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01	Boron	103	ug/L	100	ug/L	103	90.0 – 110.0	MS	29-SEP-22 11:34	220929-1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 – 110.0	MS	29-SEP-22 11:34	220929-1
	Boron	99.4	ug/L	100	ug/L	99.4	90.0 – 110.0	MS	29-SEP-22 23:18	220929-5
CCV01	Boron	99	ug/L	100	ug/L	99	90.0 – 110.0	MS	29-SEP-22 11:43	220929-1
	Calcium	5070	ug/L	5000	ug/L	101.5	90.0 – 110.0	MS	29-SEP-22 11:43	220929-1
	Boron	97.3	ug/L	100	ug/L	97.3	90.0 – 110.0	MS	29-SEP-22 23:27	220929-5
CCV02	Boron	101	ug/L	100	ug/L	100.8	90.0 – 110.0	MS	29-SEP-22 11:49	220929-1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	MS	29-SEP-22 11:49	220929-1
	Boron	95.5	ug/L	100	ug/L	95.5	90.0 – 110.0	MS	29-SEP-22 23:47	220929-5
CCV03	Boron	99.8	ug/L	100	ug/L	99.8	90.0 – 110.0	MS	29-SEP-22 12:11	220929-1
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	MS	29-SEP-22 12:11	220929-1
CCV04	Boron	96.7	ug/L	100	ug/L	96.7	90.0 – 110.0	MS	29-SEP-22 12:30	220929-1
	Calcium	5070	ug/L	5000	ug/L	101.3	90.0 – 110.0	MS	29-SEP-22 12:30	220929-1
CCV05	Boron	99.6	ug/L	100	ug/L	99.6	90.0 – 110.0	MS	29-SEP-22 12:49	220929-1
	Calcium	5060	ug/L	5000	ug/L	101.2	90.0 – 110.0	MS	29-SEP-22 12:49	220929-1

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

METALS
-2b-
CRDL Standard for ICP & ICPMS

SDG No: 594161

Contract: DMNN00101

Lab Code: GEL

Instrument ID: ICPMS15

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M*</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01	Boron	18.1	ug/L	15	ug/L	120.8	70.0 – 130.0	MS	29-SEP-22 11:37	220929-1
	Calcium	220	ug/L	200	ug/L	110.2	70.0 – 130.0	MS	29-SEP-22 11:37	220929-1
	Boron	14.4	ug/L	15	ug/L	95.7	70.0 – 130.0	MS	29-SEP-22 23:21	220929-5
CRDL02	Boron	17.6	ug/L	15	ug/L	117.2	70.0 – 130.0	MS	29-SEP-22 12:51	220929-1
	Calcium	219	ug/L	200	ug/L	109.5	70.0 – 130.0	MS	29-SEP-22 12:51	220929-1
	Boron	13.2	ug/L	15	ug/L	88	70.0 – 130.0	MS	29-SEP-22 23:49	220929-5

***Analytical Methods:**

MS EPA 200.8 SC_NPDES

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 594161

Contract: DMNN00101

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M*</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
ICB01	Boron	4.63	+/-7.5	B	4.0	15.0	LIQ	MS	29-SEP-22 11:35	220929-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	29-SEP-22 11:35	220929-1
	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 23:19	220929-5
CCB01	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 11:45	220929-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	29-SEP-22 11:45	220929-1
	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 23:29	220929-5
CCB02	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 11:51	220929-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	29-SEP-22 11:51	220929-1
	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 23:51	220929-5
CCB03	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 12:13	220929-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	29-SEP-22 12:13	220929-1
CCB04	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 12:32	220929-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	29-SEP-22 12:32	220929-1
CCB05	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	29-SEP-22 12:53	220929-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	29-SEP-22 12:53	220929-1

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 594161
Contract: DMNN00101
Matrix: GW

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M*</u>	<u>MDL</u>	<u>RDL</u>
1205198952	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:

MS EPA 200.8 SC_NPDES

METALS
-4-
Interference Check Sample

SDG No: 594161

Contract: DMNN00101

Lab Code: GEL

Instrument: ICPMS15

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Boron	3.83	ug/L					29-SEP-22 11:39	220929-1
	Calcium	94500	ug/L	100000	ug/L	94.5	80.0 - 120.0	29-SEP-22 11:39	220929-1
ICSAB01	Boron	20.9	ug/L	22.06	ug/L	94.7	80.0 - 120.0	29-SEP-22 11:41	220929-1
	Calcium	95400	ug/L	100000	ug/L	95.4	80.0 - 120.0	29-SEP-22 11:41	220929-1
ICSA02	Boron	3.46	ug/L					29-SEP-22 12:45	220929-1
	Calcium	94400	ug/L	100000	ug/L	94.4	80.0 - 120.0	29-SEP-22 12:45	220929-1
ICSAB02	Boron	21.2	ug/L	22.06	ug/L	95.9	80.0 - 120.0	29-SEP-22 12:47	220929-1
	Calcium	94700	ug/L	100000	ug/L	94.7	80.0 - 120.0	29-SEP-22 12:47	220929-1

METALS
-4-
Interference Check Sample

SDG No: 594161

Contract: DMNN00101

Lab Code: GEL

Instrument: ICPMS15

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Boron	1.7	ug/L					29-SEP-22 23:23	220929-5
ICSAB01	Boron	19.4	ug/L	22.06	ug/L	88.1	80.0 - 120.0	29-SEP-22 23:25	220929-5
ICSA02	Boron	2.96	ug/L					29-SEP-22 23:44	220929-5
ICSAB02	Boron	18.9	ug/L	22.06	ug/L	85.9	80.0 - 120.0	29-SEP-22 23:45	220929-5

METALS

-5a-

Matrix Spike Summary

SDG NO. 594161 Client ID: MW-LF-21-2022Q3S

Contract: DMNN00101 Level: Low

Matrix: GROUND WATER % Solids:

Sample ID: 594161004 Spike ID: 1205198955

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M*</u>
Boron	ug/L	75-125	319		211		100	108		MS
Calcium	ug/L		124000		116000		2000	416	N/A	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-5a-

Matrix Spike Summary

SDG NO. 594161 Client ID: MW-LF-28-2022Q3S

Contract: DMNN00101 Level: Low

Matrix: GROUND WATER % Solids:

Sample ID: 594161013 Spike ID: 1205198958

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M*</u>
Boron	ug/L	75-125	120		16.1		100	104		MS
Calcium	ug/L		10800		8390		2000	120	N/A	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

Metals
-6-
Duplicate Sample Summary

SDG No.: 594161

Lab Code: GEL

Contract: DMNN00101

Client ID: MW-LF-21-2022Q3D

Matrix: GROUND WATER

Level: Low

Sample ID: 594161004

Duplicate ID: 1205198954

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Boron	ug/L	+/-150	211		216		2.29		MS
Calcium	ug/L	+/-20%	116000		122000		4.77		MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

Metals
-6-
Duplicate Sample Summary

SDG No.: 594161

Lab Code: GEL

Contract: DMNN00101

Client ID: MW-LF-28-2022Q3D

Matrix: GROUND WATER

Level: Low

Sample ID: 594161013

Duplicate ID: 1205198957

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Boron	ug/L	+/-30	16.1		15.5		4.02		MS
Calcium	ug/L	+/-20%	8390		8300		1.08		MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 594161

Contract: DMNN00101

Aqueous LCS Source: Enviromental Express

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M*</u>
1205198953								
	Boron	ug/L	100	101		101	85-115	MS
	Calcium	ug/L	2000	2090		104	85-115	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 594161 Client ID: MW-LF-21-2022Q3L

Contract: DMNN00101

Matrix: LIQUID Level: Low

Sample ID: 594161004 Serial Dilution ID: 1205198956

<u>Analyte</u>	<u>Initial Value</u> ug/L	<u>C</u>	<u>Serial Value</u> ug/L	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M*</u>
Boron	42.2		52	B	23.04			MS
Calcium	23200		21800		5.75		10	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 594161 Client ID: MW-LF-28-2022Q3L

Contract: DMNN00101

Matrix: LIQUID Level: Low

Sample ID: 594161013 Serial Dilution ID: 1205198959

<u>Analyte</u>	<u>Initial Value</u> ug/L	<u>C</u>	<u>Serial Value</u> ug/L	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M*</u>
Boron	16.1		34.7	B	115.834			MS
Calcium	8390		8290		1.2		10	MS

*Analytical Methods:

MS EPA 200.8 SC_NPDES

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 594161

Method Type: MS

Contract:

DMNN00101

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 2320390							
1205198952	MB for batch 2320390	MB	G	27-SEP-22	50mL	50mL	
1205198953	LCS for batch 2320390	LCS	G	27-SEP-22	50mL	50mL	
1205198955	MW-LF-21-2022Q3S	MS	G	27-SEP-22	50mL	50mL	
1205198958	MW-LF-28-2022Q3S	MS	G	27-SEP-22	50mL	50mL	
1205198954	MW-LF-21-2022Q3D	DUP	G	27-SEP-22	50mL	50mL	
1205198957	MW-LF-28-2022Q3D	DUP	G	27-SEP-22	50mL	50mL	
594161001	MW-LF-10-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161002	MW-LF-11-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161003	MW-LF-20-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161004	MW-LF-21-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161005	MW-LF-22D-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161006	MW-LF-23D-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161007	DU-W52-CCR-22301	SAMPLE	G	27-SEP-22	50mL	50mL	
594161008	FBLK-W52-CCR-22301	SAMPLE	G	27-SEP-22	50mL	50mL	
594161009	MW-LF-24-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161010	MW-LF-25-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161011	MW-LF-26-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161012	MW-LF-27-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	
594161013	MW-LF-28-2022Q3	SAMPLE	G	27-SEP-22	50mL	50mL	

EPA

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 594161

Method Type: MS

Contract: DMNN00101

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
594161014	FBLK-W52-CCR-22302	SAMPLE	G	27-SEP-22	50mL	50mL	

General Chem Analysis

Case Narrative

**General Chemistry
Technical Case Narrative
Dominion Energy
SDG #: 594161**

Product: Ion Chromatography

Analytical Method: EPA 300.0

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

Analytical Batches: 2321486 and 2322156

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
594161001	MW-LF-10-2022Q3
594161002	MW-LF-11-2022Q3
594161003	MW-LF-20-2022Q3
594161004	MW-LF-21-2022Q3
594161005	MW-LF-22D-2022Q3
594161006	MW-LF-23D-2022Q3
594161007	DU-W52-CCR-22301
594161008	FBLK-W52-CCR-22301
594161009	MW-LF-24-2022Q3
594161010	MW-LF-25-2022Q3
594161011	MW-LF-26-2022Q3
594161012	MW-LF-27-2022Q3
594161013	MW-LF-28-2022Q3
594161014	FBLK-W52-CCR-22302
1205201215	Method Blank (MB)
1205201216	Laboratory Control Sample (LCS)
1205201217	594149004(GW-19-2022Q3) Sample Duplicate (DUP)
1205201218	594158001(MW-FGD-16-2022Q3) Sample Duplicate (DUP)
1205201219	594149004(GW-19-2022Q3) Post Spike (PS)
1205201220	594158001(MW-FGD-16-2022Q3) Post Spike (PS)
1205202460	Method Blank (MB)
1205202461	Laboratory Control Sample (LCS)
1205202462	594161004(MW-LF-21-2022Q3) Sample Duplicate (DUP)
1205202463	594161004(MW-LF-21-2022Q3) Post Spike (PS)

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

Data Summary:

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

Technical Information

Sample Dilutions

The following samples 1205201217 (GW-19-2022Q3DUP), 1205201218 (MW-FGD-16-2022Q3DUP), 1205201219 (GW-19-2022Q3PS), 1205201220 (MW-FGD-16-2022Q3PS), 594161001 (MW-LF-10-2022Q3), 594161003

(MW-LF-20-2022Q3), 594161007 (DU-W52-CCR-22301), 1205202462 (MW-LF-21-2022Q3DUP), 1205202463 (MW-LF-21-2022Q3PS), 594161004 (MW-LF-21-2022Q3), 594161005 (MW-LF-22D-2022Q3), 594161006 (MW-LF-23D-2022Q3), 594161009 (MW-LF-24-2022Q3), 594161010 (MW-LF-25-2022Q3), 594161011 (MW-LF-26-2022Q3) and 594161012 (MW-LF-27-2022Q3) 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.

Analyte	594161										
	001	003	004	005	006	007	009	010	011	012	
Chloride	5X	2X	2X	2X	2X	20X	5X	40X	20X	5X	
Sulfate	1X	1X	1X	2X	2X	20X	1X	40X	20X	1X	

Miscellaneous Information

Additional Comments

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

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

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

Analytical Batches: 2321838 and 2322364

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
594161001	MW-LF-10-2022Q3
594161002	MW-LF-11-2022Q3
594161003	MW-LF-20-2022Q3
594161004	MW-LF-21-2022Q3
594161005	MW-LF-22D-2022Q3
594161006	MW-LF-23D-2022Q3
594161007	DU-W52-CCR-22301
594161008	FBLK-W52-CCR-22301
594161009	MW-LF-24-2022Q3
594161010	MW-LF-25-2022Q3
594161011	MW-LF-26-2022Q3
594161012	MW-LF-27-2022Q3
594161013	MW-LF-28-2022Q3
594161014	FBLK-W52-CCR-22302
1205201917	Method Blank (MB)
1205201918	Laboratory Control Sample (LCS)
1205201919	593896001(NonSDG) Sample Duplicate (DUP)
1205201920	593969003(NonSDG) Sample Duplicate (DUP)
1205201921	594040002(NonSDG) Sample Duplicate (DUP)
1205201922	594047006(NonSDG) Sample Duplicate (DUP)
1205201923	594161004(MW-LF-21-2022Q3) Sample Duplicate (DUP)
1205202833	Method Blank (MB)
1205202834	Laboratory Control Sample (LCS)
1205202835	594054010(NonSDG) Sample Duplicate (DUP)
1205202836	594161003(MW-LF-20-2022Q3) Sample Duplicate (DUP)
1205202837	594230002(NonSDG) Sample Duplicate (DUP)
1205202838	594346002(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	1205201920 (Non SDG 593969003DUP)	9.7* (0%-5%)
	1205201921 (Non SDG 594040002DUP)	5.88* (0%-5%)
	1205202837 (Non SDG 594230002DUP)	5.08* (0%-5%)

Miscellaneous Information

Additional Comments

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

Certification Statement

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

GEL LABORATORIES LLC

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Qualifier Definition Report for

DMNN001 Dominion Energy (50149867)

Client SDG: 594161 GEL Work Order: 594161


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: 

Name: Aubrey Kingsbury

Date: 05 OCT 2022

Title: Team Leader

Sample Data Summary

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-10-2022Q3 Project: DMNN00101
Sample ID: 594161001 Client ID: DMNN001
Matrix: GW
Collect Date: 21-SEP-22 14:07
Receive Date: 22-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.453	0.0330	0.100	mg/L		1	HXC1	09/27/22	0248	2321486	1
Sulfate		4.62	0.133	0.400	mg/L		1					
Chloride		17.0	0.335	1.00	mg/L		5	HXC1	09/27/22	1931	2321486	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		365	2.38	10.0	mg/L			CH6	09/27/22	1503	2321838	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-11-2022Q3	Project:	DMNN00101
Sample ID:	594161002	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	21-SEP-22 14:50		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.48	0.0670	0.200	mg/L		1	HXC1	09/27/22	0318	2321486	1
Fluoride		0.272	0.0330	0.100	mg/L		1					
Sulfate		1.56	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		84.0	2.38	10.0	mg/L			CH6	09/27/22	1503	2321838	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-20-2022Q3	Project:	DMNN00101
Sample ID:	594161003	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-SEP-22 11:27		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.203	0.0330	0.100	mg/L		1	HXC1	09/27/22	0348	2321486	1
Sulfate		4.24	0.133	0.400	mg/L		1					
Chloride		11.7	0.134	0.400	mg/L		2	HXC1	09/27/22	2001	2321486	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		656	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-21-2022Q3	Project: DMNN00101
Sample ID: 594161004	Client ID: DMNN001
Matrix: GW	
Collect Date: 21-SEP-22 16:32	
Receive Date: 22-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.223	0.0330	0.100	mg/L		1	HXC1	09/27/22	1335	2322156	1
Sulfate		6.35	0.133	0.400	mg/L		1					
Chloride		10.9	0.134	0.400	mg/L		2	HXC1	09/27/22	2218	2322156	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		612	2.38	10.0	mg/L			CH6	09/27/22	1503	2321838	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-22D-2022Q3	Project:	DMNN00101
Sample ID:	594161005	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-SEP-22 12:05		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.286	0.0330	0.100	mg/L		1	HXC1	09/27/22	1405	2322156	1
Chloride		10.5	0.134	0.400	mg/L		2	HXC1	09/27/22	2350	2322156	2
Sulfate		32.8	0.266	0.800	mg/L		2					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		583	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-23D-2022Q3	Project:	DMNN00101
Sample ID:	594161006	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	21-SEP-22 15:22		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.348	0.0330	0.100	mg/L		1	HXC1	09/27/22	1436	2322156	1
Chloride		16.3	0.134	0.400	mg/L		2	HXC1	09/28/22	0021	2322156	2
Sulfate		21.7	0.266	0.800	mg/L		2					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		501	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: DU-W52-CCR-22301	Project: DMNN00101
Sample ID: 594161007	Client ID: DMNN001
Matrix: GW	
Collect Date: 22-SEP-22 12:00	
Receive Date: 22-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.209	0.0330	0.100	mg/L		1	HXC1	09/27/22	0418	2321486	1
Chloride		138	1.34	4.00	mg/L		20	HXC1	09/27/22	2031	2321486	2
Sulfate		53.6	2.66	8.00	mg/L		20					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		907	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: FBLK-W52-CCR-22301	Project: DMNN00101
Sample ID: 594161008	Client ID: DMNN001
Matrix: GW	
Collect Date: 21-SEP-22 15:55	
Receive Date: 22-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	09/27/22	1507	2322156	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219
Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-24-2022Q3	Project:	DMNN00101
Sample ID:	594161009	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-SEP-22 10:50		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.485	0.0330	0.100	mg/L		1	HXC1	09/27/22	1537	2322156	1
Sulfate		10.1	0.133	0.400	mg/L		1					
Chloride		18.0	0.335	1.00	mg/L		5	HXC1	09/28/22	0225	2322156	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		478	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-25-2022Q3	Project: DMNN00101
Sample ID: 594161010	Client ID: DMNN001
Matrix: GW	
Collect Date: 21-SEP-22 16:20	
Receive Date: 22-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.990	0.0330	0.100	mg/L		1	HXC1	09/27/22	1608	2322156	1
Chloride		18.4	2.68	8.00	mg/L		40	HXC1	09/28/22	0255	2322156	2
Sulfate		316	5.32	16.0	mg/L		40					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		956	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
 Address : 120 Tredegar Street
 Richmond, Virginia 23219
 Contact: Kelly Hicks
 Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-26-2022Q3	Project: DMNN00101
Sample ID: 594161011	Client ID: DMNN001
Matrix: GW	
Collect Date: 22-SEP-22 09:10	
Receive Date: 22-SEP-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.255	0.0330	0.100	mg/L		1	HXC1	09/27/22	1639	2322156	1
Chloride		137	1.34	4.00	mg/L		20	HXC1	09/28/22	0326	2322156	2
Sulfate		53.9	2.66	8.00	mg/L		20					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		890	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-27-2022Q3	Project:	DMNN00101
Sample ID:	594161012	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-SEP-22 09:02		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.223	0.0330	0.100	mg/L		1	HXC1	09/27/22	1710	2322156	1
Sulfate		4.69	0.133	0.400	mg/L		1					
Chloride		19.3	0.335	1.00	mg/L		5	HXC1	09/28/22	0357	2322156	2
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		194	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	3

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID:	MW-LF-28-2022Q3	Project:	DMNN00101
Sample ID:	594161013	Client ID:	DMNN001
Matrix:	GW		
Collect Date:	22-SEP-22 10:22		
Receive Date:	22-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.87	0.0670	0.200	mg/L		1	HXC1	09/27/22	1741	2322156	1
Fluoride		0.110	0.0330	0.100	mg/L		1					
Sulfate		1.51	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids		40.0	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SM 2540C	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 5, 2022

Company : Dominion Energy Services, Inc.
Address : 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks
Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: FBLK-W52-CCR-22302 Project: DMNN00101
Sample ID: 594161014 Client ID: DMNN001
Matrix: GW
Collect Date: 22-SEP-22 11:05
Receive Date: 22-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	09/27/22	1944	2322156	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Solids Analysis												
SM2540C TDS "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	09/28/22	1349	2322364	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	SM 2540C		

Notes:

Column headers are defined as follows:

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

Quality Control Summary

GEL LABORATORIES LLC

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QC Summary

Report Date: October 5, 2022

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Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia

Contact: Kelly Hicks

Workorder: 594161

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2321486										
QC1205201217	594149004	DUP									
Chloride		19.4		19.4	mg/L	0.144		(0%-20%)	HXC1	09/27/22	08:16
Fluoride		0.385		0.388	mg/L	0.957 ^		(+/-2)		09/26/22	15:51
Sulfate		136		137	mg/L	0.176		(0%-20%)		09/27/22	08:16
QC1205201218	594158001	DUP									
Chloride		24.5		24.4	mg/L	0.0879		(0%-20%)		09/27/22	13:03
Fluoride		0.330		0.326	mg/L	1.16 ^		(+/-2)		09/26/22	19:50
Sulfate		48.9		48.8	mg/L	0.0235		(0%-20%)		09/27/22	13:03
QC1205201216	LCS										
Chloride	5.00			4.66	mg/L		93.3	(90%-110%)		09/26/22	13:22
Fluoride	2.50			2.46	mg/L		98.5	(90%-110%)			
Sulfate	10.0			9.45	mg/L		94.5	(90%-110%)			
QC1205201215	MB										
Chloride			U	ND	mg/L					09/26/22	12:52
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205201219	594149004	PS									
Chloride	5.00	1.94		6.82	mg/L		97.7	(90%-110%)		09/27/22	08:46

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QC Summary

Workorder: 594161

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2321486										
Fluoride	2.50	0.385		2.83	mg/L		97.8	(90%-110%)	HXC1	09/26/22	16:21
Sulfate	10.0	13.6		24.2	mg/L		106	(90%-110%)		09/27/22	08:46
QC1205201220	594158001 PS										
Chloride	5.00	4.89		10.4	mg/L		109	(90%-110%)		09/27/22	13:33
Fluoride	2.50	0.330		2.78	mg/L		98.1	(90%-110%)		09/26/22	20:20
Sulfate	10.0	9.77		20.2	mg/L		105	(90%-110%)		09/27/22	13:33
Batch	2322156										
QC1205202462	594161004 DUP										
Chloride		10.9		10.9	mg/L	0.296		(0%-20%)	HXC1	09/27/22	22:49
Fluoride		0.223		0.239	mg/L	6.98 ^		(+/-2)		09/27/22	21:17
Sulfate		6.35		6.31	mg/L	0.572		(0%-20%)			
QC1205202461	LCS										
Chloride	5.00			4.67	mg/L		93.5	(90%-110%)		09/27/22	20:46
Fluoride	2.50			2.38	mg/L		95.2	(90%-110%)			
Sulfate	10.0			9.70	mg/L		97	(90%-110%)			
QC1205202460	MB										
Chloride			U	ND	mg/L					09/27/22	20:15
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						

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QC Summary

Workorder: 594161

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch 2322156											
QC1205202463 594161004 PS Chloride	5.00	5.45		10.6	mg/L		104	(90%-110%)	HXC1	09/27/22	23:20
Fluoride	2.50	0.223		2.55	mg/L		93.1	(90%-110%)		09/27/22	21:47
Sulfate	10.0	6.35		16.2	mg/L		98.1	(90%-110%)			
Solids Analysis											
Batch 2321838											
QC1205201919 593896001 DUP Total Dissolved Solids		117		120	mg/L	2.53		(0%-5%)	CH6	09/27/22	15:03
QC1205201920 593969003 DUP Total Dissolved Solids		227		206	mg/L	9.7*		(0%-5%)		09/27/22	15:03
QC1205201921 594040002 DUP Total Dissolved Solids		175		165	mg/L	5.88*		(0%-5%)		09/27/22	15:03
QC1205201922 594047006 DUP Total Dissolved Solids		730		734	mg/L	0.546		(0%-5%)		09/27/22	15:03
QC1205201923 594161004 DUP Total Dissolved Solids		612		611	mg/L	0.164		(0%-5%)		09/27/22	15:03
QC1205201918 LCS Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		09/27/22	15:03
QC1205201917 MB Total Dissolved Solids			U	ND	mg/L					09/27/22	15:03
Batch 2322364											
QC1205202835 594054010 DUP Total Dissolved Solids		370		386	mg/L	4.23		(0%-5%)	CH6	09/28/22	13:49

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QC Summary

Workorder: **594161**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2322364										
QC1205202836	594161003	DUP									
Total Dissolved Solids		656		639	mg/L	2.63		(0%-5%)	CH6	09/28/22	13:49
QC1205202837	594230002	DUP									
Total Dissolved Solids		211		222	mg/L	5.08*		(0%-5%)		09/28/22	13:49
QC1205202838	594346002	DUP									
Total Dissolved Solids		788		803	mg/L	1.89		(0%-5%)		09/28/22	13:49
QC1205202834	LCS										
Total Dissolved Solids	300			301	mg/L		100	(95%-105%)		09/28/22	13:49
QC1205202833	MB										
Total Dissolved Solids			U	ND	mg/L					09/28/22	13:49

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.

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QC Summary

Workorder: 594161

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
^											
d											
e											
h											

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

h Preparation or preservation holding time was exceeded

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

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

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

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

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

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

**Williams Power Station Groundwater Sampling
Samples Collected between: 9/19/2022 and 9/22/2022**

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:

594161

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:

Based on QA review, qualification of data was not warranted.

Data Qualifiers	
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 Codes and Explanations	
BE	Equipment blank contamination.
BF	Field blank contamination.
BL	Laboratory blank contamination.
BN	Negative laboratory blank contamination.
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
H	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

T	Temperature preservation issue.
X	Percent solids < 50%.
Y	Chemical yield outside of acceptance limits
ZZ	Other

Lab Sample ID	594161001
Sys Sample Code	MW-LF-10-2022Q3
Sample Name	MW-LF-10-2022Q3
Sample Date	9/21/2022 2:07:00 PM
Location	WMS-GW-10 / GW-10
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	70.8				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	68700				300	300	1000	Y	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.453				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	4.62				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	17.0				0.335	0.335	1.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	365				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161002
Sys Sample Code	MW-LF-11-2022Q3
Sample Name	MW-LF-11-2022Q3
Sample Date	9/21/2022 2:50:00 PM
Location	W52-MW-LF-11 / MW-LF-11
Sample Type	N
Matrix	GW
Parent Sample	

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 200.8	Boron	7440-42-8	T	ug/L	31.9				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	19300				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	6.48				0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.272				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	1.56				0.133	0.133	0.400	Y	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	84.0				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161003
Sys Sample Code	MW-LF-20-2022Q3
Sample Name	MW-LF-20-2022Q3
Sample Date	9/22/2022 11:27:00 AM
Location	W52-MW-LF-20 / MW-LF-20
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	T	ug/L	228				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	149000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.203				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	4.24				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	11.7				0.134	0.134	0.400	Y	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	656				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161004
Sys Sample Code	MW-LF-21-2022Q3
Sample Name	MW-LF-21-2022Q3
Sample Date	9/21/2022 4:32:00 PM
Location	W52-MW-LF-21 / MW-LF-21
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	T	ug/L	211				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	116000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.223				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	6.35				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	10.9				0.134	0.134	0.400	Y	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	612				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161005
Sys Sample Code	MW-LF-22D-2022Q3
Sample Name	MW-LF-22D-2022Q3
Sample Date	9/22/2022 12:05:00 PM
Location	W52-MW-LF-22D / MW-LF-22D
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	T	ug/L	347				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	83300				150	150	500	Y	Yes	5	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	10.5				0.134	0.134	0.400	Y	Yes	2	NA
	Sulfate	14808-79-8	N	mg/L	32.8				0.266	0.266	0.800	Y	Yes	2	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.286				0.0330	0.0330	0.100	Y	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	583				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161006
Sys Sample Code	MW-LF-23D-2022Q3
Sample Name	MW-LF-23D-2022Q3
Sample Date	9/21/2022 3:22:00 PM
Location	W52-MW-LF-23D / MW-LF-23D
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	T	ug/L	292				20.0	20.0	75.0	Y	Yes	5	NA
	Calcium	7440-70-2	T	ug/L	68100				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.348				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	16.3				0.134	0.134	0.400	Y	Yes	2	NA
	Sulfate	14808-79-8	N	mg/L	21.7				0.266	0.266	0.800	Y	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	501				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161007
Sys Sample Code	DU-W52-CCR-22301
Sample Name	DU-W52-CCR-22301
Sample Date	9/22/2022 12:00:00 PM
Location	W52-MW-LF-26 / MW-LF-26
Sample Type	FD
Matrix	GW
Parent Sample	MW-LF-26-2022Q3

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	T	ug/L	152				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	159000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.209				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	138				1.34	1.34	4.00	Y	Yes	20	NA
	Sulfate	14808-79-8	N	mg/L	53.6				2.66	2.66	8.00	Y	Yes	20	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	907				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161008
Sys Sample Code	FBLK-W52-CCR-22301
Sample Name	FBLK-W52-CCR-22301
Sample Date	9/21/2022 3:55:00 PM
Location	WMS-FB / Field 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	T	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	T	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L		U			0.0670	0.0670	0.200	N	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			2.38	2.38	10.0	N	Yes	1	NA

Lab Sample ID	594161009
Sys Sample Code	MW-LF-24-2022Q3
Sample Name	MW-LF-24-2022Q3
Sample Date	9/22/2022 10:50:00 AM
Location	W52-MW-LF-24 / MW-LF-24
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	T	ug/L	87.7				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	110000				150	150	500	Y	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.485				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	10.1				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	18.0				0.335	0.335	1.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	478				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161010
Sys Sample Code	MW-LF-25-2022Q3
Sample Name	MW-LF-25-2022Q3
Sample Date	9/21/2022 4:20:00 PM
Location	W52-MW-LF-25 / MW-LF-25
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	T	ug/L	78.7				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	166000				300	300	1000	Y	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.990				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	18.4				2.68	2.68	8.00	Y	Yes	40	NA
	Sulfate	14808-79-8	N	mg/L	316				5.32	5.32	16.0	Y	Yes	40	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	956				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161011
Sys Sample Code	MW-LF-26-2022Q3
Sample Name	MW-LF-26-2022Q3
Sample Date	9/22/2022 9:10:00 AM
Location	W52-MW-LF-26 / MW-LF-26
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	T	ug/L	149				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	166000				300	300	1000	Y	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.255				0.0330	0.0330	0.100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	137				1.34	1.34	4.00	Y	Yes	20	NA
	Sulfate	14808-79-8	N	mg/L	53.9				2.66	2.66	8.00	Y	Yes	20	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	890				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161012
Sys Sample Code	MW-LF-27-2022Q3
Sample Name	MW-LF-27-2022Q3
Sample Date	9/22/2022 9:02:00 AM
Location	W52-MW-LF-27 / MW-LF-27
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	T	ug/L	34.7				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	46100				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.223				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	4.69				0.133	0.133	0.400	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	19.3				0.335	0.335	1.00	Y	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	194				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161013
Sys Sample Code	MW-LF-28-2022Q3
Sample Name	MW-LF-28-2022Q3
Sample Date	9/22/2022 10:22:00 AM
Location	W52-MW-LF-28 / MW-LF-28
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	T	ug/L	16.1				4.00	4.00	15.0	Y	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	8390				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.87				0.0670	0.0670	0.200	Y	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.110				0.0330	0.0330	0.100	Y	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	1.51				0.133	0.133	0.400	Y	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	40.0				2.38	2.38	10.0	Y	Yes	1	NA

Lab Sample ID	594161014
Sys Sample Code	FBLK-W52-CCR-22302
Sample Name	FBLK-W52-CCR-22302
Sample Date	9/22/2022 11:05:00 AM
Location	WMS-FB / Field 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	T	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	T	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L		U			0.0670	0.0670	0.200	N	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			2.38	2.38	10.0	N	Yes	1	NA

Appendix E First Semiannual Detection Monitoring Statistical Evaluation



DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL

SEMIANNUAL DETECTION MONITORING

BERKELEY COUNTY, SOUTH CAROLINA

CCR GROUNDWATER DETECTION MONITORING
STATISTICAL ANALYSIS REPORT

For the

March 2022 Sampling Event

July 2022



A handwritten signature in blue ink, appearing to read "Joyce E. Peterson".

Joyce Peterson, P.E.
Senior Environmental Engineer

A handwritten signature in blue ink, appearing to read "Richard A. Mayer Jr.".

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

*TRC Environmental Corporation | Dominion Energy South Carolina
Williams Highway 52 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 Williams Station Highway 52 Class III Landfill for the tenth semiannual detection monitoring event. Samples were collected on March 23rd and 24th, 2022. The final laboratory analytical data packages for the event were received on April 4th, 2022, and the data validation report was received on April 8th, 2022. This report addresses results from Detection Monitoring wells MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26. Background wells for the Class III Landfill include MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28.

Statistical Analysis

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

- MW-LF-20: calcium and total dissolved solids (TDS)
- MW-LF-21: calcium and TDS
- MW-LF-22D: TDS
- MW-LF-23D: TDS
- MW-LF-24: calcium and TDS
- MW-LF-25: calcium, sulfate, and TDS
- MW-LF-26: calcium, chloride, sulfate, and TDS

As has been done since the initiation of detection monitoring at the Williams Station Highway 52 Class III Landfill, 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. TRC is currently evaluating the existing monitoring well network and updates to the Site's Statistical Analysis Plan (StAP) will be forthcoming which will formally establish and describe the statistical methods being employed. The prediction limits used for the first monitoring event in 2021 were calculated to be used for four semiannual sampling events, of which this is the third.

Appendix A presents the background data used for the prediction limit calculations. **Table 1** presents the BTVs calculated based on the background data¹. **Table 2** presents the data set for the tenth detection monitoring event and highlights results that are potential SSIs. An Alternative Source Demonstration (ASD) should be prepared for these potential SSIs.

¹ As shown on Table 1, pH was found to have a decreasing trend in the background data set. The procedure for evaluating SSIs with trending data were followed initially and indicated potential SSIs for pH based on trend comparisons for MW-LF-20, MW-LF-24, MW-LF-25, and MW-LF-26. However, when conducting the trend comparisons, it was noted that pH differentials based on the trend differences for the four wells with trends exceeding the trend for the background data set were much lower than the precision of pH field measurements. On that basis, trend-based SSIs were discarded in favor of prediction limit-based SSIs.

Table 1

Background Threshold Values for 2021 and 2022

Table 1
Background Threshold Values for 2021 and 2022
Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill

CONSTITUENT	NUMBER of RESULTS	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS
Boron (mg/L)	51	33	Nonparametric	N/A	0.5	95% USL
Calcium (mg/L)	51	100	Nonparametric	None	94.6	95% USL
Chloride (mg/L)	51	100	Nonparametric	None	28.6	95% USL
Fluoride (mg/L)	51	88	Normal	None	0.756	95% KM UPL (k = 28)
pH (s.u.)	51	100	Normal	Decreasing	5.16 - 8.33	95% UPL (k = 28)
Sulfate (mg/L)	51	100	Gamma	None	45.2	95% HW UPL (k = 28)
TDS (mg/L)	51	100	Nonparametric	None	389	95% USL

[1] Trend-based comparisons resulted in SSIs based on differences much smaller than the precision of the field pH measurements, SSIs are based on the UPL and LPL.

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

Table 2
March 2022 Downgradient Results
and Potential SSIs

Table 2
 March 2022 Downgradient Results and Potential SSIs
 Dominion Energy South Carolina
 Williams Station Highway 52 Class III Landfill

WELL	CONSTITUENT / BTV / RESULT (mg/L except as noted) ^[1]						
	BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
	0.5	94.6	28.6	0.756	5.2 - 8.3	45.2	389
BACKGROUND WELLS							
MW-LF-10	0.0634	66.8	20.4	0.438	6.87	5.08	350
MW-LF-11	0.0218	17.1	6.49	0.235	6.01	1.36	98.6
MW-LF-27	0.0303	28.5	7.25	0.242	6.36	2.45	147
MW-LF-28	0.00917 J	10.2	5.96	0.0858 J	5.82	0.839	47.1
DOWNGRADIANT WELLS							
MW-LF-20	0.206	151	12.5	0.206	6.32	5.41	651
MW-LF-21	0.208	134	11.5	0.228	6.48	7.14	620
MW-LF-22D	0.343	85.3	10.0	0.248	6.80	32.9	579
MW-LF-23D	0.277	65.7	16.0	0.327	6.92	22.5	516
MW-LF-24	0.0846	103.0	19.1	0.403	6.20	12.4	477
MW-LF-25	0.083	178	18.2	0.610	6.50	373	1060
MW-LF-26	0.167	161	136	0.202	5.99	61.9	900

Shaded cells indicate an SSI.

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

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
Williams Station Highway 52 Class III Landfill

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) ^[1]						
		BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
BL-1	MW-LF-10	0.0557 U	58.6	15.8	0.541	7.1	3.31	270
BL-2	MW-LF-10	0.0557 U	48.8	15.6	0.634	7.0	3.4	234
BL-3	MW-LF-10	0.0557 U	21.6	6.37	0.119	6.8	7.57	149
BL-4	MW-LF-10	0.0577	30.5	10.9	0.33	6.9	4.12	174
BL-5	MW-LF-10	0.0442 U	14.6	17.1	0.534	6.9	9.54	204
BL-6	MW-LF-10	0.166	38.6	17.15	0.442	7.4	5.4	277
BL-7	MW-LF-10	0.0442 U	32.3	16.42	0.368	7.4	4.95	241
BL-8	MW-LF-10	0.0442 U	41.5	19.45	0.515	7.7	5.51	196
DM-1	MW-LF-10	0.15	29.49	19.7	0.545	8.4	6	167
DM-2	MW-LF-10	0.0863	56.92	19	0.42	8.0	5.92	263
DM-3	MW-LF-10	0.0381	54.3	27.9	0.46	7.4	8.23	187
DM-4	MW-LF-10	0.0676	63.4	26.7	0.46	7.1	7.19	334
DM-5	MW-LF-10	0.0568	81.2	28.6	0.43	6.7	9.64	373
DM-6	MW-LF-10	0.122	79	27.5	0.43	7.0	7.13	382
DM-7	MW-LF-10	0.5 U	71.2	25.6	0.46	6.8	7.27	389
BL-4	MW-LF-11	0.0557 U	18.3	5.93	0.407	6.3	1.73	94
BL-5	MW-LF-11	0.0442 U	15.6	3.04	0.337	6.4	5.13	89
BL-6	MW-LF-11	0.0778	16.6	5.04	0.31	6.4	1.45	101
BL-7	MW-LF-11	0.0442 U	19.3	5.16	0.336	7.0	1.34	98
BL-8	MW-LF-11	0.0442 U	20.1	5.99	0.324	7.1	1.47	105

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

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

Appendix A (Continued)
Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events
Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) ^[1]						
		BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
DM-1	MW-LF-11	0.0599	20.18	6.1	0.368	6.7	1.8	110
DM-2	MW-LF-11	0.0442 U	16.26	5.84	0.25	6.3	1.77	98
DM-3	MW-LF-11	0.0219 U	19.5	6.59	0.35	6.4	1.44	108
DM-4	MW-LF-11	0.2 U	14.7	5.58	0.28	6.2	1.85	71
DM-5	MW-LF-11	0.0542	23	5.96	0.36	6.6	2.06	108
DM-6	MW-LF-11	0.0437	13.3	4.3	0.2	6.0	3.54	93
DM-7	MW-LF-11	0.5 U	18.8	7.23	0.34	6.2	1.24	126
BL-4	MW-LF-27	0.0557 U	53	4.85	0.318	7.2	5.69	189
BL-5	MW-LF-27	0.0442 U	81.6	10.1	0.288	6.9	12	294
BL-6	MW-LF-27	0.0508	87.1	12.78	0.273	6.8	11.33	314
BL-7	MW-LF-27	0.0442 U	94.6	12.94	0.244	6.6	13.97	330
BL-8	MW-LF-27	0.0442 U	94.6	16.51	0.265	6.9	35.14	332
DM-1	MW-LF-27	0.0442 U	86.73	14.2	0.267	6.7	32	318
DM-2	MW-LF-27	0.0442 U	69.67	13.3	0.21	6.8	15.5	265
DM-3	MW-LF-27	0.0224	79.7	13.3	0.27	7.2	16.8	315
DM-4	MW-LF-27	0.0982	55.9	14.6	0.23	6.7	14.1	274
DM-5	MW-LF-27	0.0426	62.5	15.2	0.23	6.8	10.4	239
DM-6	MW-LF-27	0.0584	51.3	14.5	0.16	6.5	20.9	235
DM-7	MW-LF-27	0.5 U	82.3	10.1	0.26	6.8	8.5	306
BL-4	MW-LF-28	0.0557 U	34.5	4.05	0.12	6.6	4.85	120
BL-5	MW-LF-28	0.0442 U	29.9	3.98	0.146	6.6	0.827	96

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

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

Appendix A (Continued)
Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events
Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) ^[1]						
		BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
BL-6	MW-LF-28	0.0442 U	23.8	3.68	0.145	6.4	0.92	95
BL-7	MW-LF-28	0.0442 U	17.3	3.98	0.0851	6.4	1.36	68
BL-8	MW-LF-28	0.0442 U	18.4	3.86	0.0938	7.0	1.72	95
DM-1	MW-LF-28	0.0442 U	17.46	3.6	0.118	6.7	3.1	73
DM-2	MW-LF-28	0.0442 U	19.93	3.99	0.025 U	6.4	3.12	76
DM-3	MW-LF-28	0.0219 U	12	3.65	0.025 U	6.0	1.29	64
DM-4	MW-LF-28	0.2 U	10.6	4.05	0.1 U	6.1	2.96	67
DM-5	MW-LF-28	0.2 U	12	4.45	0.1 U	5.9	2.48	57
DM-6	MW-LF-28	0.2 U	13.5	5.21	0.1 U	5.9	5.11	68
DM-7	MW-LF-28	0.5 U	12.3	5.24	0.1 U	5.9	1.74	76

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

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

Appendix F

Second Semiannual Detection Monitoring Statistical Evaluation



DOMINION ENERGY SOUTH CAROLINA

WILLIAMS STATION HIGHWAY 52 CLASS III LANDFILL

SEMIANNUAL DETECTION MONITORING

BERKELEY COUNTY, SOUTH CAROLINA

CCR GROUNDWATER DETECTION MONITORING STATISTICAL ANALYSIS REPORT

For the

September 2022 Sampling Event

November 2022



A handwritten signature in blue ink, appearing to read "Joyce E. Peterson".

Joyce Peterson, P.E.
Senior Environmental Engineer

A handwritten signature in blue ink, appearing to read "Richard A. Mayer Jr.".

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

*TRC Environmental Corporation | Dominion Energy South Carolina
Williams Highway 52 Class III Landfill – Detection Monitoring*

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Appendix A Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

Statistical Analysis Report

Groundwater Sampling

TRC Environmental Corporation (TRC) is providing this Statistically Significant Increases (SSI) notification for the Williams Station Highway 52 Class III Landfill for the eleventh semiannual detection monitoring event. Samples were collected on September 21st and 22nd, 2022. The final laboratory analytical data packages for the event were received on October 5th, 2022, and the data validation report was received on October 10th, 2022. This report addresses results from Detection Monitoring wells MW-LF-20, MW-LF-21, MW-LF-22D, MW-LF-23D, MW-LF-24, MW-LF-25, and MW-LF-26. Background wells for the Class III Landfill include MW-LF-10, MW-LF-11, MW-LF-27, and MW-LF-28.

Statistical Analysis

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

- MW-LF-20: calcium and total dissolved solids (TDS)
- MW-LF-21: calcium and TDS
- MW-LF-22D: TDS
- MW-LF-23D: TDS
- MW-LF-24: calcium and TDS
- MW-LF-25: calcium, fluoride, sulfate, and TDS
- MW-LF-26: calcium, chloride, sulfate, and TDS

As has been done since the initiation of detection monitoring at the Williams Station Highway 52 Class III Landfill, 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. TRC is currently evaluating the existing monitoring well network and updates to the Site's Statistical Analysis Plan (StAP) will be forthcoming which will formally establish and describe the statistical methods being employed. The prediction limits used for the first monitoring event in 2021 were calculated to be used for four semiannual sampling events, of which this is the fourth. The prediction limits will be updated prior to the first semiannual event in 2023.

Appendix A presents the background data used for the prediction limit calculations. **Table 1** presents the BTVs calculated based on the background data¹. **Table 2** presents the data set for the eleventh detection monitoring event and highlights results that are potential SSIs.

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 well system to include MW-LF-11, MW-LF-20, and MW-LF-28 and exclude monitoring wells MW-LF-10 and MW-LF-27.
- Install three new downgradient monitoring wells along the northern edge of the CCR Unit boundary.
- Remove MW-LF-26 from the monitoring system as this well may intercept groundwater from other locations outside 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.

¹ As shown on Table 1, pH was found to have a decreasing trend in the background data set. The procedure for evaluating SSIs with trending data were followed initially and indicated potential SSIs for pH based on trend comparisons for MW-LF-20, MW-LF-24, MW-LF-25, and MW-LF-26. However, when conducting the trend comparisons, it was noted that pH differentials based on the trend differences for the four wells with trends exceeding the trend for the background data set were much lower than the precision of pH field measurements. On that basis, trend-based SSIs were discarded in favor of prediction limit-based SSIs.

Table 1

Background Threshold Values for 2021 and 2022

Table 1
Background Threshold Values for 2021 and 2022
Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill

CONSTITUENT	NUMBER of RESULTS	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS
Boron (mg/L)	51	33	Nonparametric	N/A	0.5	95% USL
Calcium (mg/L)	51	100	Nonparametric	None	94.6	95% USL
Chloride (mg/L)	51	100	Nonparametric	None	28.6	95% USL
Fluoride (mg/L)	51	88	Normal	None	0.756	95% KM UPL (k = 28)
pH (s.u.)	51	100	Normal	Decreasing	5.16 - 8.33	95% UPL (k = 28)
Sulfate (mg/L)	51	100	Gamma	None	45.2	95% HW UPL (k = 28)
TDS (mg/L)	51	100	Nonparametric	None	389	95% USL

[1] Trend-based comparisons resulted in SSIs based on differences much smaller than the precision of the field pH measurements, SSIs are based on the UPL and LPL.

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

Table 2

September 2022 Downgradient Results and Potential SSIs

Table 2
September 2022 Downgradient Results and Potential SSIs
Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill

WELL	CONSTITUENT / BTV / RESULT (mg/L except as noted) ^[1]						
	BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
	0.5	94.6	28.6	0.756	5.2 - 8.3	45.2	389
BACKGROUND WELLS							
MW-LF-10	0.0708	68.7	17.0	0.453	6.68	4.62	365
MW-LF-11	0.0319	19.3	6.48	0.272	5.80	1.56	84.0
MW-LF-27	0.347	46.1	19.3	0.223	6.21	4.69	194
MW-LF-28	0.161	8.39	5.87	0.110	5.86	1.51	40.0
DOWNGRAIENT WELLS							
MW-LF-20	0.228	149	11.7	0.203	6.28	4.24	656
MW-LF-21	0.211	116	10.9	0.223	6.30	6.35	612
MW-LF-22D	0.347	83.3	10.5	0.286	6.32	32.8	583
MW-LF-23D	0.292	68.1	16.3	0.348	6.70	21.7	501
MW-LF-24	0.0877	110	18.0	0.485	5.88	10.1	478
MW-LF-25	0.0787	166	18.4	0.990	6.19	316	956
MW-LF-26	0.149	166	137	0.255	5.57	53.9	890

Shaded cells indicate an SSI.

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

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
Williams Station Highway 52 Class III Landfill

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) ^[1]						
		BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
BL-1	MW-LF-10	0.0557 U	58.6	15.8	0.541	7.1	3.31	270
BL-2	MW-LF-10	0.0557 U	48.8	15.6	0.634	7.0	3.4	234
BL-3	MW-LF-10	0.0557 U	21.6	6.37	0.119	6.8	7.57	149
BL-4	MW-LF-10	0.0577	30.5	10.9	0.33	6.9	4.12	174
BL-5	MW-LF-10	0.0442 U	14.6	17.1	0.534	6.9	9.54	204
BL-6	MW-LF-10	0.166	38.6	17.15	0.442	7.4	5.4	277
BL-7	MW-LF-10	0.0442 U	32.3	16.42	0.368	7.4	4.95	241
BL-8	MW-LF-10	0.0442 U	41.5	19.45	0.515	7.7	5.51	196
DM-1	MW-LF-10	0.15	29.49	19.7	0.545	8.4	6	167
DM-2	MW-LF-10	0.0863	56.92	19	0.42	8.0	5.92	263
DM-3	MW-LF-10	0.0381	54.3	27.9	0.46	7.4	8.23	187
DM-4	MW-LF-10	0.0676	63.4	26.7	0.46	7.1	7.19	334
DM-5	MW-LF-10	0.0568	81.2	28.6	0.43	6.7	9.64	373
DM-6	MW-LF-10	0.122	79	27.5	0.43	7.0	7.13	382
DM-7	MW-LF-10	0.5 U	71.2	25.6	0.46	6.8	7.27	389
BL-4	MW-LF-11	0.0557 U	18.3	5.93	0.407	6.3	1.73	94
BL-5	MW-LF-11	0.0442 U	15.6	3.04	0.337	6.4	5.13	89
BL-6	MW-LF-11	0.0778	16.6	5.04	0.31	6.4	1.45	101
BL-7	MW-LF-11	0.0442 U	19.3	5.16	0.336	7.0	1.34	98
BL-8	MW-LF-11	0.0442 U	20.1	5.99	0.324	7.1	1.47	105

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

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

Appendix A (Continued)
Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events
Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) ^[1]						
		BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
DM-1	MW-LF-11	0.0599	20.18	6.1	0.368	6.7	1.8	110
DM-2	MW-LF-11	0.0442 U	16.26	5.84	0.25	6.3	1.77	98
DM-3	MW-LF-11	0.0219 U	19.5	6.59	0.35	6.4	1.44	108
DM-4	MW-LF-11	0.2 U	14.7	5.58	0.28	6.2	1.85	71
DM-5	MW-LF-11	0.0542	23	5.96	0.36	6.6	2.06	108
DM-6	MW-LF-11	0.0437	13.3	4.3	0.2	6.0	3.54	93
DM-7	MW-LF-11	0.5 U	18.8	7.23	0.34	6.2	1.24	126
BL-4	MW-LF-27	0.0557 U	53	4.85	0.318	7.2	5.69	189
BL-5	MW-LF-27	0.0442 U	81.6	10.1	0.288	6.9	12	294
BL-6	MW-LF-27	0.0508	87.1	12.78	0.273	6.8	11.33	314
BL-7	MW-LF-27	0.0442 U	94.6	12.94	0.244	6.6	13.97	330
BL-8	MW-LF-27	0.0442 U	94.6	16.51	0.265	6.9	35.14	332
DM-1	MW-LF-27	0.0442 U	86.73	14.2	0.267	6.7	32	318
DM-2	MW-LF-27	0.0442 U	69.67	13.3	0.21	6.8	15.5	265
DM-3	MW-LF-27	0.0224	79.7	13.3	0.27	7.2	16.8	315
DM-4	MW-LF-27	0.0982	55.9	14.6	0.23	6.7	14.1	274
DM-5	MW-LF-27	0.0426	62.5	15.2	0.23	6.8	10.4	239
DM-6	MW-LF-27	0.0584	51.3	14.5	0.16	6.5	20.9	235
DM-7	MW-LF-27	0.5 U	82.3	10.1	0.26	6.8	8.5	306
BL-4	MW-LF-28	0.0557 U	34.5	4.05	0.12	6.6	4.85	120
BL-5	MW-LF-28	0.0442 U	29.9	3.98	0.146	6.6	0.827	96

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

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

Appendix A (Continued)
Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events
Dominion Energy South Carolina
Williams Station Highway 52 Class III Landfill

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) ^[1]						
		BORON	CALCIUM	CHLORIDE	FLUORIDE	pH	SULFATE	TDS
BL-6	MW-LF-28	0.0442 U	23.8	3.68	0.145	6.4	0.92	95
BL-7	MW-LF-28	0.0442 U	17.3	3.98	0.0851	6.4	1.36	68
BL-8	MW-LF-28	0.0442 U	18.4	3.86	0.0938	7.0	1.72	95
DM-1	MW-LF-28	0.0442 U	17.46	3.6	0.118	6.7	3.1	73
DM-2	MW-LF-28	0.0442 U	19.93	3.99	0.025 U	6.4	3.12	76
DM-3	MW-LF-28	0.0219 U	12	3.65	0.025 U	6.0	1.29	64
DM-4	MW-LF-28	0.2 U	10.6	4.05	0.1 U	6.1	2.96	67
DM-5	MW-LF-28	0.2 U	12	4.45	0.1 U	5.9	2.48	57
DM-6	MW-LF-28	0.2 U	13.5	5.21	0.1 U	5.9	5.11	68
DM-7	MW-LF-28	0.5 U	12.3	5.24	0.1 U	5.9	1.74	76

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

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