



# 2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

## EPA CCR RULE COMPLIANCE

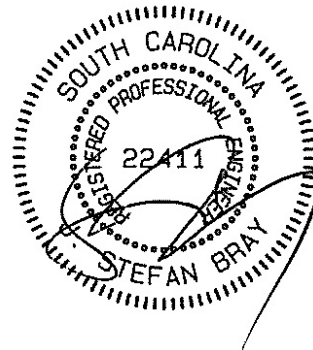
### DOMINION ENERGY SOUTH CAROLINA: Wateree Station: Class Three Landfill

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## EXECUTIVE SUMMARY

This document presents the *2020 Annual Groundwater Monitoring and Corrective Action* report for the Class 3 landfill at Dominion Energy South Carolina (DESC) Wateree Generating Station in Wateree, Richland County, South Carolina in accordance with 40 CFR Part 257.90 (e). The Class 3 landfill is a coal combustion residuals (CCR) existing landfill as defined by the US Environmental Protection Agency (EPA) CCR Rule (40 CFR Part 257.53). Pursuant to the CCR Rule (40 CFR Part 257.50 *et. seq.*), DESC is required to complete an *Annual Groundwater Monitoring and Corrective Action Report* by January 31<sup>st</sup> annually.

This report documents the status of the groundwater monitoring program for the Class 3 landfill, summarizes key activities completed during 2020 and any issues encountered, actions taken to resolve any identified issues, and lists key activities to be completed in 2021. The following is a summary of the current status of groundwater monitoring and corrective action for the Class 3 landfill.

1. At the start and end of the current annual reporting period (2020), the Class 3 landfill was operating under the Detection Monitoring program under 40 CFR Part 257.94.
2. Detection monitoring was conducted at the site in March and August 2020 pursuant to 40 CFR Part 257.94.
3. Confirmation monitoring was conducted in May and October 2020 to confirm the March and August 2020 Detection Monitoring results, respectively, and to supplement the site water quality database for statistical analysis.
4. Based on the 2020 Detection Monitoring and supplemental monitoring results, statistically significant increases (SSIs) over background concentrations were indicated in groundwater at the following wells for the listed Appendix III constituents:

Sample Location	Parameters Presenting SSIs
MW-LF-07	Chloride
MW-LF-10	Sulfate
MW-LF-10A	Chloride, Sulfate
MW-LF-22	Chloride

5. Pursuant to 40 CFR Part 257.94 (e)(2), DESC conducted an Alternate Source Demonstration (ASD) for the SSIs identified for the Appendix III constituents in



groundwater relative to background concentrations based on the March 2020 Detection Monitoring and May 2020 supplemental monitoring events. The results of the ASD are presented in the September 2020 *Alternate Source Demonstration Report, Wateree Station Class 3 Landfill*.

6. The results of the ASD support the position that the SSIs for chloride and sulfate in groundwater evident from statistical analysis of groundwater quality data collected during the March 2020 Detection Monitoring and May 2020 supplemental monitoring events are not due to a release from the Class 3 landfill at the site.
7. In 2021, an ASD and report of results will be conducted based on the results of the August 2020 Detection Monitoring event and supplemental monitoring conducted in October 2020. The ASD report will be completed and the report of results included in the plant operating record by April 17, 2021. It is anticipated that the results of the ASD based on the September 2020 Detection Monitoring data will be similar to those based on the previous ASDs. Consequently, it is anticipated that Detection Monitoring will continue in 2021. Two rounds of detection monitoring are anticipated to be completed during March and September 2021.





## 1.0 INTRODUCTION

This document presents the *2020 Annual Groundwater Monitoring and Corrective Action* report for the Class 3 landfill at Dominion Energy South Carolina (DESC) Wateree Generating Station in Wateree, Richland County, South Carolina in accordance with 40 CFR Part 257.90 (e). The Class 3 landfill is a coal combustion residuals (CCR) existing landfill as defined by the US Environmental Protection Agency (EPA) CCR Rule (40 CFR Part 257.53).

This report presents the following information as required under 40 CFR Part 257.90 (e):

1. A facility map (aerial image) showing the Class 3 landfill and all background (or upgradient) and downgradient monitoring wells, including the well identification numbers, that are part of the groundwater monitoring program for the landfill;
2. Identification of additional monitoring wells that were installed during 2018, along with a narrative description of why the wells were installed;
3. In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
4. A narrative discussion of transitions between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and
5. Other information required to be included in the annual report as specified in Parts 257.90 through 257.98 of the CCR Rule.

The following sections present the components of the annual report.



## 2.0 GROUNDWATER MONITORING WELL SYSTEM

Nine Type II groundwater monitoring wells (designated MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73) were installed and developed at Wateree Station Class Three Landfill in March 2016, June 2017, November 2017 and November 2018 to serve as EPA CCR Rule Compliance monitoring wells. A site location map is presented as **Figure 1** and a site map showing the locations and designations of the EPA CCR Rule Compliance monitoring wells at Wateree Station is presented as **Figure 2**.

The Type II groundwater monitoring wells were installed to monitor groundwater quality in the vicinity of the Class Three landfill in compliance with the groundwater monitoring requirements of the US EPA CCR Rule (40 CFR Part 257.93). In addition, existing monitoring wells MW-LF-01, MW-LF-06, and MW-LF-22, which are also used for NPDES and South Carolina Department of Health and Environmental Control (SCDHEC) landfill groundwater monitoring compliance, are included as part of the monitoring well network for US EPA CCR Rule compliance groundwater monitoring. Monitoring wells AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73, MW-LF-01 and MW-LF-06 serve as up-gradient wells to monitor the quality of background groundwater in the surficial aquifer entering the area of the Class Three landfill. The remaining monitoring wells (MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22) serve as down gradient wells to monitor the quality of groundwater down gradient of the Class Three landfill.



### **3.0 GROUNDWATER MONITORING**

#### **3.1 Groundwater Sampling**

In accordance with 40 CFR Part 257.94, the sixth round of Detection Monitoring was conducted on March 10 and 11, 2020 and included groundwater sampling from monitoring wells MW-LF-01, MW-LF-06, MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, MW-LF-22, MW-BG-73, AS-LF-01, AS-LF-02 and AS-LF-03. One groundwater sample was collected from each of the monitoring wells during the Detection Monitoring event. All groundwater samples collected from the monitoring wells for Detection Monitoring on March 10 and 11, 2020 were analyzed by a South Carolina Certified laboratory (DESC Central Laboratory (Certification Number 32006)) for the constituents listed in Appendix III of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107). In addition, all groundwater samples were analyzed for total alkalinity, iron, magnesium, potassium and sodium. Samples of landfill leachate were collected from leachate Outfalls 1 and 2 in March 2020 and analyzed for all of the constituents listed in Appendix III and Appendix IV of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107) except Radium 226/228.

In accordance with 40 CFR Part 257.94, the seventh round of Detection Monitoring was conducted on September 14 and 15, 2020 and included groundwater sampling from monitoring wells MW-LF-01, MW-LF-06, MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, MW-LF-22, MW-BG-73, AS-LF-01, AS-LF-02 and AS-LF-03. One groundwater sample was collected from each of the monitoring wells during the Detection Monitoring event. All groundwater samples collected from the monitoring wells for Detection Monitoring on September 14 and 15, 2020 were analyzed by a South Carolina Certified laboratory (DESC Central Laboratory (Certification Number 32006)) for the constituents listed in Appendix III of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107). In addition, all groundwater samples were analyzed for total alkalinity, iron, magnesium, potassium and sodium. Samples of landfill leachate were collected from leachate Outfalls 1 and 2 in September 2020 and analyzed for all of the constituents listed in Appendix III and Appendix IV of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107) except Radium 226/228.

Based on the results of the March 2020 Detection Monitoring event, groundwater was resampled for field and laboratory analysis from monitoring wells MW-LF-01, MW-LF-07, MW-LF-10, MW-LF-10A, MW-LF-22, MW-BG-73, AS-LF-01 and AS-LF-02 on May 26 and 27, 2020 to confirm the March 2020 results and supplement the site water quality database for statistical analysis. All groundwater samples collected from the



monitoring wells during the May 2020 resampling event were analyzed by a South Carolina Certified laboratory (DESC Central Laboratory (Certification Number 32006)). The groundwater samples were analyzed for the following constituents listed in Appendix III of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107): 1) Chloride and sulfate – all groundwater samples; 2) Calcium – MW-BG-73, MW-LF-10, AS-LF-01 and AS-LF-02; and 3) TDS – MW-LF-01. In addition, the groundwater sample from MW-LF-01 was analyzed for pH and specific conductance; the groundwater samples from all wells except MW-LF-01 were analyzed for total alkalinity; and the groundwater samples from MW-BG-73, MW-LF-10, AS-LF-01 and AS-LF-02 were analyzed for magnesium, potassium and sodium.

Based on the results of the September 2020 Detection Monitoring event, groundwater was resampled for field and laboratory analysis from monitoring wells MW-LF-01, MW-LF-07, MW-LF-10, MW-LF-10A, MW-LF-22, MW-BG-73, AS-LF-01, AS-LF-02 and AS-LF-03 on October 26 and 27, 2020 to confirm the September 2020 results and supplement the site water quality database for statistical analysis. All groundwater samples collected from the monitoring wells during the October 2020 resampling event were analyzed by a South Carolina Certified laboratory (DESC Central Laboratory (Certification Number 32006)) for the following constituents listed in Appendix III of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107): 1) All Appendix III constituents – MW-BG-73; 2) chloride and sulfate – MW-LF-01, AS-LF-01, AS-LF-02 and AS-LF-03; 3) chloride only – MW-LF-07 and MW-LF-22; and 4) sulfate only – MW-LF-10 and MW-LF-10A. In addition, the groundwater sample from MW-BG-73 was analyzed for magnesium, potassium, sodium and total alkalinity, and the groundwater samples from the remaining wells were analyzed for total alkalinity.

### **3.2 Results of Field and Laboratory Analyses of Groundwater Samples**

The results of the field and laboratory analyses of the groundwater samples collected from the monitoring wells since May 2016 are presented in **Table 1**, and copies of laboratory data sheets for the groundwater samples collected during the Detection Monitoring event conducted in September 2020, as well as the supplemental monitoring conducted in October 2020, are presented in **Appendix A**. The results of the field and laboratory analyses of the groundwater samples collected from the monitoring wells and leachate collected from the landfill during the Detection Monitoring event conducted in March 2020, as well as the supplemental monitoring conducted in May 2020, are presented in the Alternate Source Demonstration Report included in **Appendix C** (see Section **3.3**).



Statistical analysis to compare the groundwater quality in the downgradient monitoring wells to that of background water quality for the March 2020 Detection Monitoring event was completed on June 15, 2020. The results of the statistical analysis are presented in **Appendix B**. The results of the statistical analysis indicate that the concentrations of chloride in the groundwater samples collected from compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate in the groundwater samples collected from compliance monitoring wells MW-LF-10 and MW-LF-10A, showed statistically significant increases over background concentrations (as determined from the data for groundwater samples collected from background monitoring wells MW-LF-01, MW-LF-06, AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73). No other statistically significant increases over background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from the EPA CCR Rule compliance monitoring wells during the March 2020 Detection Monitoring event.

Statistical analysis to compare the groundwater quality in the downgradient monitoring wells to that of background water quality for the August 2020 Detection Monitoring event was completed on November 25, 2020. The results of the statistical analysis are presented in **Appendix B**. The results of the statistical analysis indicate that the concentration of chloride in the groundwater samples collected from compliance monitoring wells MW-LF-07 and MW-LF-22, and sulfate in the groundwater samples collected from compliance monitoring wells MW-LF-10 and MW-LF-10A, showed statistically significant increases over background concentrations (as determined from the data for groundwater samples collected from background monitoring wells MW-LF-01, MW-LF-06, AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73). No other statistically significant increases over background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from the EPA CCR Rule compliance monitoring wells during the August 2020 Detection Monitoring event.

### **3.3 Alternate Source Demonstration**

The results of the statistical analysis of data from the Detection Monitoring event conducted in March 2020 indicated that the concentrations of chloride in the groundwater samples collected from compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate in the groundwater samples collected from compliance monitoring wells MW-LF-10 and MW-LF-10A, showed statistically significant increases over background concentrations. Consequently, pursuant to 40 CFR Part 257.94 (e)(2), DESC conducted an Alternate Source Demonstration (ASD) for the statistically



significant increases in those constituents relative to background concentrations. The results of the ASD are presented in the September 2020 *Alternate Source Demonstration Report, Wateree Station Class 3 Landfill*, a copy of which is provided in **Appendix C**. The results of the ASD support the position that the SSIs for chloride and sulfate in groundwater evident from statistical analysis of groundwater quality data collected during the March 2020 Detection Monitoring event are not due to a release from the Class 3 landfill at the site. Therefore, no further action was warranted and the Class 3 landfill remains in detection monitoring.



#### **4.0 KEY PROJECT ACTIVITIES FOR 2020**

In 2021, an ASD and report of results will be conducted based on the results of the August 2020 Detection Monitoring event and supplemental groundwater monitoring conducted in October 2020. The ASD report will be completed and the report of results included in the plant operating record by April 17, 2020. It is anticipated that the results of the ASD based on the August 2020 Detection Monitoring data will be similar to those based on the previous ASDs. Consequently, it is anticipated that Detection Monitoring will continue in 2021. Two rounds of detection monitoring are anticipated to be completed during March and September 2021 with groundwater samples being collected from monitoring wells MW-LF-01, MW-LF-06, MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, MW-LF-22 and AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73.

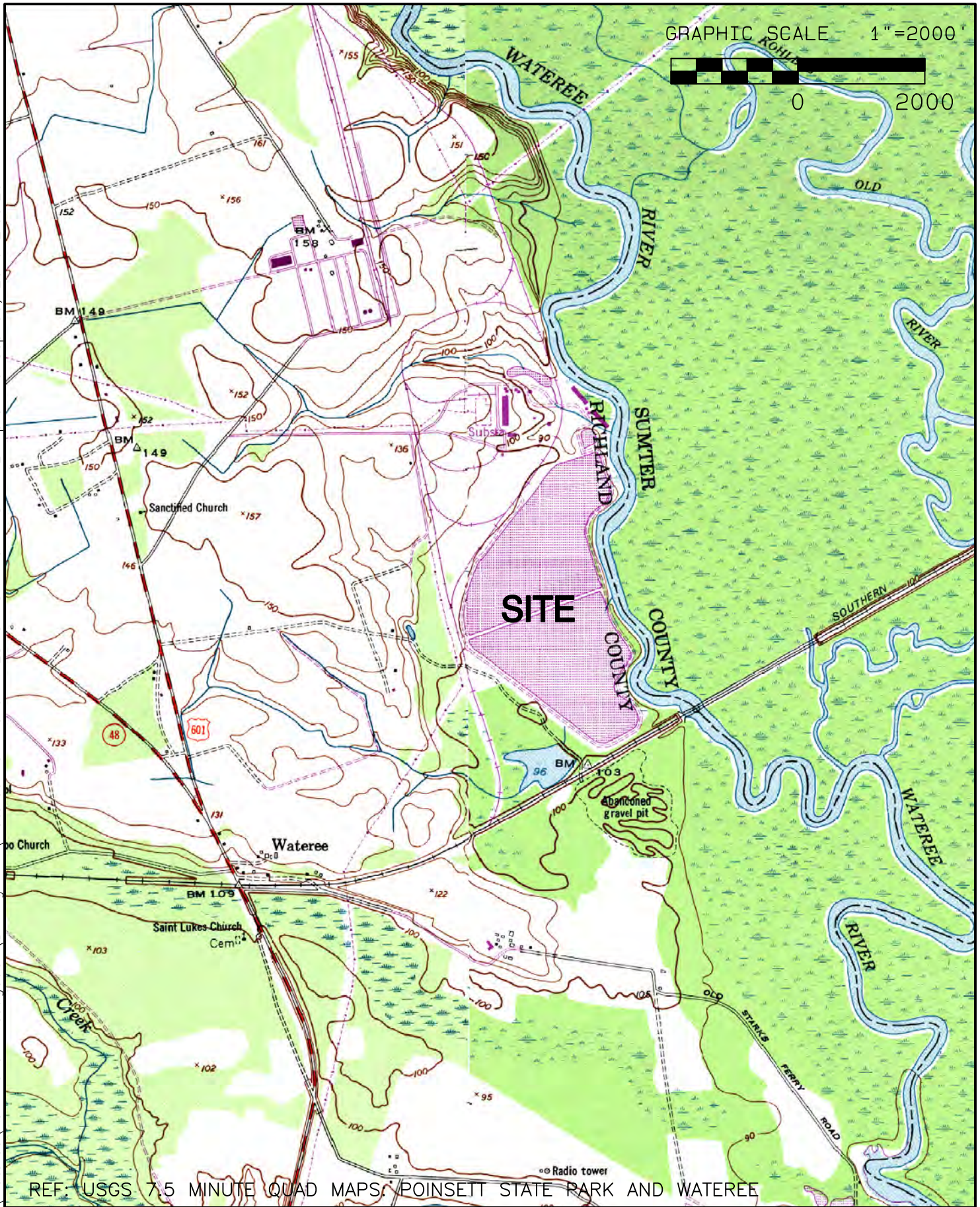


V:\SCE&G\Wateree\Ash Pond Investigation\Drilling RFP\Wateree Ash Pond INVESTIGATION Plan-WORK PLAN.pro Thu Sep 30, 2010 2:03:20PM

GRAPHIC SCALE 1"=2000'



0 2000



REF. USGS 7.5 MINUTE QUAD MAPS, POINSETT STATE PARK AND WATREEE

**GARRETT & MOORE**  
Engineering for the Power and Waste Industries

# DESC WATREEE STATION SITE LOCATION MAP

JOB

FIG

1



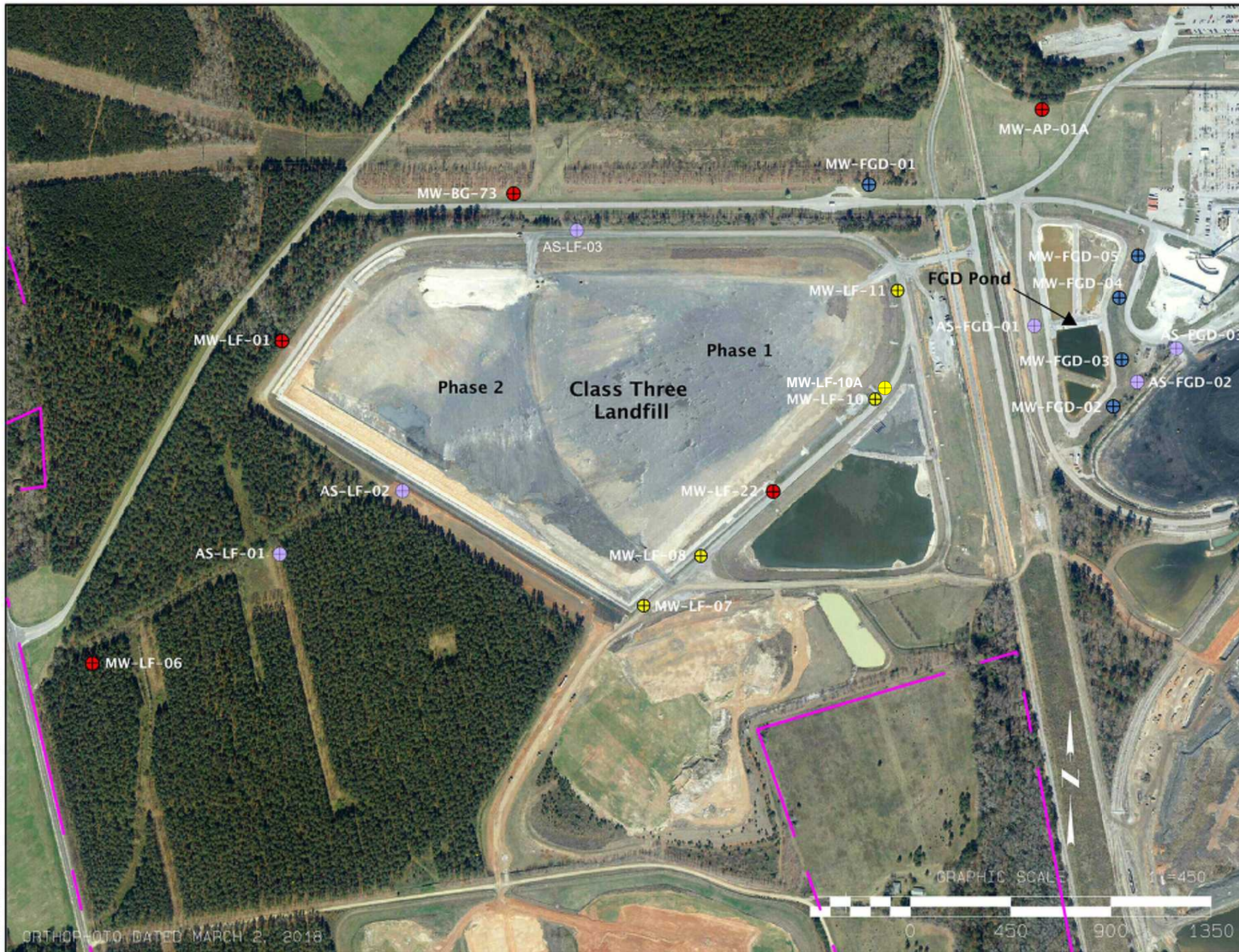
# EPA CCR Rule Compliance Groundwater Monitoring Wells

## Class Three Landfill

- Background and down gradient monitoring well
- ⊕ Well used for down gradient water quality monitoring
- ⊕ Alternate Source Demonstration monitoring well

## FGD Waste Water Pond

- ⊕ Background and down gradient monitoring well
- ⊕ Alternate Source Demonstration monitoring well



V:\Brain Boutin\Waterree\Waterree MAY 2018.dwg Tue May 8, 2018 11:01:33AM

ORTHOPHOTO DATED MARCH 2, 2018

GRAPHIC SCALE 1"=450'



DESC WATEREE STATION

**CCR RULE COMPLIANCE  
GROUNDWATER MONITORING WELLS  
FOR LANDFILL AND FGD POND**

JOB NUMBER  
**SHEET  
2**



**TABLE 1  
RESULTS OF FIELD AND LABORATORY ANALYSES OF GROUNDWATER AND LEACHATE SAMPLES  
EPA CCR RULE BACKGROUND AND COMPLIANCE GROUNDWATER MONITORING WELLS  
Wateree Generating Station Class 3 Landfill  
Eastover, Richland County, South Carolina**

	Groundwater Monitoring Indicator Parameters						40 CFR Part 257 Appendix III Detection Monitoring Parameters										40 CFR Part 257 Appendix IV Assessment Monitoring Constituents																
	Groundwater Elevation ft	ORP mV	DO mg/L	Specific conductance µmhos/cm	Temperature degrees C	Turbidity NTU	pH (lab) S.U. BG	pH (field) S.U. BG	Boron ug/L BG	Calcium ug/L BG	Chloride mg/L 250 mg/L	Fluoride mg/L 4 mg/L	Sulfate mg/L 250 mg/L	TDS mg/L 500 mg/L	Antimony ug/L 6 ug/L	Arsenic ug/L 10 ug/L	Barium ug/L 2000 ug/L	Beryllium ug/L 4 ug/L	Cadmium ug/L 5 ug/L	Chromium ug/L 100 ug/L	Cobalt ug/L 6 ug/L	Lead ug/L 15 ug/L	Lithium ug/L 40 ug/L	Mercury ug/L 2 ug/L	Molybdenum ug/L 100 ug/L	Radium 226 pCi/L 5 pCi/L	Radium 228 pCi/L 5 pCi/L	Radium 228 + 228 pCi/L 5 pCi/L	Selenium ug/L 50 ug/L	Thallium ug/L 2 ug/L			
<b>Wateree Landfill</b>																																	
<b>MW-LF-01</b>																																	
5/12/16	126.17	240.6	5.85	53	18.97	0.4	5.46	3.64	<1,000	<100	5.33	<0.033	<0.5	19	<1.00	<1.00	51.5	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.939	0.367	1.306	<5.00	<1.00
7/12/16	126.17	172.4	7.72	42	20.23	0.51	5.09	4.25	<1,000	<100	5.3	<0.033	<0.5	24	<1.00	<1.00	53.9	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.581	-0.0444	0.5366	<5.00	<1.00
9/20/16	125.83	361	6.88	45	18.87	3.54	5.67	3.56	<1,000	<100	5.83	0.0442	<0.5	35	<1.00	<1.00	57.2	<2.00	<1.00	<1.00	<1.00	<1.00	1	<3.00	<0.2	<5.00	1.02	<2.00	1.02	<5.00	<1.00		
11/15/16	125.71	307	4.92	52	17.97	0.6	4.78	4.85	<1,000	<100	116	5.99	<0.033	<0.5	33	<1.00	<1.00	57	<2.00	<1.00	<1.00	<1.00	1	<3.00	<0.2	<1.00	0.52	<1.99	0.52	<5.00	<1.00		
1/17/18	125.63	194.4	4.75	55	18.1	0.5	4.71	4.74	<1,000	<100	6.05	<0.033	<0.5	22	<1.00	1.2	62.7	<2.00	<1.00	<1.00	<1.00	<1.00	1.3	<3.00	<0.2	<1.00	0.783	<1.78	0.783	<5.00	<1.00		
3/20/17	125.92	337.1	4.89	42	17.17	6.9	5.11	4.02	<1,000	<100	5.3	<0.033	<0.5	34	<1.00	<1.00	29.8	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.367	0.462	0.462	<5.00	<1.00		
5/22/17	126.25	226	5.35	62	19.07	1.5	4.72	4.37	<1,000	<100	5.16	0.0405	<0.5	34	<1.00	<1.00	58.3	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.44	<1.85	0.44	<5.00	<1.00		
7/24/17	126.19	265	6.32	67	17.75	2.1	4.96	4.53	<1,000	<1,437	5.01	0.038	0.87	32	<1.00	<1.00	62.6	<2.00	<1.00	<1.00	<1.00	1.4	<1.00	1	<3.00	<0.2	<1.00	<0.636	1.54	1.54	<5.00	<1.00	
9/27/17	125.90	276.3	5.73	42	17.8	4.8	4.79	4.53	<1,000	<100	5.85	<0.033	<0.5	33																			
10/31/17	125.75	271.4	4.59	52	16.75	0.8	4.11	4.11	<1,000	<100	6.05	<0.033	<0.5																				
11/13/17	125.71	306.1	7.41	46	16.44	1.8		4.26			5.75		<0.5																				
3/6/18	124.87	394.3	7.29	47	14.49	0.6	4.9	4.6	<1,000	<500	5.71	<0.2	<0.5	35																			
9/11/18	123.80	397.6	5.37	57	15.17	1.9	5.36	2.98	<21.9	<59	5.49	<0.025	<0.129	65																			
11/20/18	121.85	362.4	4.55	58	19.9	2.66		3.28	<50.0	<5,000	6.2	<0.1	<1.00	36																			
3/4/19	124.97	190.5	6.5	58	12.52	1.5	4.85	4.57	60.2	88	5.96	<0.1	<0.5	54									0.77										
5/1/19	125.44	340.5	7.26	56.3	20.1	2.1		4.62			5.68	<0.50																					
8/29/19	125.17	338.2	5.65	43.5	19.1	3.5	4.91	4.44	<200	<500	5.85	<0.10	<0.50	33									0.80 J										
11/18/19	124.67	238.4	3.65	44.1	16.8	0.31	4.96	4.73		74.10 J	5.98		<0.50	38																			
3/10/20	124.87	294.1	5.83	55.8	18.7	1.53	4.83	4.41	<200	102 J	6.47	<0.10	<0.50	29									0.83 J										
5/5/20	124.04	195.6	5.94	53.8	19.1	5.6	5.61	4.4			6		<0.50	29																			
9/14/20	125.10	297	8.87	47.5	20.9	0.95	5.26	4.38	75.9	372	6.31	<0.10	<0.50	56									0.834										
10/26/20	125.16	282.2	4.3	51.1	18.8	1.3		4.04			6.23		<0.50																				
<b>MW-LF-07</b>																																	
5/12/16	116.75	227	5.58	72	21.96	0.6	4.78	3.94	<1,000	1,110	9.11	0.0817	<0.5	44	<1.00	<1.00	50.5	<1.00	<1.00	<1.00	<1.00	1.2	<1.00	2.17	<0.2	<5.00	1.64	2.67	4.31	<5.00	<1.00		
7/12/16	116.64	182.3	7.17	70	26.65	0.87	5.94	3.9	<1,000	893	9.3	0.0599	<0.5	47	<1.00	<1.00	49.5	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2.18	<0.2	<5.00	1.22	0.385	1.605	<5.00	<1.00		
9/20/16	116.33	316.5	6.74	69	23.21	2.42	5.81	4.21	<1,000	1,110	9.9	0.0962	<0.5	58	<1.00	<1.00	51.3	<2.00	<1.00	<1.00	<1.00	1.2	<1.00	3.14	<0.2	<5.00	1.13	<1.78	1.13	<5.00	<1.00		
11/16/16	116.16	272	3.16	79	24.32	4.2	4.58	4.73	<1,000	1,610	10.1	0.126	<0.5	47	<1.00	<1.00	66.5	<2.00	<1.00	<1.00	<1.00	<1.00	4.46	<0.2	<1.00	1.88	3.29	5.17	<5.00	<1.00			
1/18/17	116.00	178.4	4.61	69	21.36	1.35	4.54	4.61	<1,000	2,190	10.06	0.0553	<0.5	38	<1.00	1.4	72.9	<2.00	<1.00	<1.00	<1.00	2	<1.00	4.74	<0.2	<1.00	1.43	2.62	4.05	<5.00	<1.00		
3/21/17	115.95	226	5.71	95	18.64	1.1	5.02	3.82	<1,000	1,960	9.16	0.0627	<0.5	44	<1.00	<1.00	62.7	<2.00	<1.00	<1.00	<1.00	1.8	<1.00	4.68	<0.2	<1.00	1.42	1.45	2.87	<5.00	<1.00		
5/23/17	116.02	208.2	6.51	74	22.74	1.83	4.56	4.42	<1,000	2,042	4.55	0.0946	<0.5	46	<1.00	<1.00	79.8	<2.00	<1.00	<1.00	<1.00	1	<1.00	4.49	<0.2	<1.00	1.49	2.4	3.89	<5.00	<1.00		
7/24/17	116.09	317.3	4.9	103	20.45	6.9	4.56	4.87	<1,000	2,011	9.62	0.0582	<0.5	47	<1.00	<1.00	80.3	<2.00	<1.00	<1.00	<1.00	1.8	<1.00	4.32	<0.2	<1.00	0.578	2.68	3.258	<5.00	<1.00		
9/27/17	115.88	294.2	5.3	75	19.33	4.4	4.63	4.17	<1,000	1,912	9.83	<0.033	<0.5	64									4.57										
10/31/17	115.71	196.1	4.47	89	17.7	2.8		4.23		1,920	9.61		<0.5																				
11/14/17	115.71	260.9	5.26	73	14.74	6.9		4.28			9.38		<0.5																				
3/5/18	115.27	390	6.07	76	15.98	3.6	4.62	4.33	<1,000	1,660	9.53	<0.2	<0.5	42																			
9/11/18	115.44	330.5	7.1	73	23.42	3.7	5.25	4.28	<21.9	1,630	8.9	<0.025	<0.129	60																			
11/20/18	114.58	159.8	5.03	76	19.99	9.29		4.26	<50.0	<5,000	10	<0.1	<1.00	36																			
3/5/19	116.31	231.9	7.16	73	4.2	3	4.68	4.1	<21.9	1,380	9.3	<0.1	<0.5	32									3.6										
5/1/19	116.38	196.1	4.58	60	23.1	2.3		4.53			9.14																						
8/29/19	115.88	229.5	4.02	64	18.52	2.1	4.55	4.18	<200	1,500	9.06	<0.10	<0.50	32									4.2										
11/19/19	115.51	352.2	3.92	58.6	18	5.4		4.82		1,370	8.78		<0.50	42																			
3/11/20	117.38	218.4	6.19	79	18.2	4.02	5.11	5.08	<200	1,070	10.2	<0.10	<0.50	40									1.52 J										
5/26/20	116.43	320.3	6.12	86	21.6	3.8		4.18			10.2		<0.50																				
9/15/20	116.75	291.5	4.39	72.3	21.8	3.5	4.73	4.23	<200	769	9.91	<0.10	<0.50	75									1.9										
10/26/20	116.80	228	5.56	74.3	22.4	4.4		4			10.2																						
<b>MW-LF-08</b>																																	
5/12/16	113.10	235.4	5.8	42																													







## **APPENDIX A**

### **Results of Laboratory Analyses of Groundwater Samples**



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09351**

**Wateree Landfill MW-01LF-RCRA/CCR**

Date & Time Sampled: March 10, 2020 15:50

Date & Time Submitted: March 11, 2020 14:26

Collected by: J.HILL

Location Code: WAG01LFTM

MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	102.00 (J)	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	0.83 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	753	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	979.00 (J)	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5230	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashley M Bonatto*





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 Fax: (803) 217-9911

March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09352**

**Wateree Landfill AS-3-LF-RCRA/CCR**

Date & Time Sampled: March 10, 2020 15:50  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGAS3LFTM

MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	689	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.84	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	879	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1170	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	3610	1000	254	ppb	3/16/20 14:16	AMB/C

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If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashley M. Bennett*



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09353**

**Wateree Landfill Well GW 6-RCRA**

Date & Time Sampled: March 11, 2020 11:30  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG06LFTM

GW 6

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	866	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.33 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	425	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1070	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5630	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Shelly M. Burt*





Central Laboratory (P-08)  
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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09354**

**Wateree Landfill MW-07LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 08:35  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG07LFTM

MW-07LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	1070	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.52 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1220	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	724.00 (J)	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	7920	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Sally M. Bennett*



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09355**

**Wateree Landfill MW-08LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG08LFTM

MW-08LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	867	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	9.60	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	633	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1100	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	4210	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 19, 2020

<b>REPORT TO:</b>
Rashida Marlowe

Sample ID: **BA09356**

**Wateree Landfill MW-10LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 11:20  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10LFTM

MW-10LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	26700	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	3.52	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	5120	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	2050	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	6280	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashlynn Brunette*



Central Laboratory (P-08)  
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March 19, 2020

<b>REPORT TO:</b>
Rashida Marlowe

Sample ID: **BA09357**

**Wateree Landfill MW-10A LF-RCRA/CCR Metals**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10ALFTM

MW-10ALF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	2190	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.37	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1420	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1060	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	9880	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashley M. Bennett*





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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09358**

**Wateree Landfill MW-11LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG11LFTM

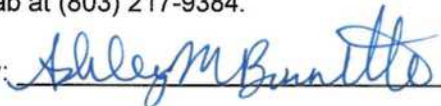
MW-11LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	245.00 (J)	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.34	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	535	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1010	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5700	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09359**

**Wateree Landfill MW-22LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:15  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG22LFTM

MW-22LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	1910	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.36 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1700	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	2140	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	4940	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Ashley M Bonnetts



Central Laboratory (P-08)  
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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09360**

**Wateree Landfill AS-1-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGASLF1TM

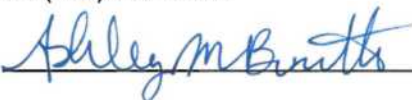
MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	1330	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.10	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1350	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1620	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5370	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09361**

**Wateree Landfill AS-2-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGAS2LFTM

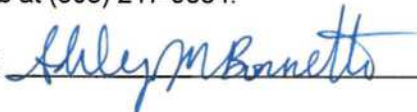
MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	6670	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	36.7	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	608	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	3110	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	3340	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09362**

**Wateree Well MW BG-73 TM (NPDES/CCR)**

Date & Time Sampled: March 11, 2020 09:20  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAMWBG73TM

AP1-01

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	335.00 (J)	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.46 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	622	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	751.00 (J)	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	1340	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)  
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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09315**

**Wateree LF Leechate 1 CCR**

Date & Time Sampled: March 09, 2020 14:03  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH1HM

Login Record File: 200311002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	0.11 (J)	1.0	0.090	ppb	3/13/20 15:30	LS
Arsenic by ICP_MS 200.8	7.30	1.0	0.292	ppb	3/13/20 15:30	LS
Barium by ICP-OES 200.7	45.3	10.0	1.113	ppb	3/12/20 14:22	AMB/C
Beryllium EPA 200.7	Less than MDL	2.0	0.148	ppb	3/12/20 14:22	AMB/C
Boron - EPA 200.7	1690	200	38.458	ppb	3/12/20 14:22	AMB/C
Cadmium by ICP_MS EPA 200.8	0.39 (J)	1.0	0.035	ppb	3/13/20 15:30	LS
Calcium EPA 200.7	400000	500	83.8	ppb	3/12/20 14:22	AMB/C
Chromium by ICP_MS 200.8	0.23 (J)	1.0	0.130	ppb	3/13/20 15:30	LS
Cobalt by ICP_MS 200.8	3.91	1.0	0.072	ppb	3/13/20 15:30	LS
Lead by ICP-MS 200.8	3.38	1.0	0.085	ppb	3/13/20 15:30	LS
Lithium (CWA) 200.7	1.29 (J)	2.0	0.758	ppb	3/12/20 14:22	AMB/C
Magnesium EPA 200.7	31800	50	18.7	ppb	3/12/20 14:22	AMB/C
Mercury (CWA) by EPA 245.2	Less than MDL	0.2	0.071	ppb	3/18/20 16:01	PRC
Molybdenum - EPA 200.8	41.9	1.0	0.111	ppb	3/13/20 15:30	LS
Potassium EPA 200.7	7940	1000	310	ppb	3/12/20 14:22	AMB/C
Selenium by ICP-MS 200.8	319	50.0	20.6	ppb	3/16/20 11:33	AMB
Sodium EPA 200.7	21300	1000	254	ppb	3/12/20 14:22	AMB/C
Thallium by ICP-MS 200.8	0.22 (J)	0.5	0.071	ppb	3/13/20 15:30	LS

*Ashlee M Bonnetto*



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09316**

**Wateree LF Leechate 2 CCR**

Date & Time Sampled: March 09, 2020 14:08  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH2HM

Login Record File: 200311002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	0.76 (J)	1.0	0.090	ppb	3/13/20 15:30	LS
Arsenic by ICP_MS 200.8	1.76	1.0	0.292	ppb	3/13/20 15:30	LS
Barium by ICP-OES 200.7	32.2	10.0	1.113	ppb	3/12/20 14:22	AMB/C
Beryllium EPA 200.7	Less than MDL	2.0	0.148	ppb	3/12/20 14:22	AMB/C
Boron - EPA 200.7	10100	200	38.458	ppb	3/12/20 14:22	AMB/C
Cadmium by ICP_MS EPA 200.8	1.13	1.0	0.035	ppb	3/13/20 15:30	LS
Calcium EPA 200.7	695000	1000	167	ppb	3/16/20 14:24	AMB/C
Chromium by ICP_MS 200.8	0.51 (J)	1.0	0.130	ppb	3/13/20 15:30	LS
Cobalt by ICP_MS 200.8	2.36	1.0	0.072	ppb	3/13/20 15:30	LS
Lead by ICP-MS 200.8	Less than MDL	1.0	0.085	ppb	3/13/20 15:30	LS
Lithium (CWA) 200.7	135	2.0	0.758	ppb	3/12/20 14:22	AMB/C
Magnesium EPA 200.7	120000	50	18.7	ppb	3/12/20 14:22	AMB/C
Mercury (CWA) by EPA 245.2	Less than MDL	0.2	0.071	ppb	3/18/20 16:01	PRC
Molybdenum - EPA 200.8	297	10	1.11	ppb	3/16/20 11:33	AMB
Potassium EPA 200.7	40400	1000	310	ppb	3/12/20 14:22	AMB/C
Selenium by ICP-MS 200.8	311	50	20.6	ppb	3/16/20 11:33	AMB
Sodium EPA 200.7	47900	1000	254	ppb	3/12/20 14:22	AMB/C
Thallium by ICP-MS 200.8	0.895	0.5	0.071	ppb	3/13/20 15:30	LS





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09284**


**Wateree Well Field Blank (NPDES)**

Date & Time Sampled: March 09, 2020 13:50  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WAFBTDS

Login Record File: 200311001

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than PQL	0.50	0.038	mg/L	3/14/20 00:14	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 00:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.33			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 00:14	BB
Total Alkalinity by SM2320B	2.5	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	15	2.0	2.0	mg/L	3/12/20 14:00	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09286**

**Wateree LF Leechate 1 CCR**

Date & Time Sampled: March 09, 2020 14:03  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH1AN

Login Record File: 200311001

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	86.1	10.00	0.76	mg/L	3/14/20 00:14	BB
Fluoride by IC EPA 300.0	Less than PQL	2.00	0.16	mg/L	3/14/20 00:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.29			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	1103	10.00	1.26	mg/L	3/14/20 00:14	BB
Total Alkalinity by SM2320B	11	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	1819	2.0	2.0	mg/L	3/12/20 14:00	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 26, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09287**

**Wateree LF Leechate 2 CCR**

Date & Time Sampled: March 09, 2020 14:08  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH2AN

Login Record File: 200311001

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	358	5.00	0.38	mg/L	3/14/20 00:14	BB
Fluoride by IC EPA 300.0	1.39	1.00	0.08	mg/L	3/14/20 00:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.84			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	1471	10.0	1.26	mg/L	3/23/20 21:47	BB
Total Alkalinity by SM2320B	330	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	3148	2.0	2.0	mg/L	3/12/20 14:00	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09339**

**Wateree Landfill MW-01LF-RCRA/CCR**


Date & Time Sampled: March 10, 2020 15:50  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG01LFTDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.47	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.83			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	29	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09340**

**Wateree Landfill AS-3-LF-RCRA/CCR**

Date & Time Sampled: March 10, 2020 15:50  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGLFAS3TDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.77	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.8			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	19	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09341**

**Wateree Landfill Well GW 6 -RCRA**

Date & Time Sampled: March 11, 2020 11:30  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG06LFTDS

GW 6

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.30	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.17			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	31	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09342**

**Wateree Landfill MW-07LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 08:35  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG07LFTDS

MW-07LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.2	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.11			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	3	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	40	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09343**

**Wateree Landfill MW-08LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG08LFTDS

MW-08LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.96	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.59			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	2	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	23	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09344**

**Wateree Landfill MW-10LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 11:20  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10LFTDS

MW-10LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	14.9	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.46			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	97.7	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	169	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09345**

**Wateree Landfill MW-10A LF-RCRA/CCR TDS**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10ALFTDS

MW-10ALF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.4	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.11			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	15.1	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	1.5	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	68	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09346**

**Waterree Landfill MW-11LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG11LFTDS

MW-11LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.56	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.32			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	4.5	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	27	2.0	2.0	mg/L	3/16/20 10:35	MS466

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09347**

**Wateree Landfill MW-22LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:15  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG22LFTDS

MW-22LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.8	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.67			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	49	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09348**

**Wateree Landfill AS-1-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGLFAS1TDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.14	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.26			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	0.58	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	6	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	38	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09349**

**Wateree Landfill AS-2-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGLFAS2TDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.82	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.12			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	2.94	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	30	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	91	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_





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March 25, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09350**

**Wateree Well MW BG-73 (NPDES/CCR)**

Date & Time Sampled: March 11, 2020 09:20

Date & Time Submitted: March 11, 2020 14:26

Collected by: J.HILL

Location Code: WAMWBG73TDS

AP1-01

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.39	0.50	0.038	mg/L	3/17/20 04:03	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/17/20 04:03	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.38			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/17/20 04:03	BB
Total Alkalinity by SM2320B	3	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	10	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09964**

**Wateree Landfill MW-LF-01 TDS**

Date & Time Sampled: May 26, 2020 11:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: J.HILL Location Code: WAG01LFTDS

Login Record File: 200528001

MW-01LF

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.00	0.50	0.038	mg/L	5/28/20 00:05	BB
Conductivity, EPA 120.1 (1982)	46.6	0.050	0.050	umhos	5/28/20 12:17	PRC
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.61			S.U.	5/28/20 12:17	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Dissolved Solid-SM2540C	29	2.0	2.0	mg/L	5/29/20 11:39	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Copern



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09978**

**Wateree Well MW BG-73 CCR/TDS**

Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAMWBG73TDS

Login Record File: 200528002

AP1-01

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.37	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers



Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09979**

**Wateree Landfill Duplicate-CCR/TDS**

Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGDUPTDS

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.26	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capone





Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: BA09980

**Wateree Landfill Field Blank-CCR/TDS**

Date & Time Sampled: May 26, 2020 13:05  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGFBTDS

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than PQL	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers



Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09981**

**Waree Landfill MW-10LF CCR/TDS**

Date & Time Sampled: May 26, 2020 13:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG10LFTDS

MW-10LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.94	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	12.1	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capete



Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09982**

**Wateree Landfill MW-10A LF CCR/TDS**

Date & Time Sampled: May 26, 2020 14:26  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG10ALFTDS

MW-10ALF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	11.2	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	25.7	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	1.5	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Cooper



Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09983**

**Wateree Landfill MW-07LF CCR/TDS**

Date & Time Sampled: May 26, 2020 15:08  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG07LFTDS

Login Record File: 200528002

MW-07LF

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.2	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers





Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09984**

**Wateree Landfill MW-22LF CCR/TDS**

Date & Time Sampled: May 26, 2020 15:52  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG22LFTDS

MW-22LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.1	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Copern



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09985**

**Wataree Landfill AS-2-LF CCR/TDS**

Date & Time Sampled: May 27, 2020 09:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGLFAS2TDS

MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.92	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	2.37	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers



Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: BA09986

**Wateree Landfill AS-1-LF CCR/TDS**

Date & Time Sampled: May 27, 2020 12:00  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGLFAS1TDS

MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.85	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Cooper



Central Laboratory (P-08)  
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May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09989**

**Wateree Well MW BG-73 CCR/Metals**

Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAMWBG73TM

AP1-01

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	340.00 (J)	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	594	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	777.00 (J)	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	1470	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





Central Laboratory (P-08)  
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May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09990**

**Wateree Landfill Duplicate-CCR/Metals**

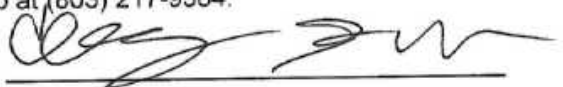
Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGDUPTM

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	324.00 (J)	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	596	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	826.00 (J)	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	1520	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 

May 29, 2020

<b>REPORT TO:</b>
Rocky Archer Rashida Marlowe

 Sample ID: **BA09991**
**Wateree Landfill Field Blank-CCR/Metals**


 Date & Time Sampled: May 26, 2020 13:05  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGFBTM

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	Less than MDL	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	Less than MDL	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	Less than MDL	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	Less than MDL	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

 Approved By: 



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May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09998**

**Wateree AS-LF-02 CCR/Metals**

Date & Time Sampled: May 27, 2020 09:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGASLF1TM


MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	910	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	559	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	2120	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	2420	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09999**

**Wateree AS-LF-01 CCR/Metals**

Date & Time Sampled: May 27, 2020 12:00  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGAS2LFTM

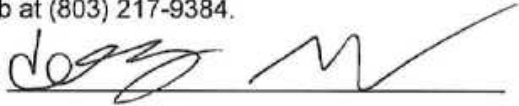
MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	918	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	1300	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	1610	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	5560	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09992**

**Wateree Landfill MW-LF-10 CCR/Metals**

Date & Time Sampled: May 26, 2020 13:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG10LFM


MW-10LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	4860	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	930	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	1230	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	4910	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11082**

**Wateree Landfill GW 6 CCR TDS**

Date & Time Sampled: September 14, 2020 13:57  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG06LFTDS

GW 6

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.23	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.1		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	1.6	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	75	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



Central Laboratory (P-08)  
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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11083**

**Wateree Landfill MW-01LF CCR TDS**

Date & Time Sampled: September 14, 2020 14:43  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG01LFTDS

MW-01LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.31	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.26		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	56	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



Central Laboratory (P-08)  
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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11084**

**Wateree Landfill AS-3-LF CCR TDS**

Date & Time Sampled: September 14, 2020 15:31  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAGLFAS3TDS

MW-01LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.40	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.88		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	57	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:





Central Laboratory (P-08)  
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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11085**

**Wateree Landfill MW-10LF CCR TDS**

Date & Time Sampled: September 14, 2020 16:21  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG10LFTDS

MW-10LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.95	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.61		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	26.8	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	98	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



Central Laboratory (P-08)  
 2102 North Lake Drive  
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 Fax: (803) 217-9911

January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11086**

**Wateree Landfill MW-10A CCR TDS**

Date & Time Sampled: September 14, 2020 17:03  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG10ALFTDS

MW-10ALF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.94	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.20		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	14.7	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	71	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



Central Laboratory (P-08)  
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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11087**

**Wateree Landfill MW-07LF CCR TDS**

Date & Time Sampled: September 15, 2020 08:41  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG07LFTDS

MW-07LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.91	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.73		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	1.6	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	75	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11088**

**Wateree Landfill MW-08LF CCR TDS**

Date & Time Sampled: September 15, 2020 09:25  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG08LFTDS

MW-08LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.09	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.08		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	51	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:





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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11089**

**Wateree Landfill MW BG-73 CCR TDS**

Date & Time Sampled: September 15, 2020 10:10  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAMWBG73TDS

AP1-01

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.25	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.98		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	51	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11090**

**Wateree Landfill MW-22LF CCR TDS**

Date & Time Sampled: September 15, 2020 10:51  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG22LFTDS

MW-22LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.99	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.65		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	62	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11091**

**Wateree Landfill AS-1-LF CCR TDS**

Date & Time Sampled: September 15, 2020 12:26  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAGLFAS1TDS

MW-01LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.29	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.79		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	Less than	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	42	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11092**

**Wateree Landfill AS-2-LF CCR TDS**

Date & Time Sampled: September 15, 2020 13:16  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAGLFAS2TDS

MW-01LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.78	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.32		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	2.09	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	4.8	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	47	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:





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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11093**

**Wateree Landfill MW-11LF CCR TDS**

Date & Time Sampled: September 15, 2020 14:06  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG11LFTDS

MW-11LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.47	0.50	mg/L	9/17/20 17:13	BB
Fluoride by IC EPA 300.0	Less than	0.10	mg/L	9/17/20 17:13	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.20		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/17/20 17:13	BB
Total Alkalinity by SM2320B	1.6	0.50	mg/L	9/17/20 20:39	MS
Total Dissolved Solid-SM2540C	67	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11094**

**Wateree LF Leachate Outfall 1 CCR TDS**

Date & Time Sampled: September 15, 2020 10:32  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WALFLEACH1AN

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	102	3.50	mg/L	9/17/20 23:06	BB
Fluoride by IC EPA 300.0	0.87	0.70	mg/L	9/24/20 23:06	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.22		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	535	3.50	mg/L	9/24/20 18:38	BB
Total Alkalinity by SM2320B	372	0.50	mg/L	9/17/20 20:30	MS
Total Dissolved Solid-SM2540C	3551	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11095**

**Wateree LF Leachate Outfall 2 CCR TDS**

Date & Time Sampled: September 15, 2020 11:00  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WALFLEACH2AN

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	464	10.00	mg/L	9/24/20 18:38	BB
Fluoride by IC EPA 300.0	Less than	2.00	mg/L	9/24/20 18:38	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.39		S.U.	9/16/20 15:12	PRC
Sulfates by IC EPA 300.0	1509	10.00	mg/L	9/24/20 18:38	BB
Total Alkalinity by SM2320B	44.9	0.50	mg/L	9/17/20 20:40	MS
Total Dissolved Solid-SM2540C	1126	2.0	mg/L	9/19/20 14:08	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11096**

**Wateree Landfill Well GW 6 CCR Metals**

Date & Time Sampled: September 14, 2020 13:57  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG06LFTM

GW 6

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	140	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	746	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	1.11	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	391	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	949	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	6080	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:





Central Laboratory (P-08)  
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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11097**

**Wateree Landfill MW-01LF CCR Metals**

Date & Time Sampled: September 14, 2020 14:43  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG01LFTM

MW-01LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	75.9	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	372	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	0.834	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	598	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	843	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	5790	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11098**

**Wateree Landfill Well GW 3 CCR Metals**

Date & Time Sampled: September 14, 2020 15:31  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG03LFTM

GW 3

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	47.9	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	665	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	2.81	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	800	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	1070	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	3930	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11099**

**Wateree Landfill MW-10LF CCR Metals**

Date & Time Sampled: September 14, 2020 16:21

Date & Time Submitted: September 16, 2020 07:09

Collected by: J.HILL

Location Code: WAG10LFTM

MW-10LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	41.2	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	9030	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	2.74	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	1180	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	1360	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	6610	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11100**

**Wateree Landfill MW-10A LF CCR Metals**

Date & Time Sampled: September 14, 2020 17:03  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG10ALFTM

MW-10ALF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	4400	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	2.71	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	1360	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	1030	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	5920	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11101**

**Wateree Landfill MW-07LF CCR Metals**

Date & Time Sampled: September 15, 2020 08:41  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG07LFTM

MW-07LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	769	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	1.90	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	1110	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	593	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	8160	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:





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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11102**

**Wateree Landfill MW-08LF CCR Metals**

Date & Time Sampled: September 15, 2020 09:25  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG08LFTM

MW-08LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	825	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	7.35	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	565	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	1020	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	4380	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11103**

**Wateree Well MW BG-73 CCR Metals**

Date & Time Sampled: September 15, 2020 10:10  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAMWBG73TM

AP1-01

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	245	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	1.53	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	412	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	712	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	1320	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11104**

**Wateree Landfill MW-22LF CCR Metals**

Date & Time Sampled: September 15, 2020 10:51

Date & Time Submitted: September 16, 2020 07:09

Collected by: J.HILL

Location Code: WAG22LFTM

MW-22LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	1880	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	1.28	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	1460	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	2100	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	5520	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



Central Laboratory (P-08)  
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 Fax: (803) 217-9911

January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11105**

**Wateree Landfill AS-1-LF CCR Metals**

Date & Time Sampled: September 15, 2020 12:26  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAGASLF1TM

MW-01LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	804	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	1.94	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	1070	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	1460	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	5310	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11106**

**Wateree Landfill AS-2-LF CCR Metals**

Date & Time Sampled: September 15, 2020 13:16  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAGAS2LFTM

MW-01LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	77.3	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	769	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	21.4	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	486	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	1860	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	2070	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:





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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11107**

**Wateree Landfill MW-11LF CCR Metals**

Date & Time Sampled: September 15, 2020 14:06  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WAG11LFTM

MW-11LF

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	200	ppb	9/16/20 16:22	CHG
Calcium EPA 200.7	182	500	ppb	9/16/20 16:22	CHG
Lithium (CWA) 200.7	2.27	2.0	ppb	9/16/20 16:22	CHG
Magnesium EPA 200.7	329	50	ppb	9/16/20 16:22	CHG
Potassium EPA 200.7	798	1000	ppb	9/16/20 16:22	CHG
Sodium EPA 200.7	4860	1000	ppb	9/16/20 16:22	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11108**

**Wateree LF Leachate Outfall 1 CCR Metals**

Date & Time Sampled: September 15, 2020 10:32  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WALFLEACH1HM

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	0.520	1.0	ppb	10/1/20 11:37	CHG
Arsenic by ICP_MS 200.8	8.47	1.0	ppb	10/1/20 11:37	CHG
Barium by ICP-OES 200.7	32.8	10.0	ppb	9/17/20 08:09	CHG
Beryllium EPA 200.7	Less than	2.0	ppb	9/17/20 08:09	CHG
Boron - EPA 200.7	14000	200	ppb	9/17/20 08:09	CHG
Cadmium by ICP_MS EPA 200.8	1.81	1.0	ppb	10/1/20 11:37	CHG
Calcium EPA 200.7	695000	5000	ppb	9/17/20 08:09	CHG
Chromium by ICP_MS 200.8	0.607	1.0	ppb	10/1/20 11:37	CHG
Cobalt by ICP_MS 200.8	2.70	1.0	ppb	10/1/20 11:37	CHG
Lead by ICP-MS 200.8	Less than	1.0	ppb	10/1/20 11:37	CHG
Lithium (CWA) 200.7	199	2.0	ppb	9/17/20 08:09	CHG
Magnesium EPA 200.7	139000	50	ppb	9/17/20 08:09	CHG
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/17/20 14:10	PRC
Molybdenum - EPA 200.8	394	1.0	ppb	10/1/20 11:37	CHG
Potassium EPA 200.7	52800	1000	ppb	9/17/20 08:09	CHG
Selenium by ICP-MS 200.8	183	5.0	ppb	10/1/20 11:37	CHG
Sodium EPA 200.7	70300	1000	ppb	9/17/20 08:09	CHG
Thallium by ICP-MS 200.8	0.750	0.5	ppb	10/1/20 11:37	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:



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January 07, 2021

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11109**

**Wateree LF Leachate Outfall 2 CCR Metals**

Date & Time Sampled: September 15, 2020 11:00  
 Date & Time Submitted: September 16, 2020 07:09  
 Collected by: J.HILL Location Code: WALFLEACH2HM

Login Record File: 200916001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	0.848	1.0	ppb	10/1/20 11:37	CHG
Arsenic by ICP_MS 200.8	73.0	1.0	ppb	10/1/20 11:37	CHG
Barium by ICP-OES 200.7	102	10.0	ppb	9/17/20 08:09	CHG
Beryllium EPA 200.7	Less than	2.0	ppb	9/17/20 08:09	CHG
Boron - EPA 200.7	1830	200	ppb	9/17/20 08:09	CHG
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	10/1/20 11:37	CHG
Calcium EPA 200.7	238000	500	ppb	9/17/20 08:09	CHG
Chromium by ICP_MS 200.8	2.58	1.0	ppb	10/1/20 11:37	CHG
Cobalt by ICP_MS 200.8	2.15	1.0	ppb	10/1/20 11:37	CHG
Lead by ICP-MS 200.8	2.36	1.0	ppb	10/1/20 11:37	CHG
Lithium (CWA) 200.7	7.03	2.0	ppb	9/17/20 08:09	CHG
Magnesium EPA 200.7	26600	50	ppb	9/17/20 08:09	CHG
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/17/20 14:10	PRC
Molybdenum - EPA 200.8	16.8	1.0	ppb	10/1/20 11:37	CHG
Potassium EPA 200.7	12200	1000	ppb	9/17/20 08:09	CHG
Selenium by ICP-MS 200.8	55.4	5.0	ppb	10/1/20 11:37	CHG
Sodium EPA 200.7	20600	1000	ppb	9/17/20 08:09	CHG
Thallium by ICP-MS 200.8	0.206	0.5	ppb	10/1/20 11:37	CHG

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By:





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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11729**

**Wateree Well MW BG-73 CCR TDS**

Date & Time Sampled: October 26, 2020 14:20  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAMWBG73TDS

AP1-01

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.21	0.50	0.038	mg/L	10/28/20 22:52	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	10/28/20 22:52	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.59			S.U.	11/2/20 19:00	MS
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS
Total Dissolved Solid-SM2540C	38	2.0	2.0	mg/L	10/30/20 08:51	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11730**

**Wateree DUP 1 CCR TDS**

Date & Time Sampled: October 26, 2020 08:00  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGDUPTDS

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.20	0.50	0.038	mg/L	10/28/20 22:52	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	10/28/20 22:52	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.65			S.U.	11/2/20 19:00	MS
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS
Total Dissolved Solid-SM2540C	37	2.0	2.0	mg/L	10/30/20 08:51	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11733**

**Wateree Landfill AS-1-LF CCR TDS**

Date & Time Sampled: October 26, 2020 16:01  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGLFAS1TDS

MW-01LF

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.22	0.50	0.038	mg/L	10/28/20 22:52	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11734**

**Wateree Landfill AS-2-LF CCR TDS**

Date & Time Sampled: October 26, 2020 16:56  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGLFAS2TDS

MW-01LF

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.74	0.50	0.038	mg/L	10/28/20 22:52	BB
Sulfates by IC EPA 300.0	2.05	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	2.00	0.50	0.50	mg/L	11/1/20 18:16	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11735**

**Wateree Landfill MW-01LF CCR TDS**


Date & Time Sampled: October 26, 2020 17:51  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAG01LFTDS

MW-01LF

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.23	0.50	0.038	mg/L	10/28/20 22:52	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11736**

**Wateree Landfill MW-10LF CCR TDS**


Date & Time Sampled: October 26, 2020 16:12  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAG10LFTDS

MW-10LF

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Sulfates by IC EPA 300.0	28.5	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11737**

**Wateree Landfill MW-10A LF CCR TDS**


Date & Time Sampled: October 26, 2020 16:52  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAG10ALFTDS

MW-10ALF

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Sulfates by IC EPA 300.0	45.3	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11738**

**Wateree Landfill MW-07LF CCR TDS**

Date & Time Sampled: October 26, 2020 15:21  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAG07LFTDS

MW-07LF

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.2	0.50	0.038	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11739**

**Wateree Landfill MW-22LF CCR TDS**

Date & Time Sampled: October 27, 2020 08:12  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAG22LFTDS

MW-22LF

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.64	0.50	0.038	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11741**

**Wateree DUP 2 CCR TDS**

Date & Time Sampled: October 27, 2020 08:00  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGDUPTDS

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.68	0.50	0.038	mg/L	10/28/20 22:52	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	10/28/20 22:52	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.83			S.U.	11/2/20 19:00	MS
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	11/1/20 18:16	MS
Total Dissolved Solid-SM2540C	49	2.0	2.0	mg/L	10/30/20 08:51	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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November 03, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11742**

**Wateree Field Blank 2 CCR TDS**

Date & Time Sampled: October 27, 2020 09:22  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGFBTDS

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than PQL	0.50	0.038	mg/L	10/28/20 22:52	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	10/28/20 22:52	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.00			S.U.	11/2/20 19:00	MS
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	10/28/20 22:52	BB
Total Alkalinity by SM2320B	1.00	0.50	0.50	mg/L	11/1/20 18:16	MS
Total Dissolved Solid-SM2540C	Less than PQL	2.0	2.0	mg/L	10/30/20 08:51	MS

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_





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November 02, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11745**

**Wateree Well MW BG-73 TM CCR**

Date & Time Sampled: October 26, 2020 14:20  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAMWBG73TM

AP1-01

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	500	165	ppb	10/30/20 08:08	CHG
Calcium EPA 200.7	251.00 (J)	500	83.8	ppb	10/30/20 08:08	CHG
Magnesium EPA 200.7	469	50	18.7	ppb	10/30/20 08:08	CHG
Potassium EPA 200.7	834.00 (J)	1000	310	ppb	10/30/20 08:08	CHG
Sodium EPA 200.7	1290	1000	254	ppb	10/30/20 08:08	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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November 02, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: BA11746

**Wateree DUP 1 Tot Metals CCR**

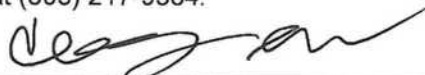
Date & Time Sampled: October 26, 2020 08:00  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGDUPTM

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	500	165	ppb	10/30/20 08:08	CHG
Calcium EPA 200.7	236.00 (J)	500	83.8	ppb	10/30/20 08:08	CHG
Magnesium EPA 200.7	447	50	18.7	ppb	10/30/20 08:08	CHG
Potassium EPA 200.7	715.00 (J)	1000	310	ppb	10/30/20 08:08	CHG
Sodium EPA 200.7	1210	1000	254	ppb	10/30/20 08:08	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

November 02, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11747**

**Wateree Field Blank 1 Tot Met CCR**

Date & Time Sampled: October 26, 2020 14:35  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGFBTM

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	500	165	ppb	10/30/20 08:08	CHG
Calcium EPA 200.7	Less than MDL	500	83.8	ppb	10/30/20 08:08	CHG
Magnesium EPA 200.7	Less than MDL	50	18.7	ppb	10/30/20 08:08	CHG
Potassium EPA 200.7	Less than MDL	1000	310	ppb	10/30/20 08:08	CHG
Sodium EPA 200.7	Less than MDL	1000	254	ppb	10/30/20 08:08	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)  
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November 02, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: BA11750

**Wateree Duplicate 2 Metals CCR**

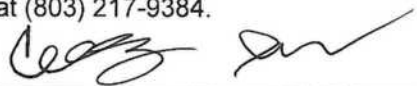
Date & Time Sampled: October 27, 2020 08:00  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGDUPTM

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	500	165	ppb	10/30/20 08:08	CHG
Calcium EPA 200.7	594	500	83.8	ppb	10/30/20 08:08	CHG
Magnesium EPA 200.7	1050	50	18.7	ppb	10/30/20 08:08	CHG
Potassium EPA 200.7	950.00 (J)	1000	310	ppb	10/30/20 08:08	CHG
Sodium EPA 200.7	3740	1000	254	ppb	10/30/20 08:08	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

November 02, 2020

REPORT TO:
Rashida Marlowe Rocky Archer

Sample ID: **BA11751**

**Wateree Field Blank 2 Metals CCR**

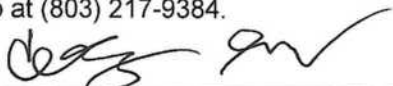
Date & Time Sampled: October 27, 2020 09:22  
 Date & Time Submitted: October 27, 2020 15:01  
 Collected by: A.HILL Location Code: WAGFBTM

Login Record File: 201028003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	500	165	ppb	10/30/20 08:08	CHG
Calcium EPA 200.7	Less than MDL	500	83.8	ppb	10/30/20 08:08	CHG
Magnesium EPA 200.7	Less than MDL	50	18.7	ppb	10/30/20 08:08	CHG
Potassium EPA 200.7	Less than MDL	1000	310	ppb	10/30/20 08:08	CHG
Sodium EPA 200.7	Less than MDL	1000	254	ppb	10/30/20 08:08	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



## **APPENDIX B**

### **Statistical Analysis of Detection Monitoring Groundwater Quality Results**

**DOMINION ENERGY  
SOUTH CAROLINA**

**WATEREE STATION  
CLASS III LANDFILL**

**RICHLAND COUNTY, SOUTH CAROLINA**

**CCR GROUNDWATER  
DETECTION MONITORING  
STATISTICAL ANALYSIS REPORT**

**for the**

**March 2020 Sampling Event**

**Prepared on  
July 15, 2020**





## **STATISTICAL ANALYSIS REPORT**

### **Groundwater Sampling**

In accordance with 40 CFR Part 257.94, the 2020 first semi-annual groundwater sampling event for Detection Monitoring at the Wateree Station Class III Landfill began on March 11, 2020. This event included groundwater sampling from background monitoring wells MW-BG-73, MW-LF-01, AS-LF-01, AS-LF-02 and AS-LF-03; and the downgradient compliance monitoring wells MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22. The groundwater samples were analyzed for the constituents listed in Appendix III of the EPA CCR Rule which include Boron, Calcium, Chloride, Fluoride, pH, Sulfate, and Total Dissolved Solids.

### **Statistical Analysis**

The statistical analysis indicates that the concentrations of chloride in the groundwater samples collected from monitoring wells MW-LF-07, MW-LF-10A, and MW-LF-22 show statistically significant increases (SSI) above background concentrations. The statistical analysis indicates that the concentrations of sulfate in the groundwater samples collected from monitoring wells MW-LF-10 and MW-LF-10A show statistically significant increases (SSI) above background concentrations. No other statistically significant increases above background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from the Class III Landfill monitoring wells during the 2020 first semi-annual Detection Monitoring event.

**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 1

**Location Id:** MW-LF-07

**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09354	--	--	< 200.000	n	n	--

Run Id: 2

**Location Id:** MW-LF-07

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	03/11/2020	BA09354	1 of 2	24800.000	1070.000	n	n	--

Run Id: 3

**Location Id:** MW-LF-07

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	03/11/2020	BA09342	1 of 2	9.140	10.200	y	n	None
Chloride, tot mg/L	05/26/2020	BA09983	1 of 2	9.140	10.200	y	y	None

Run Id: 4

**Location Id:** MW-LF-07

**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	5.080	n/n	n	--

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 4

Location Id: MW-LF-07

Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.180	n/n	n	--
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Run Id: 5

Location Id: MW-LF-07

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	03/11/2020	BA09342	--	--	< 0.100	n	n	--

Run Id: 6

Location Id: MW-LF-07

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Sulfate, tot mg/L	03/11/2020	BA09342	1 of 2	7.890	< 0.500	n	n	--
Sulfate, tot mg/L	05/26/2020	BA09983	1 of 2	7.890	< 0.500	n	n	--

Run Id: 7

Location Id: MW-LF-07

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
TDS mg/L	03/11/2020	BA09342	1 of 2	373.000	40.000	n	n	--

Run Id: 8

Location Id: MW-LF-08

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 8

Location Id: MW-LF-08

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Boron, total ug/L	03/11/2020	BA09355	--	--	< 200.000	n	n	--

Run Id: 9

Location Id: MW-LF-08

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Calcium, tot ug/L	03/11/2020	BA09355	1 of 2	24800.000	867.000	n	n	--

Run Id: 10

Location Id: MW-LF-08

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	03/11/2020	BA09343	1 of 2	9.140	4.960	n	n	--

Run Id: 11

Location Id: MW-LF-08

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.750	n/n	n	--

Run Id: 12

Location Id: MW-LF-08

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 12

**Location Id:** MW-LF-08  
**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Fluoride, total mg/L	03/11/2020	BA09343	--	--	< 0.100	n	n	--

Run Id: 13

**Location Id:** MW-LF-08  
**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	03/11/2020	BA09343	1 of 2	7.890	< 0.500	n	n	--

Run Id: 14

**Location Id:** MW-LF-08  
**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09343	1 of 2	373.000	23.000	n	n	--

Run Id: 15

**Location Id:** MW-LF-10  
**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09356	--	--	< 200.000	n	n	--

Run Id: 16

**Location Id:** MW-LF-10

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.



**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 16

**Location Id:** MW-LF-10

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	03/11/2020	BA09356	1 of 2	24800.000	26700.000	y	n	Upward
Calcium, tot ug/L	05/26/2020	BA09992	1 of 2	24800.000	4860.000	n	n	--

Run Id: 17

**Location Id:** MW-LF-10

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	03/11/2020	BA09344	1 of 2	9.140	14.900	y	n	None
Chloride, tot mg/L	05/26/2020	BA09981	1 of 2	9.140	5.940	n	n	--

Run Id: 18

**Location Id:** MW-LF-10

**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.170	n/n	n	--
Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.030	n/n	n	--

Run Id: 19

**Location Id:** MW-LF-10

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 19

Location Id: MW-LF-10

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	03/11/2020	BA09344	--	--	< 0.100	n	n	--

Run Id: 20

Location Id: MW-LF-10

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Sulfate, tot mg/L	03/11/2020	BA09344	1 of 2	7.890	97.700	y	n	Upward
Sulfate, tot mg/L	05/26/2020	BA09981	1 of 2	7.890	12.100	y	y	Upward

Run Id: 21

Location Id: MW-LF-10

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
TDS mg/L	03/11/2020	BA09344	1 of 2	373.000	169.000	n	n	--

Run Id: 22

Location Id: MW-LF-10A

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Boron, total ug/L	03/11/2020	BA09357	--	--	< 200.000	n	n	--

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 23

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Calcium, tot ug/L	03/11/2020	BA09357	1 of 2	24800.000	2190.000	n	n	--

Run Id: 24

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	03/11/2020	BA09345	1 of 2	9.140	10.400	y	n	Insufficient E
Chloride, tot mg/L	05/26/2020	BA09982	1 of 2	9.140	11.200	y	y	Insufficient E

Run Id: 25

Location Id: MW-LF-10A

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.500	n/n	n	--
Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.120	n/n	n	--

Run Id: 26

Location Id: MW-LF-10A

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 26

Location Id: MW-LF-10A

Fluoride, total mg/L	03/11/2020	BA09345	--	--	< 0.100	n	n	--
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Run Id: 27

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Sulfate, tot mg/L	03/11/2020	BA09345	1 of 2	7.890	15.100	y	n	Insufficient E
Sulfate, tot mg/L	05/26/2020	BA09982	1 of 2	7.890	25.700	y	y	Insufficient E

Run Id: 28

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
TDS mg/L	03/11/2020	BA09345	1 of 2	373.000	68.000	n	n	--

Run Id: 29

Location Id: MW-LF-11

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Boron, total ug/L	03/11/2020	BA09358	--	--	< 200.000	n	n	--

Run Id: 30

Location Id: MW-LF-11

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 30

Location Id: MW-LF-11

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Calcium, tot ug/L	03/11/2020	BA09358	1 of 2	24800.000	< 500.000	n	n	--

Run Id: 31

Location Id: MW-LF-11

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	03/11/2020	BA09346	1 of 2	9.140	6.560	n	n	--

Run Id: 32

Location Id: MW-LF-11

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.590	n/n	n	--

Run Id: 33

Location Id: MW-LF-11

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	03/11/2020	BA09346	--	--	< 0.100	n	n	--

Run Id: 34

Location Id: MW-LF-11

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 34**Location Id:** MW-LF-11**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	03/11/2020	BA09346	1 of 2	7.890	< 0.500	n	n	--

Run Id: 35**Location Id:** MW-LF-11**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09346	1 of 2	373.000	27.000	n	n	--

Run Id: 36**Location Id:** MW-LF-22**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09359	--	--	< 200.000	n	n	--

Run Id: 37**Location Id:** MW-LF-22**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	03/11/2020	BA09359	1 of 2	24800.000	1910.000	n	n	--

Run Id: 38**Location Id:** MW-LF-22

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.



## Wateree Station

## Wateree Station Class III Landfill

Run Id: 38

Location Id: MW-LF-22

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	03/11/2020	BA09347	1 of 2	9.140	10.800	y	n	None
Chloride, tot mg/L	05/26/2020	BA09984	1 of 2	9.140	10.100	y	y	None

Run Id: 39

Location Id: MW-LF-22

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.270	n/n	n	--
Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.010	n/n	n	--

Run Id: 40

Location Id: MW-LF-22

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	03/11/2020	BA09347	--	--	< 0.100	n	n	--

Run Id: 41

Location Id: MW-LF-22

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
-----------	-------------	--------	------------	-------------	-------------------	------------	--------------	----------------

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 41

**Location Id:** MW-LF-22

Sulfate, tot mg/L	03/11/2020	BA09347	1 of 2	7.890	< 0.500	n	n	--
Sulfate, tot mg/L	05/26/2020	BA09984	1 of 2	7.890	< 0.500	n	n	--

Run Id: 42

**Location Id:** MW-LF-22

**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09347	1 of 2	373.000	49.000	n	n	--

2020 1st Semi-annual Detection Monitoring

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station Parametric Prediction Interval on Background - Background Data Calculation

<u>Number Of Locations:</u> 6	<u>Annual Site Wide False Positive Rate (SWFPR):</u> 0.10	
<u>Number Of Parameters:</u> 7	<u>Sample Events per Year:</u> 2	
<u>Sampling Plan:</u> Interwell	<u>Verification Sampling:</u> Pass 1 of 2 (one resample)	

**Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01**

Insufficient Background: 0

DQR Tests: 2

**Parameter Name: Field pH, S.U.**

Background Date Range: 05/01/2016 to 05/27/2020

Alpha Per Test FPR: 0.00174

Option for LT Pts: 0% to <= 15% Substitute ½ PQL

Total Pts 47

Kappa for Selected Verification Plan: 1.961

LT Pts 0

Mean 4.587

%LT Pts 0.00

StdDev 0.689

Normal/Log Normal y/n

ln Mean 1.511

Log Transformed: n

ln StdDev 0.161

Upper Limit: 5.938

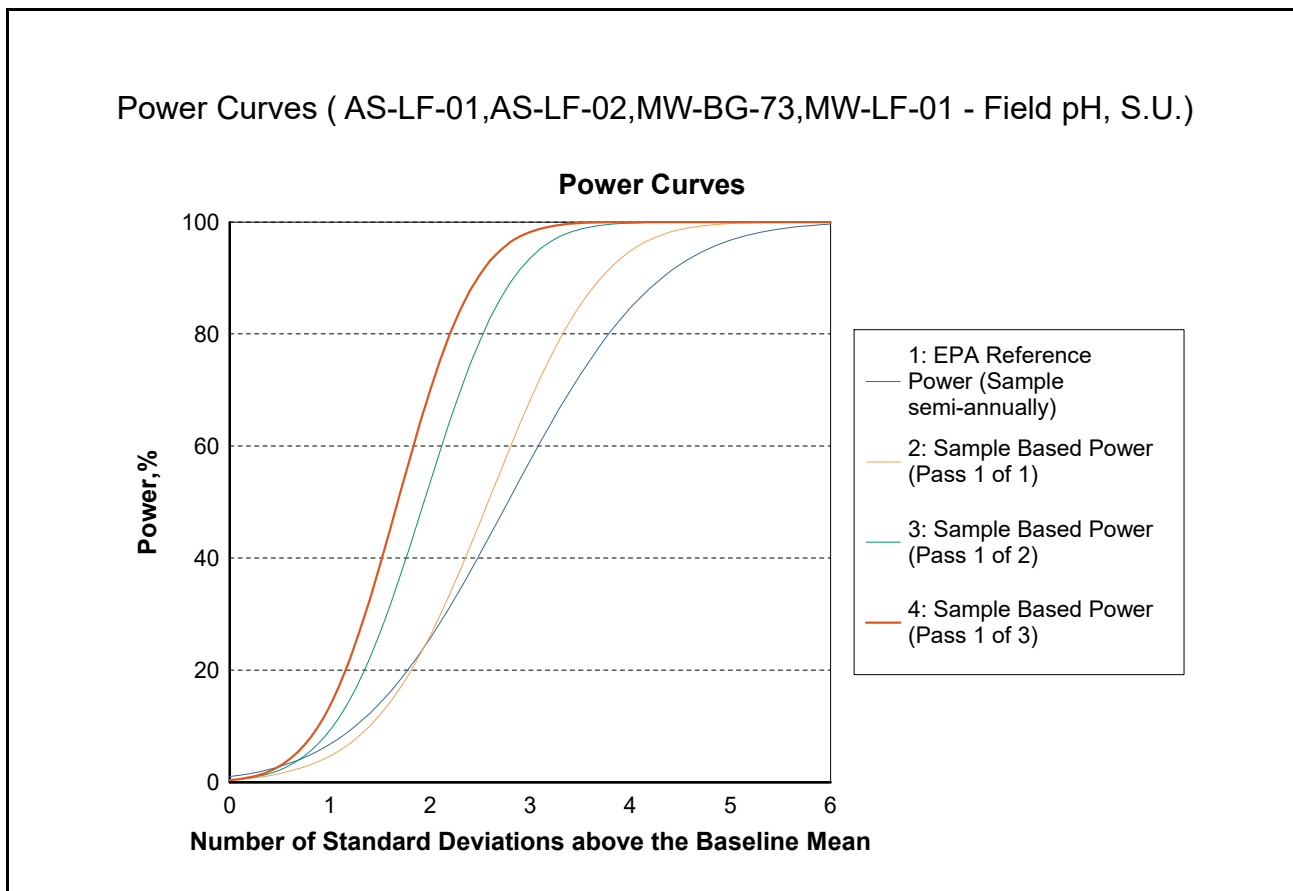
Lower Limit: 3.235

## Wateree Station Parametric Prediction Interval on Background - Background Data Calculation

---

<u>Number Of Locations:</u> 6	<u>Annual Site Wide False Positive Rate (SWFPR):</u> 0.10	
<u>Number Of Parameters:</u> 7	<u>Sample Events per Year:</u> 2	
<u>Sampling Plan:</u> Interwell	<u>Verification Sampling:</u> Pass 1 of 2 (one resample)	

---



## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 2

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper Confidence Level, %	PU (Upper) Value:
99.6	24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-07	03/11/2020	1070	n

Run Id: 3

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, %	PU (Upper) Value:
99.61	9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-07	03/11/2020	10.2	y
MW-LF-07	05/26/2020	10.2	y

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 6

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-07	03/11/2020	<0.5	n
MW-LF-07	05/26/2020	<0.5	n

Run Id: 7

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.43

PU (Upper) Value:

373.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-07	03/11/2020	40	n



## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 9

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.6 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-08	03/11/2020	867	n

Run Id: 10

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-08	03/11/2020	4.96	n

Run Id: 13

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

MW-LF-08                      03/11/2020                      <0.5                      n

Run Id: 14

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

<b>One-Sided Upper Confidence Level, %</b>	<b>PU (Upper) Value:</b>
<b>99.43</b>	<b>373.000</b>

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-08	03/11/2020	23	n

Run Id: 16

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

<b>One-Sided Upper Confidence Level, %</b>	<b>PU (Upper) Value:</b>
<b>99.6</b>	<b>24800.000</b>

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	03/11/2020	26700	y
MW-LF-10	05/26/2020	4860	n

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 17

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	03/11/2020	14.9	y
MW-LF-10	05/26/2020	5.94	n

Run Id: 20

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	03/11/2020	97.7	y
MW-LF-10	05/26/2020	12.1	y

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 21

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.43 373.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	03/11/2020	169	n

Run Id: 23

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.6 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	03/11/2020	2190	n

Run Id: 24

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

**Background Date Range:** 05/01/2016 to 05/27/2020  
**Compliance Date Range:** 03/01/2020 to 5/27/2020  
**No. of Verification Resamples:** 1

MW-LF-10A	03/11/2020	10.4	y
MW-LF-10A	05/26/2020	11.2	y

Run Id: 27

**Background Locations:** AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<b><u>Parameter Code</u></b>	<b><u>Parameter Name</u></b>	<b><u>Units</u></b>	<b><u>Background Sample Count</u></b>	<b><u>Option for LT Pts.</u></b>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

**One-Sided Upper Confidence Level, %** **PU (Upper) Value:**  
**99.61** **7.890**

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	03/11/2020	15.1	y
MW-LF-10A	05/26/2020	25.7	y

Run Id: 28

**Background Locations:** AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<b><u>Parameter Code</u></b>	<b><u>Parameter Name</u></b>	<b><u>Units</u></b>	<b><u>Background Sample Count</u></b>	<b><u>Option for LT Pts.</u></b>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** **PU (Upper) Value:**  
**99.43** **373.000**

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	03/11/2020	68	n

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 30

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.6 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-11	03/11/2020	<500	n

Run Id: 31

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-11	03/11/2020	6.56	n

Run Id: 34

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>





## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 38

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	03/11/2020	10.8	y
MW-LF-22	05/26/2020	10.1	y

Run Id: 41

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	03/11/2020	<0.5	n
MW-LF-22	05/26/2020	<0.5	n

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 42

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %  
  
**99.43**

PU (Upper) Value:  
  
**373.000**

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	03/11/2020	49	n

Wateree Station

July 15, 2020

1:13:55 PM

All Background Results Non-Detect

---

Location Id: MW-LF-07

Run Id: 1

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-07

Run Id: 5

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-08

Run Id: 8

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

---



All Background Results Non-Detect

---

Location Id: MW-LF-08

Run Id: 12

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

Location Id: MW-LF-10

Run Id: 15

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

All Background Results Non-Detect

---

Location Id: MW-LF-10

Run Id: 19

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-10A

Run Id: 22

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-10A

Run Id: 26

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-11

Run Id: 29

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

---

All Background Results Non-Detect

Location Id: MW-LF-11

Run Id: 33

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N



**All Background Results Non-Detect**

**Location Id:** MW-LF-22

Run Id: 36

**Parameter:** Boron, total, ug/L

Double Quantification Rule

**Percent ND:** 100

**ND Approach:** > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

All Background Results Non-Detect

Location Id: MW-LF-22

Run Id: 40

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

**All Background Results Non-Detect**

---

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 1

**Location ID:** MW-LF-07

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 01022

**Parameter:** Boron, total

**Units:** ug/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 ug/L per year
Lower Confidence Limit of Slope, M1:	-291.454 ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.631
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 2

**Location ID:** MW-LF-07

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 5

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-134.893 ug/L per year
Lower Confidence Limit of Slope, M1:	-272.214 ug/L per year
Upper Confidence Limit of Slope, M2+1:	147.245 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.805
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 3

**Location ID:** MW-LF-07

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.045 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.263 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.208 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.332
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 4

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.080 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.055 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.217 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.023
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 5

**Location ID:** MW-LF-07

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 93

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.215
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 6

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 mg/L per year
Lower Confidence Limit of Slope, M1:	0.000 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.694
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 7

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-2.148 mg/L per year
Lower Confidence Limit of Slope, M1:	-5.218 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.677
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 8

**Location ID:** MW-LF-08

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 01022

**Parameter:** Boron, total

**Units:** ug/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	-257.626	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.758
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 9

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00916
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Calcium, tot
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> ug/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-15.161 ug/L per year
Lower Confidence Limit of Slope, M1:	-50.897 ug/L per year
Upper Confidence Limit of Slope, M2+1:	13.267 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.833
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 10

**Location ID:** MW-LF-08

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.052 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.069 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.213 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.660
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 11

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.011 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.154 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.246 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.055
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 12

**Location ID:** MW-LF-08

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.004
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 13

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 94

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 mg/L per year
Lower Confidence Limit of Slope, M1:	0.000 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.895
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 14

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-3.337 mg/L per year
Lower Confidence Limit of Slope, M1:	-7.745 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.764
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 15

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 01022
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Boron, total
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> ug/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-213.706	ug/L per year
Lower Confidence Limit of Slope, M1:	-326.425	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.986
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 16

**Location ID:** MW-LF-10

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	1491.364	ug/L per year
Lower Confidence Limit of Slope, M1:	592.633	ug/L per year
Upper Confidence Limit of Slope, M2+1:	3974.501	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.277
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 17

**Location ID:** MW-LF-10

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 5

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.936	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.053	mg/L per year
Upper Confidence Limit of Slope, M2+1:	3.017	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.238
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 18

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.084 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.148 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.023 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.319
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 19

**Location ID:** MW-LF-10

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 94

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.070
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 20

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 15% to <= 50% Substitute PQL	<b>Percent of ND:</b> 27

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	4.517 mg/L per year
Lower Confidence Limit of Slope, M1:	2.432 mg/L per year
Upper Confidence Limit of Slope, M2+1:	13.963 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.280
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 21

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	26.166 mg/L per year
Lower Confidence Limit of Slope, M1:	5.704 mg/L per year
Upper Confidence Limit of Slope, M2+1:	41.561 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.391
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 29

**Location ID:** MW-LF-11

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 01022

**Parameter:** Boron, total

**Units:** ug/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	-257.756	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.758
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 30

**Location ID:** MW-LF-11

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 15% to <= 50% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 18

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	22.650 ug/L per year
Lower Confidence Limit of Slope, M1:	-16.811 ug/L per year
Upper Confidence Limit of Slope, M2+1:	99.017 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.992
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 31

**Location ID:** MW-LF-11

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.193 mg/L per year
Lower Confidence Limit of Slope, M1:	0.068 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.512 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.464
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 32

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.080 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.219 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.050 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.091
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 33

**Location ID:** MW-LF-11

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.004
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 34

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 35

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.991 mg/L per year
Lower Confidence Limit of Slope, M1:	-4.373 mg/L per year
Upper Confidence Limit of Slope, M2+1:	8.778 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.219
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 36

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 01022

**Parameter:** Boron, total

**Units:** ug/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	-257.561	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.758
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 37

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	19.007 ug/L per year
Lower Confidence Limit of Slope, M1:	-167.731 ug/L per year
Upper Confidence Limit of Slope, M2+1:	235.145 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.227
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 38

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.113 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.379 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.604 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.357
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 39

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00400

**Parameter:** Field pH

**Units:** S.U.

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.016	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.119	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.128	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.083
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 40

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.004
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 41

<b>Location ID:</b> MW-LF-22	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 42

<b>Location ID:</b> MW-LF-22	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.956 mg/L per year
Lower Confidence Limit of Slope, M1:	-2.453 mg/L per year
Upper Confidence Limit of Slope, M2+1:	3.564 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.348
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station**  
**Theil Sen Mann-Kendall Trend Analysis**

**DOMINION ENERGY  
SOUTH CAROLINA**

**WATEREE STATION  
CLASS III LANDFILL**

**RICHLAND COUNTY, SOUTH CAROLINA**

**CCR GROUNDWATER  
DETECTION MONITORING  
STATISTICAL ANALYSIS REPORT**

**for the**

**September 2020 Sampling Event**

**Prepared on  
November 25, 2020**



**Dominion  
Energy®**

## **STATISTICAL ANALYSIS REPORT**

### **Groundwater Sampling**

In accordance with 40 CFR Part 257.94, the 2020 second semi-annual groundwater sampling event for Detection Monitoring at the Wateree Station Class III Landfill began on September 14, 2020. This event included groundwater sampling from background monitoring wells MW-BG-73, MW-LF-01, AS-LF-01, AS-LF-02 and AS-LF-03; and the downgradient compliance monitoring wells MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22. The groundwater samples were analyzed for the constituents listed in Appendix III of the EPA CCR Rule which include Boron, Calcium, Chloride, Fluoride, pH, Sulfate, and Total Dissolved Solids.

### **Statistical Analysis**

The statistical analysis indicates that the concentrations of chloride in the groundwater samples collected from monitoring wells MW-LF-07 and MW-LF-22 show statistically significant increases (SSI) above background concentrations. The statistical analysis indicates that the concentrations of sulfate in the groundwater samples collected from monitoring wells MW-LF-10 and MW-LF-10A show statistically significant increases (SSI) above background concentrations. No other statistically significant increases above background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from the Class III Landfill monitoring wells during the 2020 first semi-annual Detection Monitoring event.

**Wateree Station Rocky 202010**  
**Wateree Station Class III Landfill**

Run Id: 1

Location Id: MW-LF-07

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	09/15/2020	BA11101	--	--	< 200.000	n	n	--

Run Id: 2

Location Id: MW-LF-07

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	09/15/2020	BA11101	1 of 2	24800.000	769.000	n	n	--

Run Id: 3

Location Id: MW-LF-07

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	09/15/2020	BA11087	1 of 2	6.500	9.910	y	n	None
Chloride, tot mg/L	10/26/2020	BA11738	1 of 2	6.500	10.200	y	y	None

Run Id: 4

Location Id: MW-LF-07

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	09/15/2020	FLD20200915	1 of 2	5.811	3.304	4.230	n/n	n	--

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

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Run Id: 4

Location Id: MW-LF-07

Field pH S.U. 10/26/2020 FLD20201026 1 of 2 5.811 3.304 4.000 n/n n --

Run Id: 5

Location Id: MW-LF-07

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	09/15/2020	BA11087	--	--	< 0.100	n	n	--

Run Id: 6

Location Id: MW-LF-07

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Sulfate, tot mg/L	09/15/2020	BA11087	1 of 2	7.890	< 0.500	n	n	--

Run Id: 7

Location Id: MW-LF-07

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
TDS mg/L	09/15/2020	BA11087	1 of 2	79.440	75.000	n	n	--

Run Id: 8

Location Id: MW-LF-08

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

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Run Id: 8

Location Id: MW-LF-08

Boron, total ug/L      09/15/2020      BA11102      --      --      < 200.000      n      n      --

Run Id: 9

Location Id: MW-LF-08

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Calcium, tot ug/L	09/15/2020	BA11102	1 of 2	24800.000	825.000	n	n	--

Run Id: 10

Location Id: MW-LF-08

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	09/15/2020	BA11088	1 of 2	6.500	5.090	n	n	--

Run Id: 11

Location Id: MW-LF-08

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	09/15/2020	FLD20200915	1 of 2	5.811	3.304	4.350	n/n	n	--

Run Id: 12

Location Id: MW-LF-08

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

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Run Id: 12

**Location Id:** MW-LF-08

Fluoride, total mg/L	09/15/2020	BA11088	--	--	< 0.100	n	n	--
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Run Id: 13

**Location Id:** MW-LF-08

**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	09/15/2020	BA11088	1 of 2	7.890	< 0.500	n	n	--

Run Id: 14

**Location Id:** MW-LF-08

**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	09/15/2020	BA11088	1 of 2	79.440	51.000	n	n	--

Run Id: 15

**Location Id:** MW-LF-10

**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	09/14/2020	BA11099	--	--	< 200.000	n	n	--

Run Id: 16

**Location Id:** MW-LF-10

**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.



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Run Id: 16

Location Id: MW-LF-10

Calcium, tot ug/L	09/14/2020	BA11099	1 of 2	24800.000	9030.000	n	n	--
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Run Id: 17

Location Id: MW-LF-10

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	09/14/2020	BA11085	1 of 2	6.500	7.950	y	n	None

Run Id: 18

Location Id: MW-LF-10

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	09/14/2020	FLD20200914	1 of 2	5.811	3.304	4.320	n/n	n	--
Field pH S.U.	10/26/2020	FLD20201026	1 of 2	5.811	3.304	4.390	n/n	n	--

Run Id: 19

Location Id: MW-LF-10

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	09/14/2020	BA11085	--	--	< 0.100	n	n	--

Run Id: 20

Location Id: MW-LF-10

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

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Run Id: 20

Location Id: MW-LF-10

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	09/14/2020	BA11085	1 of 2	7.890	26.800	y	n	Upward
Sulfate, tot mg/L	10/26/2020	BA11736	1 of 2	7.890	28.500	y	y	Upward

Run Id: 21

Location Id: MW-LF-10

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	09/14/2020	BA11085	1 of 2	79.440	98.000	y	n	Upward

Run Id: 22

Location Id: MW-LF-10A

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	09/14/2020	BA11100	--	--	< 200.000	n	n	--

Run Id: 23

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	09/14/2020	BA11100	1 of 2	24800.000	4400.000	n	n	--

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

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Run Id: 24

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	09/14/2020	BA11086	1 of 2	6.500	7.940	y	n	Insufficient Da

Run Id: 25

Location Id: MW-LF-10A

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	09/14/2020	FLD20200914	1 of 2	5.811	3.304	4.320	n/n	n	--
Field pH S.U.	10/26/2020	FLD20201026	1 of 2	5.811	3.304	4.260	n/n	n	--

Run Id: 26

Location Id: MW-LF-10A

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Fluoride, total mg/L	09/14/2020	BA11086	--	--	< 0.100	n	n	--

Run Id: 27

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	09/14/2020	BA11086	1 of 2	7.890	14.700	y	n	Insufficient Da

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

**Wateree Station Rocky 20210**  
**Wateree Station Class III Landfill**

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Run Id: 27

**Location Id:** MW-LF-10A

Sulfate, tot mg/L	10/26/2020	BA11737	1 of 2	7.890	45.300	y	y	Insufficient Da
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Run Id: 28

**Location Id:** MW-LF-10A

**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	09/14/2020	BA11086	1 of 2	79.440	71.000	n	n	--

Run Id: 29

**Location Id:** MW-LF-11

**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	09/15/2020	BA11107	--	--	< 200.000	n	n	--

Run Id: 30

**Location Id:** MW-LF-11

**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	09/15/2020	BA11107	1 of 2	24800.000	< 500.000	n	n	--

Run Id: 31

**Location Id:** MW-LF-11

**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

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Wateree Station Class III Landfill

Run Id: 31

Location Id: MW-LF-11

Chloride, tot mg/L	09/15/2020	BA11093	1 of 2	6.500	5.470	n	n	--
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Run Id: 32

Location Id: MW-LF-11

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	09/15/2020	FLD20200915	1 of 2	5.811	3.304	4.370	n/n	n	--

Run Id: 33

Location Id: MW-LF-11

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	09/15/2020	BA11093	--	--	< 0.100	n	n	--

Run Id: 34

Location Id: MW-LF-11

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Sulfate, tot mg/L	09/15/2020	BA11093	1 of 2	7.890	< 0.500	n	n	--

Run Id: 35

Location Id: MW-LF-11

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

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Wateree Station Class III Landfill

Run Id: 35

Location Id: MW-LF-11

TDS mg/L                      09/15/2020                      BA11093                      1 of 2                      79.440                      67.000                      n                      n                      --

Run Id: 36

Location Id: MW-LF-22

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	09/15/2020	BA11104	--	--	< 200.000	n	n	--

Run Id: 37

Location Id: MW-LF-22

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	09/15/2020	BA11104	1 of 2	24800.000	1880.000	n	n	--

Run Id: 38

Location Id: MW-LF-22

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	09/15/2020	BA11090	1 of 2	6.500	9.990	y	n	None
Chloride, tot mg/L	10/27/2020	BA11739	1 of 2	6.500	9.640	y	y	None

Run Id: 39

Location Id: MW-LF-22

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Wateree Station Rocky 202010

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Wateree Station Class III Landfill

Run Id: 39

Location Id: MW-LF-22

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	09/15/2020	FLD20200915	1 of 2	5.811	3.304	4.260	n/n	n	--
Field pH S.U.	10/27/2020	FLD20201027	1 of 2	5.811	3.304	4.380	n/n	n	--

Run Id: 40

Location Id: MW-LF-22

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Fluoride, total mg/L	09/15/2020	BA11090	--	--	< 0.100	n	n	--

Run Id: 41

Location Id: MW-LF-22

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	09/15/2020	BA11090	1 of 2	7.890	< 0.500	n	n	--

Run Id: 42

Location Id: MW-LF-22

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	09/15/2020	BA11090	1 of 2	79.440	62.000	n	n	--

2020 2nd Semi-annual Detection Monitoring

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

**Wateree Station Rocky 202010  
Parametric Prediction Interval on Background - Background Data Calculation**

<u>Number Of Locations:</u>	6	<u>Annual Site Wide False Positive Rate (SWFPR):</u>	0.10
<u>Number Of Parameters:</u>	7	<u>Sample Events per Year:</u>	2
<u>Sampling Plan:</u>	Interwell	<u>Verification Sampling:</u>	Pass 1 of 2 (one resample)

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

Insufficient Background: 0

DQR Tests: 2

<b><u>Parameter Name:</u></b>	<b>Field pH, S.U.</b>	<b><u>Background Date Range:</u></b>	05/01/2016 to 10/28/2020
<u>Alpha Per Test FPR:</u>	0.00174	<u>Option for LT Pts:</u>	0% to <= 15% Substitute ½ PQL
<u>Total Pts</u>	56	<u>Kappa for Selected Verification Plan:</u>	1.950
<u>LT Pts</u>	0	<u>Mean</u>	4.558
<u>%LT Pts</u>	0.00	<u>StdDev</u>	0.643
<u>Normal/Log Normal</u>	y/n	<u>In Mean</u>	1.506
<u>Log Transformed:</u>	n	<u>In StdDev</u>	0.149
<u>Upper Limit:</u>	5.811		
<u>Lower Limit:</u>	3.304		

<b><u>Parameter Name:</u></b>	<b>TDS, mg/L</b>	<b><u>Background Date Range:</u></b>	05/01/2016 to 10/28/2020
<u>Alpha Per Test FPR:</u>	0.00174	<u>Option for LT Pts:</u>	0% to <= 15% Substitute ½ PQL
<u>Total Pts</u>	51	<u>Kappa for Selected Verification Plan:</u>	1.783
<u>LT Pts</u>	1	<u>Mean</u>	38.363
<u>%LT Pts</u>	1.96	<u>StdDev</u>	18.470
<u>Normal/Log Normal</u>	n/y	<u>In Mean</u>	3.542
<u>Log Transformed:</u>	y	<u>In StdDev</u>	0.467
<u>Upper Limit:</u>	79.440		
<u>Lower Limit:</u>	15.009		

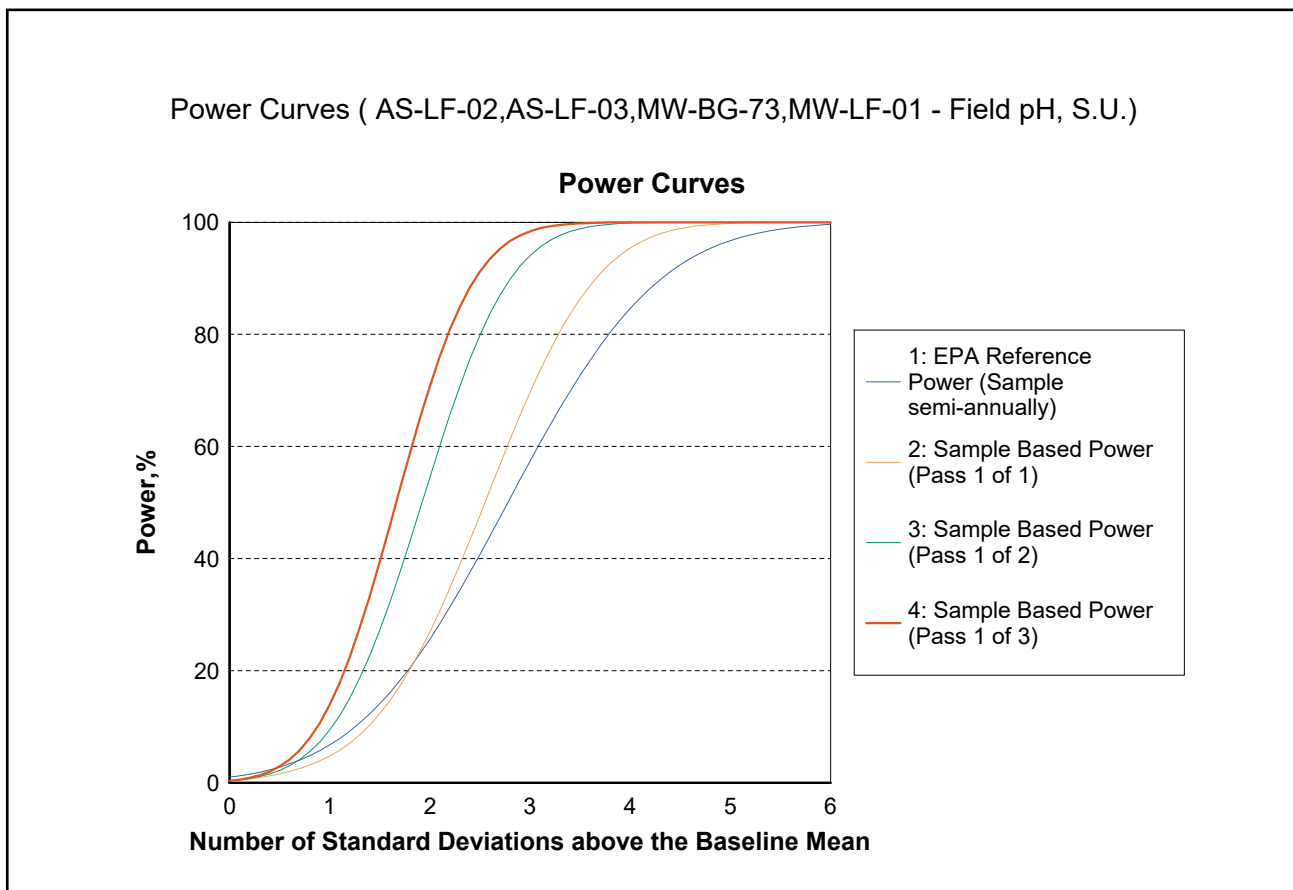


### Wateree Station Rocky 202010 Parametric Prediction Interval on Background - Background Data Calculation

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<u>Number Of Locations:</u>	6	<u>Annual Site Wide False Positive Rate (SWFPR):</u>	0.10
<u>Number Of Parameters:</u>	7	<u>Sample Events per Year:</u>	2
<u>Sampling Plan:</u>	Interwell	<u>Verification Sampling:</u>	Pass 1 of 2 (one resample)

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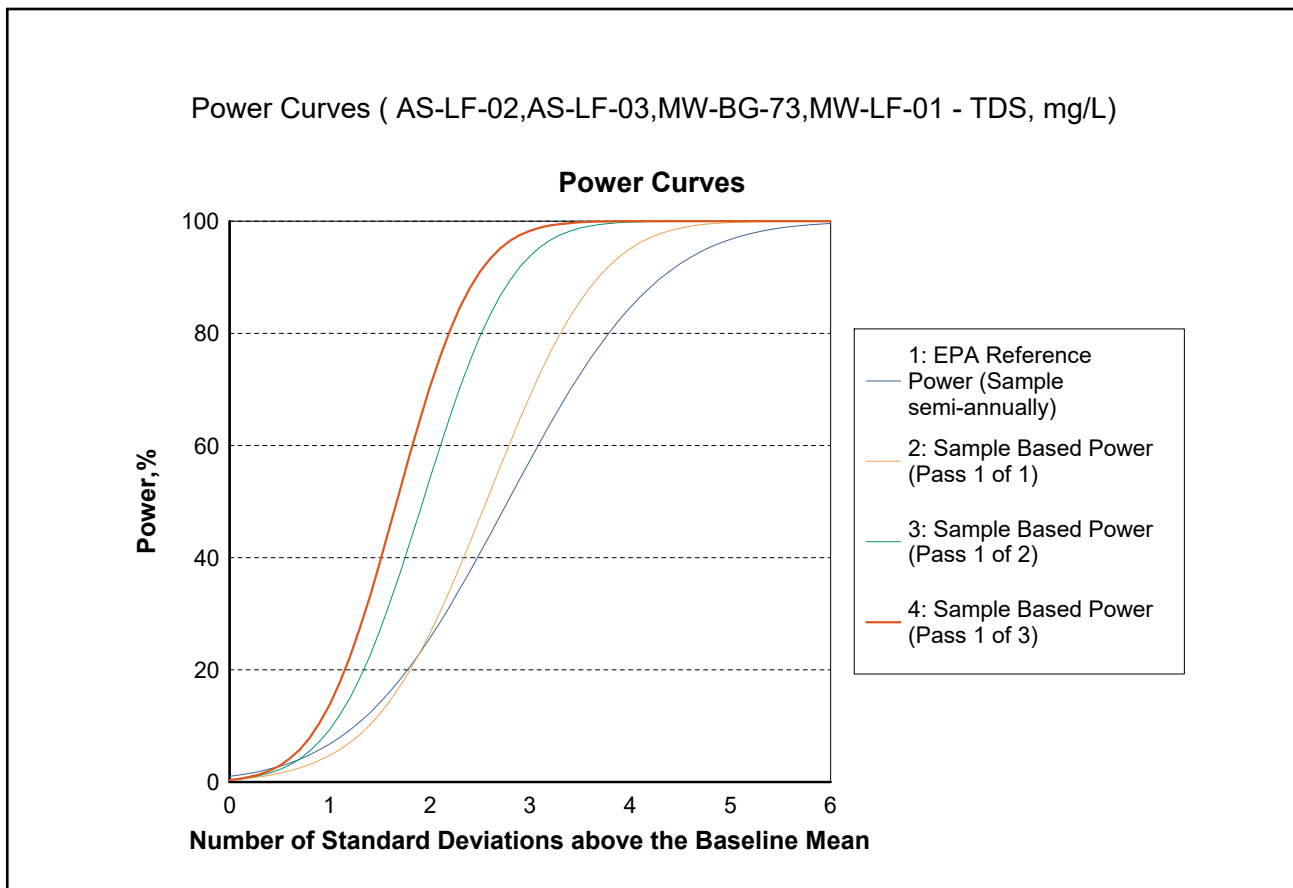


### Wateree Station Rocky 202010 Parametric Prediction Interval on Background - Background Data Calculation

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<u>Number Of Locations:</u>	6	<u>Annual Site Wide False Positive Rate (SWFPR):</u>	0.10
<u>Number Of Parameters:</u>	7	<u>Sample Events per Year:</u>	2
<u>Sampling Plan:</u>	Interwell	<u>Verification Sampling:</u>	Pass 1 of 2 (one resample)

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**Watree Station Rocky 202010  
Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

Run Id: 2

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	59	> 15% to <= 50% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.67 **PU (Upper) Value:** 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-07	09/15/2020	769	n

Run Id: 3

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	63	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 6.500

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-07	09/15/2020	9.91	y
MW-LF-07	10/26/2020	10.2	y

**Watree Station Rocky 202010  
Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

Run Id: 6

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	63	> 50% to <= 100% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-07	09/15/2020	<0.5	n

Run Id: 9

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	59	> 15% to <= 50% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.67 **PU (Upper) Value:** 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-08	09/15/2020	825	n

Run Id: 10

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	63	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 6.500

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
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**Watree Station Rocky 202010  
Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

MW-LF-08 09/15/2020 5.09 n

Run Id: 13

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	63	> 50% to <= 100% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-08	09/15/2020	<0.5	n

Run Id: 16

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	59	> 15% to <= 50% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.67 **PU (Upper) Value:** 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	09/14/2020	9030	n

**Watree Station Rocky 202010  
Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

Run Id: 17

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	63	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 6.500

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	09/14/2020	7.95	y

Run Id: 20

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	63	> 50% to <= 100% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	09/14/2020	26.8	y
MW-LF-10	10/26/2020	28.5	y

**Watree Station Rocky 202010  
Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

Run Id: 23

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	59	> 15% to <= 50% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.67 **PU (Upper) Value:** 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	09/14/2020	4400	n

Run Id: 24

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	63	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 6.500

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	09/14/2020	7.94	y

Run Id: 27

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	63	> 50% to <= 100% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>

**Wateree Station Rocky 202010**  
**Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

MW-LF-10A	09/14/2020	14.7	y
MW-LF-10A	10/26/2020	45.3	y

Run Id: 30

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	59	> 15% to <= 50% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.67 **PU (Upper) Value:** 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-11	09/15/2020	<500	n

Run Id: 31

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	63	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 6.500

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-11	09/15/2020	5.47	n



**Watree Station Rocky 202010  
Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

Run Id: 34

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	63	> 50% to <= 100% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-11	09/15/2020	<0.5	n

Run Id: 37

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	59	> 15% to <= 50% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.67 **PU (Upper) Value:** 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	09/15/2020	1880	n

Run Id: 38

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	63	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** 99.71 **PU (Upper) Value:** 6.500

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>

**Watree Station Rocky 202010  
Non-Parametric Prediction Interval on Background**

**User Supplied Information**

**Background Date Range:** 05/01/2016 to 10/28/2020  
**Compliance Date Range:** 09/01/2020 to 10/28/2020  
**No. of Verification Resamples:** 1

MW-LF-22	09/15/2020	9.99	y
MW-LF-22	10/27/2020	9.64	y

Run Id: 41

**Background Locations:** AS-LF-02,AS-LF-03,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	63	> 50% to <= 100% Substitute PQL

**One-Sided Upper  
Confidence Level, %**

99.71

**PU (Upper) Value:**

7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	09/15/2020	<0.5	n

Wateree Station Rocky 202010

November 24, 2020

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All Background Results Non-Detect

Location Id: MW-LF-07  
Parameter: Boron, total, ug/L

Run Id: 1

Double Quantification Rule  
Percent ND: 100  
ND Approach: > 50% to <= 100% Substitute PQL

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<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	200.000	38.458	38.458	200	200	Y	N

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All Background Results Non-Detect

Location Id: MW-LF-07

Run Id: 5

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	0.100	0.008	0.008	0.1	0.1	Y	N

All Background Results Non-Detect

Location Id: MW-LF-08

Run Id: 8

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	200.000	38.458	38.458	200	200	Y	N

All Background Results Non-Detect

Location Id: MW-LF-08

Run Id: 12

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	0.100	0.008	0.008	0.1	0.1	Y	N

All Background Results Non-Detect

Location Id: MW-LF-10

Run Id: 15

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/14/2020	200.000	41.2	38.458	200	200	Y	N

All Background Results Non-Detect

Location Id: MW-LF-10

Run Id: 19

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/14/2020	0.100	0.008	0.008	0.1	0.1	Y	N



All Background Results Non-Detect

Location Id: MW-LF-10A

Run Id: 22

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/14/2020	200.000	38.458	38.458	200	200	Y	N

All Background Results Non-Detect

Location Id: MW-LF-10A

Run Id: 26

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/14/2020	0.100	0.008	0.008	0.1	0.1	Y	N

All Background Results Non-Detect

Location Id: MW-LF-11

Run Id: 29

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	200.000	38.458	38.458	200	200	Y	N

All Background Results Non-Detect

**Location Id:** MW-LF-11  
**Parameter:** Fluoride, total, mg/L

Run Id: 33

Double Quantification Rule  
**Percent ND:** 100  
**ND Approach:** > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	0.100	0.008	0.008	0.1	0.1	Y	N

All Background Results Non-Detect

Location Id: MW-LF-22

Run Id: 36

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	200.000	38.458	38.458	200	200	Y	N

All Background Results Non-Detect

Location Id: MW-LF-22

Run Id: 40

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
09/15/2020	0.100	0.008	0.008	0.1	0.1	Y	N

**All Background Results Non-Detect**

---

2:34:02 PM

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 1

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 01022
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Boron, total
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> ug/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-187.864 ug/L per year
Lower Confidence Limit of Slope, M1:	-269.457 ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.742
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward



**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 2

**Location ID:** MW-LF-07

**Parameter Code:** 00916

**Confidence Level:** 95%

**Parameter:** Calcium, tot

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** ug/L

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Percent of ND:** 5

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-201.725	ug/L per year
Lower Confidence Limit of Slope, M1:	-301.206	ug/L per year
Upper Confidence Limit of Slope, M2+1:	76.680	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.363
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 3

**Location ID:** MW-LF-07

**Parameter Code:** 00940

**Confidence Level:** 95%

**Parameter:** Chloride, tot

**Date Range:** 05/12/2016 to 10/26/2020

**Units:** mg/L

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.042	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.154	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.213	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.476
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 4

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 10/26/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.024	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.086	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.133	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.390
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 5

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00951
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Fluoride, total
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 94

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 mg/L per year
Lower Confidence Limit of Slope, M1:	0.000 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 6

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 mg/L per year
Lower Confidence Limit of Slope, M1:	0.000 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.578
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 7

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-1.419 mg/L per year
Lower Confidence Limit of Slope, M1:	-4.779 mg/L per year
Upper Confidence Limit of Slope, M2+1:	3.489 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.870
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 8

**Location ID:** MW-LF-08

**Parameter Code:** 01022

**Confidence Level:** 95%

**Parameter:** Boron, total

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** ug/L

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	-242.593	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.001
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 9

**Location ID:** MW-LF-08

**Parameter Code:** 00916

**Confidence Level:** 95%

**Parameter:** Calcium, tot

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** ug/L

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-13.045	ug/L per year
Lower Confidence Limit of Slope, M1:	-42.797	ug/L per year
Upper Confidence Limit of Slope, M2+1:	7.142	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.050
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 10

**Location ID:** MW-LF-08

**Parameter Code:** 00940

**Confidence Level:** 95%

**Parameter:** Chloride, tot

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** mg/L

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.044	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.055	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.184	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.644
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 11

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.038	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.143	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.141	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.248
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 12

**Location ID:** MW-LF-08

**Parameter Code:** 00951

**Confidence Level:** 95%

**Parameter:** Fluoride, total

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** mg/L

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.764
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 13

**Location ID:** MW-LF-08

**Parameter Code:** 00945

**Confidence Level:** 95%

**Parameter:** Sulfate, tot

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** mg/L

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Percent of ND:** 94

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.981
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 14

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-2.297 mg/L per year
Lower Confidence Limit of Slope, M1:	-6.825 mg/L per year
Upper Confidence Limit of Slope, M2+1:	1.948 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.995
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 15

**Location ID:** MW-LF-10

**Parameter Code:** 01022

**Confidence Level:** 95%

**Parameter:** Boron, total

**Date Range:** 05/12/2016 to 09/14/2020

**Units:** ug/L

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-204.913	ug/L per year
Lower Confidence Limit of Slope, M1:	-290.279	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.113
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 16

**Location ID:** MW-LF-10

**Parameter Code:** 00916

**Confidence Level:** 95%

**Parameter:** Calcium, tot

**Date Range:** 05/12/2016 to 09/14/2020

**Units:** ug/L

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	1833.333	ug/L per year
Lower Confidence Limit of Slope, M1:	675.134	ug/L per year
Upper Confidence Limit of Slope, M2+1:	3113.640	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.412
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 17

**Location ID: MW-LF-10**

**Parameter Code: 00940**

**Confidence Level: 95%**

**Parameter: Chloride, tot**

**Date Range: 05/12/2016 to 09/14/2020**

**Units: mg/L**

**Option for LT Points: 0% to <= 15% Substitute PQL**

**Percent of ND: 5**

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.599 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.042 mg/L per year
Upper Confidence Limit of Slope, M2+1:	2.614 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.410
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 18

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 10/26/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.058	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.104	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.023	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.085
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 19

**Location ID:** MW-LF-10

**Parameter Code:** 00951

**Confidence Level:** 95%

**Parameter:** Fluoride, total

**Date Range:** 05/12/2016 to 09/14/2020

**Units:** mg/L

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Percent of ND:** 94

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.815
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 20

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 10/26/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 15% to <= 50% Substitute PQL	<b>Percent of ND:</b> 25

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	6.105 mg/L per year
Lower Confidence Limit of Slope, M1:	2.674 mg/L per year
Upper Confidence Limit of Slope, M2+1:	9.265 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.553
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 21

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 09/14/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	21.118	mg/L per year
Lower Confidence Limit of Slope, M1:	7.466	mg/L per year
Upper Confidence Limit of Slope, M2+1:	38.970	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.540
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 29

**Location ID:** MW-LF-11

**Parameter Code:** 01022

**Confidence Level:** 95%

**Parameter:** Boron, total

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** ug/L

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	-242.781	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.001
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 30

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00916
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Calcium, tot
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> ug/L
<b>Option for LT Points:</b> > 15% to <= 50% Substitute PQL	<b>Percent of ND:</b> 22

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	53.419 ug/L per year
Lower Confidence Limit of Slope, M1:	-3.528 ug/L per year
Upper Confidence Limit of Slope, M2+1:	87.717 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.372
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 31

**Location ID:** MW-LF-11

**Parameter Code:** 00940

**Confidence Level:** 95%

**Parameter:** Chloride, tot

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** mg/L

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.205	mg/L per year
Lower Confidence Limit of Slope, M1:	0.088	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.333	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.696
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 32

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.073	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.213	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.019	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.399
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 33

**Location ID: MW-LF-11**

**Parameter Code: 00951**

**Confidence Level: 95%**

**Parameter: Fluoride, total**

**Date Range: 05/12/2016 to 09/15/2020**

**Units: mg/L**

**Option for LT Points: > 50% to <= 100% Substitute PQL**

**Percent of ND: 100**

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.764
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 34

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 mg/L per year
Lower Confidence Limit of Slope, M1:	0.000 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 35

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	5.707 mg/L per year
Lower Confidence Limit of Slope, M1:	-2.633 mg/L per year
Upper Confidence Limit of Slope, M2+1:	9.800 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.891
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 36

Location ID: MW-LF-22

Parameter Code: 01022

Confidence Level: 95%

Parameter: Boron, total

Date Range: 05/12/2016 to 09/15/2020

Units: ug/L

Option for LT Points: > 50% to <= 100% Substitute PQL

Percent of ND: 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	-242.593	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.001
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 37

**Location ID:** MW-LF-22

**Parameter Code:** 00916

**Confidence Level:** 95%

**Parameter:** Calcium, tot

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** ug/L

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	17.800	ug/L per year
Lower Confidence Limit of Slope, M1:	-116.333	ug/L per year
Upper Confidence Limit of Slope, M2+1:	181.557	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.210
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 38

Location ID: MW-LF-22

Parameter Code: 00940

Confidence Level: 95%

Parameter: Chloride, tot

Date Range: 05/12/2016 to 10/27/2020

Units: mg/L

Option for LT Points: 0% to <= 15% Substitute PQL

Percent of ND: 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.010	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.404	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.357	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 39

<b>Location ID:</b> MW-LF-22	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 10/27/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.038	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.051	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.120	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.386
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 40

**Location ID:** MW-LF-22

**Parameter Code:** 00951

**Confidence Level:** 95%

**Parameter:** Fluoride, total

**Date Range:** 05/12/2016 to 09/15/2020

**Units:** mg/L

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.764
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 41

<b>Location ID:</b> MW-LF-22	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**

---

**Post Hoc Trend Analysis**

Run Id: 42

<b>Location ID:</b> MW-LF-22	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 09/15/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	1.739 mg/L per year
Lower Confidence Limit of Slope, M1:	-1.223 mg/L per year
Upper Confidence Limit of Slope, M2+1:	4.588 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.994
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

**Wateree Station Rocky 202010**  
**Theil Sen Mann-Kendall Trend Analysis**



## **APPENDIX C**

### **Alternate Source Demonstration Report**



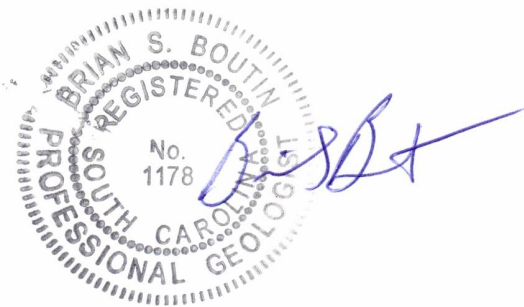
# ALTERNATE SOURCE DEMONSTRATION REPORT

## EPA CCR RULE COMPLIANCE MARCH 2020 MONITORING

### DOMINION ENERGY SOUTH CAROLINA: Wateree Station: Class Three Landfill

September 2020

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## 1.0 INTRODUCTION

This document presents an Alternate Source Demonstration (ASD) in compliance with 40 CFR Part 257 Subpart D 257.94(e)(2) of the April 2015 EPA Coal Combustion Residuals (CCR) Rule (Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments; 40 CFR Part 257 Subpart D) with respect to the Dominion Energy South Carolina (DESC) Wateree Station Class 3 Landfill in Eastover, Richland County, South Carolina (**Figures 1 and 2**). The Class 3 landfill is a CCR unit as defined in the EPA CCR Rule that receives both fly ash and FGD waste from DESC Wateree Generating Station, that includes a liner system comprised of 2 feet of  $10^{-7}$  cm/sec clay overlain by a 60-mil HDPE liner, as well as a leachate collection system. Review of the statistical analysis of data from the Detection Monitoring events conducted in March 2020 indicates that the concentrations of the monitoring parameters detected in groundwater were within acceptable statistical limits for each constituent except for statistically significant increases (SSI) observed for chloride at CCR Rule compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate at CCR Rule compliance monitoring wells MW-LF-10 and MW-LF-10A. 40 CFR 257.94(e)(2) allows the owner or operator 90 days from the date of determination to demonstrate that apparent SSIs were from a source other than the CCR unit or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Pursuant to 40 CFR 257.94(e)(2), the following sections provide data to support the conclusion that the SSIs observed for the constituents cited above are attributable to a source other than the Class 3 landfill and are likely the result of natural variation in groundwater quality within the area of the landfill.

## **2.0 GROUNDWATER MONITORING WELL SYSTEM**

Nine Type II groundwater monitoring wells (designated MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73) were installed and developed at Wateree Station Class Three Landfill in March 2016, June 2017, November 2017 and November 2018 to serve as EPA CCR Rule compliance monitoring wells. Monitoring well MW-LF-10A was installed in late November 2018 because of inadvertent damage to the well pad of monitoring well MW-LF-10 from heavy equipment operating at the landfill and concerns of potential damage to the well integrity. Monitoring well MW-LF-10A is located approximately 100 feet east of MW-LF-10 and will be used to supplement groundwater quality data from EPA CCR Rule compliance monitoring well MW-10-LF for all future compliance monitoring. The well pad of monitoring well MW-LF-10 was replaced in December 2018 and an inspection of the well did not reveal any indications of damage to the integrity of the well. A site location map is presented as **Figure 1** and a site map showing the locations and designations of the EPA CCR Rule compliance monitoring wells at Wateree Station is presented as **Figure 2**.

The Type II groundwater monitoring wells were installed to monitor groundwater quality in the vicinity of the Class Three landfill in compliance with the groundwater monitoring requirements of the US EPA CCR Rule (40 CFR Part 257.93). In addition, existing monitoring wells MW-LF-01, MW-LF-06, and MW-LF-22, which are also used for NPDES and South Carolina Department of Health and Environmental Control (SCDHEC) landfill groundwater monitoring compliance, are included as part of the monitoring well network for US EPA CCR Rule compliance groundwater monitoring. Monitoring wells AS-LF-01, AS-LF-02, AS-LF-03, MW-BG-73, MW-LF-01 and MW-LF-06 serve as up-gradient wells to monitor the quality of background groundwater in the surficial aquifer entering the area of the Class Three landfill. The remaining monitoring wells (MW-LF-07, MW-LF-08, MW-LF-10/MW-LF-10A, MW-LF-11, and MW-LF-22) serve as down gradient wells to monitor the quality of groundwater down gradient of the Class Three landfill. Monitoring well construction data and specifications are presented in **Table 1**.



### **3.0 GROUNDWATER MONITORING**

#### **3.1 Groundwater Sampling**

In accordance with 40 CFR Part 257.94, the sixth round of Detection Monitoring was conducted on March 10 and 11, 2020 and included groundwater sampling from monitoring wells MW-LF-01, MW-LF-06, MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, MW-LF-22, AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73. One groundwater sample was collected from each of the monitoring wells during the Detection Monitoring event. All groundwater samples collected from the monitoring wells for Detection Monitoring in March 2020 were analyzed by a South Carolina Certified laboratory (DESC Central Laboratory (Certification Number 32006)) for the constituents listed in Appendix III of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107), as well as lithium, total alkalinity, iron, magnesium, potassium and sodium. Samples of landfill leachate were also collected from leachate Outfalls 1 and 2 on March 9, 2020 and analyzed for all of the constituents listed in Appendix III and Appendix IV of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107), except Radium 226/228, as well as for total alkalinity, iron, magnesium, potassium and sodium.

Based on the results of the March 2020 Detection Monitoring, groundwater was resampled for field and laboratory analysis from monitoring wells MW-LF-07, MW-LF-10, MW-LF-10A, MW-LF-22, AS-LF-01, AS-LF-02 and MW-BG-73 in May 2020 to supplement the site water quality database for statistical analysis. All groundwater samples collected from the monitoring wells during the May 2020 resampling event were analyzed for calcium, chloride, magnesium, potassium, sodium, sulfate and total dissolved solids by a South Carolina Certified laboratory (DESC Central Laboratory).

#### **3.2 Results of Field and Laboratory Analyses of Groundwater Samples**

The results of the field and laboratory analyses of the groundwater samples collected from the monitoring wells during the eight independent rounds of monitoring and Detection Monitoring events conducted in September 2017, March and September 2018, March and August 2019, and March 2020, as well as multiple additional ASD monitoring events that included sampling of groundwater from the EPA CCR Rule and ASD monitoring wells, landfill leachate and landfill runoff water, are presented in **Table 2**. Copies of the laboratory reports for groundwater samples collected during the March 2020 Detection Monitoring event, as well as confirmatory monitoring conducted in May 2020 are presented in **Appendix A**.



It is worthy of note that boron was either not detected or only infrequently detected in trace concentrations in the groundwater samples collected from the down gradient EPA CCR Rule compliance monitoring wells during the September 2017, March and September 2018, and March 2019 Detection Monitoring events. Moreover, boron was not detected in the groundwater samples collected from any of the EPA CCR Rule compliance monitoring wells during the March 2020 Detection Monitoring event. Further, boron has been detected in trace concentrations at up gradient, background monitoring wells MW-LF-01, AS-LF-02 and AS-LF-03 during previous Detection Monitoring events. Conversely, boron was detected at elevated concentrations, substantially in excess of any of the concentrations ever detected in groundwater at the compliance monitoring wells, in the landfill leachate samples collected during the period of June through November 2017, and September 2018 through March 2020, and the landfill runoff water samples collected during the period of December 2018 to March 2019.

Statistical analysis to compare the groundwater quality in the downgradient monitoring wells to that of background water quality for the March 2020 Detection Monitoring event was completed on July 15, 2020. The results of the statistical analysis are presented in **Appendix B**. The results of the statistical analysis indicate that the concentration of chloride in the groundwater samples collected from compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22 showed statistically significant increases over background concentrations (as determined from the data for groundwater samples collected from background monitoring wells MW-LF-01, MW-LF-06, AS-LF-01, AS-LF-02, AS-LF-03 and MW-BG-73). In addition, the results of the statistical analysis indicate that the concentration of sulfate at CCR Rule compliance monitoring wells MW-LF-10 and MW-LF-10A showed statistically significant increases over background concentrations. No other statistically significant increases over background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from the EPA CCR Rule compliance monitoring wells during the March 2020 Detection Monitoring event.

An isoconcentration contour map of chloride in groundwater based on groundwater quality data from the March 2020 Detection Monitoring event conducted at the site is presented as **Figure 3**. The chloride isoconcentration contour map in **Figure 3** shows the highest concentrations of chloride in groundwater at the locations of EPA CCR Rule



down gradient compliance monitoring wells MW-LF-07 (10.2 mg/L), MW-LF-10 (14.9 mg/L), MW-LF-10A (10.4 mg/L) and MW-LF-22 (10.8 mg/L), which are located immediately southeast of the Class 3 landfill. It is noted that the concentrations of chloride in groundwater across the area of the Class 3 landfill based on the March 2020 Detection Monitoring data ranged from 2.39 mg/L (MW-BG-73) to 14.9 mg/L (MW-LF-10), and averaged 7.56 mg/L. The chloride concentrations in groundwater at the background monitoring wells ranged from 2.39 mg/L (MW-BG-73) to 9.14 mg/L (AS-LF-01), and averaged 5.48 mg/L. The site data indicate that the concentrations of chloride detected in groundwater at monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22 are not substantially above the upper limit of the background concentration range.

It is noted that monitoring wells MW-LF-07 and MW-LF-22 are located immediately adjacent to and hydraulically down gradient from Phase 2 of the Class 3 landfill. The landfill cells and perimeter fabric-formed concrete lined ditches of Phase 2 of the Class 3 landfill include a liner system comprised of 2 feet of  $10^{-7}$  cm/sec clay overlain by a 60-mil HDPE liner that was electronically leak tested after placement of the protective cover with results indicating the liner was free of holes. No physical evidence of leakage (e.g., seeps around the perimeter berm) has been observed at the landfill since its construction. Moreover, no coal ash was disposed in Phase 2 of the landfill up gradient of MW-LF-07 and MW-LF-22 prior to the first detection of apparently elevated concentrations of EPA CCR Rule Appendix III constituents (chloride and TDS) in groundwater at MW-LF-07 and MW-LF-22. These observations, along with the predominant east-southeast direction of groundwater flow beneath the landfill (see **Section 3.3**), as well as the lack of boron in groundwater at MW-LF-07, MW-LF-10A and MW-LF-22, while boron has been shown to be present in high concentrations in the landfill leachate and landfill runoff water, support the conclusion that the SSI for chloride detected in groundwater was not caused by a release of leachate from the landfill.

Graphs of chloride concentrations versus time for groundwater samples collected from CCR compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22 since May 2016 are presented in **Appendix C**. The graphs indicate that the concentrations of chloride in groundwater at MW-LF-07 and MW-LF-22 remained essentially stable over the period of monitoring, whereas the concentrations of chloride in groundwater at MW-LF-10A have shown highly fluctuating values ranging from 3.83 to 10.4 mg/L since the inception of monitoring at that location in December 2018.



Graphs of sulfate versus time for groundwater samples collected from CCR compliance monitoring wells MW-LF-10 and MW-LF-10A since the inception of monitoring at each well are presented in **Appendix C**. The graph of sulfate versus time for groundwater at monitoring well MW-LF-10 shows a pattern of relatively stable concentrations until March 2018, significant increasing trends between March 2018 and December 2018, followed mostly by more typically observed values between February 2019 and May 2020. The observed pattern is consistent with a scenario of a volume of water containing higher than usual concentrations of sulfate moving through the area of MW-LF-10 during the period of March through December 2018 followed by a return to more typical concentrations after passage of the high-sulfate water. Concentrations of sulfate in groundwater at GW-LF-10A, while showing a generally increasing trend since September 2019, fall within the range typically observed for sulfate in groundwater at adjacent monitoring well MW-LF-10.

Inasmuch as boron has not been detected in groundwater at down-gradient monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22 and has only been infrequently detected in trace concentrations in groundwater at down gradient monitoring wells MW-LF-10 (two occasions) and MW-LF-08 and MW-LF-11 (one occasion each) since the inception of monitoring in May 2016, these observations further support the conclusion that the trends in chloride concentrations at MW-LF-07, MW-LF-10A and MW-LF-22 do not indicate a release of leachate or runoff water to groundwater from the adjacent Class 3 landfill.

### **3.3 Groundwater Flow**

Groundwater flow direction, average hydraulic gradient, and average interstitial flow velocity at the Wateree Generating Station Class Three Landfill were derived from water-level measurements recorded in March 2020 (**Table 2**) and the results of slug tests conducted at the CCR Rule compliance monitoring wells in May 2016 and January 2017. A water-table elevation contour map derived from the groundwater elevation measurements recorded in March 2020 is presented as **Figure 4**. The water-table elevation contours in **Figure 4** indicate that the direction of shallow groundwater flow is generally to the east-southeast towards the Wateree River with an average hydraulic gradient of approximately 0.008 ft./ft. in the area of the Class Three Landfill. It is noted that the hydraulic gradient is higher northwest of the landfill and becomes lower with distance to the southeast across the landfill. The direction of groundwater flow depicted



by the groundwater elevation contours is consistent with numerous delineations of groundwater flow direction previously made at the site.

The hydraulic gradient in the vicinity of each well was derived by dividing the elevation difference between water table elevations measured at the monitoring wells and proximal water-table elevation contour lines by the perpendicular horizontal distance between the wells and contours depicted in **Figure 4**. Results of in-situ slug testing conducted in May 2016 and January 2017 indicate hydraulic conductivity values in the surficial aquifer in the vicinity of the Class Three Landfill compliance monitoring wells ranging from  $2.47 \times 10^{-4}$  cm/s to  $2.33 \times 10^{-2}$  cm/s (approximately 7.00 ft./day to 65.9 ft./day). Using the horizontal hydraulic gradient measurements, the individual estimates of hydraulic conductivity, and estimated effective porosity values ranging from 0.18 to 0.25, the range of average interstitial groundwater flow velocities for the shallow surficial aquifer was calculated using the following formula:

$$v_x = (K/n_e) \cdot \frac{dh}{dl}$$

Where:

$v_x$  = average interstitial groundwater flow velocity

K = hydraulic conductivity

$n_e$  = effective porosity

$dh/dl$  = horizontal hydraulic gradient

Average groundwater flow velocities calculated for March 2020 are estimated to range between approximately 0.02 to 2.32 feet/day, with a geometric mean velocity of 0.45 ft./day in the vicinity of the Class Three Landfill. These results are consistent with previous delineations of groundwater flow rate at the site.

## **4.0 EVIDENCE OF AN ALTERNATE SOURCE FOR OBSERVED SSIs**

### **4.1 Key Indicators**

The Electric Power Research Institute (EPRI) defines key indicators for the presence of CCR leachate in groundwater at compliance monitoring wells as:

- constituents that typically have high concentrations in leachate, relative to background, such that they are expected to have elevated concentrations in groundwater in the event of a release; and
- are not reactive, and have high mobility in groundwater such that they are expected to be at the leading edge of the plume, meaning that they will have elevated concentrations relative to background across the entire area of the plume.<sup>1</sup>

Both boron and sulfate are key indicators of the presence of coal ash leachate in groundwater, and sulfate is a key indicator of FGD waste leachate in groundwater.<sup>1</sup> Other non-reactive, highly mobile substances can also be primary indicators of coal ash (e.g., molybdenum from fly ash derived from bituminous coal) or FGD waste leachate (e.g., boron and chloride derived from unwashed FGD waste) under certain circumstances.<sup>1</sup>

Collection and laboratory analysis of landfill leachate provides useful data for an ASD evaluation with respect to identifying the leachate chemical fingerprint and whether key indicator constituents are present in the leachate at concentrations that are higher than those in background groundwater and can, therefore, potentially cause SSIs at down gradient monitoring wells if released to groundwater.<sup>1</sup> Leachate was collected for laboratory analysis of various EPA CCR Rule Appendix III and Appendix IV parameters on multiple occasions between June 2017 and March 2020. The samples were collected directly from Landfill Leachate Outfalls 1 and 2 into laboratory containers. Leachate Outfall 1 discharges leachate collected from Phase 1 of the Class 3 landfill and Leachate Outfall 2 discharges leachate collected from Phase 2 of the Class 3 landfill.

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<sup>1</sup> Electric Power Research Institute, 2017. *Guidelines for Development of Alternate Source Demonstrations at Coal Combustion Residual Sites*; EPRI, Palo Alto, CA: 3002010920; 132 pp.





The results of analysis of the leachate samples are presented in **Table 2**. The results indicate that the leachate contained concentrations of chloride (the constituent triggering the SSI in groundwater at compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22), as well as sulfate (constituent triggering SSIs in groundwater at compliance monitoring wells MW-LF-10 and MW-LF-10A), that are significantly in excess of the concentrations of these constituents measured in groundwater at the background monitoring wells (MW-LF-01, MW-LF-06, MW-BG-73, AS-LF-01, AS-LF-02 and AS-LF-03) during the eight independent rounds of monitoring, the Detection Monitoring events conducted in September 2017, March and September 2018, March and August 2019, and March 2020, as well as the multiple supplemental monitoring events conducted during the period of November 2018 through May 2020 (**Table 2**). Therefore, a release of leachate to groundwater from the landfill could potentially cause an SSI for sulfate and chloride. It is noted, that the concentrations of chloride and sulfate detected in the landfill leachate are generally 2 to 3 orders-of-magnitude higher than the concentrations detected in groundwater at the EPA CCR Rule and ASD monitoring wells.

Consequently, a release of landfill leachate to groundwater would be expected to be manifested as much higher concentrations of chloride and sulfate than were observed in groundwater at the down gradient compliance monitoring wells. Moreover, sulfate has not been detected in groundwater samples collected from EPA CCR Rule down-gradient compliance monitoring wells MW-LF-07, MW-LF-11 and MW-LF-22 since the inception of monitoring in May 2016. Inasmuch as EPA CCR Rule compliance monitoring wells MW-LF-07, MW-LF-10, MW-LF-10A and MW-LF-22 are located immediately adjacent to and hydraulically down gradient of the Class 3 landfill, these observations support the conclusion that the SSIs for chloride and sulfate in groundwater at monitoring wells MW-LF-07, MW-LF-10, MW-LF-10A and MW-LF-22 were not caused by a release of leachate from the landfill.

It is notable, that the landfill leachate water samples collected to date for laboratory analysis contained significantly elevated concentrations of boron (1,160 to 17,364 µg/L) and sulfate (461 to 1,565 µg/L). However, boron was either not detected or only detected in trace concentrations in the groundwater samples collected from the down gradient EPA CCR Rule compliance monitoring wells during the September 2017, March and September 2018, March and August 2019, and March 2020 Detection Monitoring events and the supplemental groundwater monitoring conducted during the period of November 2018 to May 2020. In addition, boron has been detected in trace concentrations at up gradient, background monitoring wells MW-LF-01, AS-LF-02 and

AS-LF-03. It is further noted that sulfate was not detected during any of the rounds of groundwater monitoring conducted to date at EPA CCR Rule down gradient monitoring wells MW-LF-07, MW-LF-11 and MW-LF-22 and only one time during the rounds of groundwater monitoring conducted to date at EPA CCR Rule down gradient monitoring well MW-LF-08. Inasmuch as boron and sulfate are essentially unreactive and highly mobile in natural groundwater, the general absence of boron and sulfate (key indicators of coal ash leachate and unwashed FGD waste) in groundwater at monitoring locations hydraulically down gradient of the Class 3 Landfill is strong evidence that the SSIs for chloride in groundwater at MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate at MW-LF-10 and MW-LF-10A, are attributable to a source other than a release of leachate from the Class 3 landfill.

## **4.2 Major Ion Analysis**

Major ion chemistry, including both cations (calcium, magnesium, sodium and potassium) and anions (total alkalinity, chloride and sulfate), can be used to fingerprint source waters and to identify mixing of source waters and other sources such as leachate. As such, major ion chemistry can be used to determine if down gradient groundwater geochemistry reflects mixing of background groundwater and leachate from a CCR unit. Piper diagrams are a useful graphical representation of major ion chemistry to differentiate the geochemical signatures of leachate or other potential sources of contamination from background groundwater and to identify mixing of those contaminant sources and background groundwater. Mixing of leachate and background groundwater may be evident in a Piper diagram when down gradient groundwater quality plots at a point between leachate and background groundwater quality.<sup>1</sup> Conversely, little or no mixing is evident if down gradient groundwater quality plots with background groundwater quality or at points that are not between leachate and background groundwater quality.<sup>1</sup>

**Table 3** presents the results of major ion analyses of groundwater samples collected from background and down gradient EPA CCR Rule monitoring wells and ASD monitoring wells in October and November 2017, March and September 2018, March and August 2019, and March 2020, as well as landfill leachate for samples collected from Outfalls 1 and 2 in October and November 2017, September 2018, March and August 2019, and March 2020, and landfill runoff water collected in March 2019. A charge balance analysis of the groundwater and leachate samples is presented in **Table 4**. In general, if the charge balance falls outside a range of  $\pm 10\%$ , it may indicate that



significant ionic constituents are missing from the charge balance calculations or that there may be errors in the reported analytical results. The analysis in **Table 4** shows that the charge balance error for many of the groundwater samples fall outside the preferred range of error. This observation indicates that the calculated results are either missing a significant ionic species (e.g.,  $\text{NO}_3^-$ ) or that the reported laboratory results for the ion analyses are in error. Inasmuch as the charge balance errors for many of the groundwater samples (including background samples) fall within a narrow range of values above the upper limit of the preferred range, it is likely that an ionic species is missing from the calculations. Further, since most of the charge balance errors outside the preferred range of error are positive, the missing species is likely an anion (e.g.,  $\text{NO}_3^-$ ). Since Piper diagrams use only the ionic constituents included in **Tables 3** and **4**, and the charge balance errors are consistent in magnitude and sign for most of the groundwater samples, likely indicating a missing anionic species, the data in **Table 3** are considered suitable for constructing relevant Piper diagrams to evaluate and compare the aqueous chemistry of the groundwater and landfill leachate. It is noted that the leachate samples fall within the preferred range of error.

Piper diagrams constructed using the data in **Table 3** are presented in **Figures 5, 6, 7, 8, 9, 10** and **11**. The diagrams were constructed using total alkalinity in place of combined carbonate and bicarbonate ion concentrations. In most natural waters, all anion bases except carbonate and bicarbonate are present in very low and negligible concentrations. Therefore, total alkalinity is commonly used as an acceptable substitute for the results of individual analyses of carbonate and bicarbonate concentrations.

The Piper diagrams for October and November 2017 are very similar and show that the data for EPA CCR Rule down gradient monitoring wells MW-LF-07, MW-LF-10 and MW-LF-22 cluster with the data from EPA CCR Rule and ASD background monitoring wells in the anion and cation ternary plots and differ markedly from the data for the landfill leachate. In the composite diamond plots, the data for monitoring well MW-LF-10 cluster with the data from EPA CCR Rule and ASD background monitoring wells, whereas the data for MW-LF-07 and MW-LF-22 broadly cluster with the data from the EPA CCR Rule and ASD background monitoring wells, but plot between the main cluster of groundwater data and the landfill leachate data. The diagrams additionally show that the landfill leachate has a distinct geochemical signature in all three plots that make up the diagrams that is significantly different from the groundwater at the EPA CCR Rule and ASD monitoring wells.



The Piper diagram for March 2018 (**Figure 7**) shows that the data for EPA CCR Rule down gradient monitoring wells MW-LF-07 and MW-LF-22 cluster with the data from EPA CCR Rule and ASD background monitoring wells in the anion and cation ternary plots and differ markedly from the data for the landfill leachate as depicted in the October and November 2017 Piper diagrams (**Figures 5 and 6**). Likewise, the March 2018 Piper diagram shows that the data for EPA CCR Rule down gradient monitoring well MW-LF-10 clusters with the data from EPA CCR Rule and ASD background monitoring wells in the cation ternary plot and differs markedly from the data for the landfill leachate as depicted in the October and November 2017 Piper diagrams. However, in the anion ternary plot of the March 2018 Piper diagram, the data for MW-LF-10 plot in the same general area as the data for landfill leachate from Outfall 1 in the anion ternary plots of the October and November 2017 Piper diagrams. In the composite diamond plot of the March 2018 Piper diagram, the data for MW-LF-07 and MW-LF-10 more broadly cluster with the data from the EPA CCR Rule and ASD background monitoring wells, but plot between the main cluster of groundwater data and the landfill leachate data as depicted in the October and November 2017 Piper diagrams. The data for MW-LF-22 plot with the data from EPA CCR Rule and ASD background monitoring wells in the March 2018 composite diamond plot. The diagrams additionally show that the landfill leachate has a distinct geochemical signature in all three plots that make up the October and November 2017 Piper diagrams that is significantly different from the groundwater at the EPA CCR Rule and ASD background monitoring wells.

The Piper diagram for September 2018 shows that the data for EPA CCR Rule down gradient monitoring well MW-LF-07 clusters with the data from EPA CCR Rule and ASD background monitoring wells in the anion and cation ternary plots and differ markedly from the data for the landfill leachate. In the composite diamond plot of the September 2018 Piper diagram, the data for MW-LF-07 more broadly clusters with the data from the EPA CCR Rule and ASD background monitoring wells, but plots between the main cluster of groundwater data and the landfill leachate data. The data for EPA CCR Rule down gradient monitoring well MW-LF-10 clusters with the landfill leachate data from both Outfalls 1 and 2 in the anion and cation ternary plots, as well as the composite diamond plot of the September 2018 Piper diagram. The data for EPA CCR Rule down gradient monitoring well MW-LF-22 clusters with the data from EPA CCR Rule and ASD background monitoring wells in the anion and cation ternary plots, as well as the



composite diamond plot, of the September 2018 Piper diagram and differ markedly from the data for the landfill leachate.

The Piper diagram for March 2019 shows that the data for EPA CCR Rule down gradient monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22 generally clusters with the data from EPA CCR Rule and ASD background monitoring wells in the anion and cation ternary plots, as well as the composite diamond plot, and differs markedly from the data for the landfill leachate. The data for EPA CCR Rule down gradient monitoring well MW-LF-10 plots between the main cluster of groundwater data and the data for the landfill leachate and landfill runoff water.

The Piper diagram for August 2019 shows that the data for EPA CCR Rule down gradient monitoring wells MW-LF-07, MW-LF-10, MW-LF-10A and MW-LF-22 clusters with the data from EPA CCR Rule and ASD background monitoring wells in the anion and cation ternary plots, as well as the composite diamond plot, and differs markedly from the data for the landfill leachate.

The Piper diagram for March 2020 shows that the data for EPA CCR Rule down gradient monitoring wells MW-LF-07 and MW-LF-22 clusters with the data from EPA CCR Rule and ASD background monitoring wells in the anion and cation ternary plots, as well as the composite diamond plot, and differ markedly from the data for the landfill leachate. The data for EPA CCR Rule down gradient monitoring well MW-LF-10A clusters with the data from EPA CCR Rule and ASD background monitoring wells in the anion ternary and composite diamond plots, and differs markedly from the data for the landfill leachate. In the anion plot of the March 2020 Piper diagram, the data for MW-LF-10A plots between the main cluster of groundwater data and the landfill leachate data. The data for EPA CCR Rule down gradient monitoring well MW-LF-10 clusters with the landfill leachate data from both Outfalls 1 and 2 in the anion and cation ternary plots, as well as the composite diamond plot of the March 2020 Piper diagram.

The results of the major ion analysis, particularly the anion and cation plots of the Piper diagrams, indicate the overall chemistry of groundwater at down gradient compliance monitoring wells MW-LF-07 and MW-LF-22 is similar to that at the up-gradient EPA CCR Rule and ASD monitoring wells and that landfill leachate is not affecting the chemistry of the groundwater at those wells. In addition, the major ion analysis results provide supporting evidence to the results of analysis of key indicators that leachate



from the Class 3 landfill is not responsible for the SSIs observed for chloride in groundwater at MW-LF-07 and MW-LF-22. Inasmuch as the geochemical signatures of the groundwater from MW-LF-07 and MW-LF-22 are similar to those of groundwater from the background monitoring wells and distinct from that of the landfill leachate and runoff water, the results of the major ion analysis with respect to groundwater at MW-LF-07 and MW-LF-22 further support the conclusion that the SSIs for chloride are not the result of a release of leachate from the Class 3 landfill to groundwater.

Whereas the Piper diagrams for October and November 2017 indicate the overall chemistry of the groundwater at MW-LF-10 is similar to that at the up-gradient EPA CCR Rule and ASD monitoring wells and distinctly dissimilar to the landfill leachate, the Piper diagrams for March and September 2018, March 2019 and March 2020 show that the data for groundwater at MW-LF-10 either plots in the same general area as the data for landfill leachate and runoff water (March and September 2018 and March 2020 Piper diagrams) or the data for MW-LF-10 plots between the data for background groundwater and the data for landfill leachate and runoff water (March 2019 Piper diagram). It is noted, however, that the temporal changes in groundwater quality as depicted in the Piper diagrams from October 2017 to March 2019 are consistent with the temporal trends of concentrations of chloride, sulfate and TDS in groundwater at MW-LF-10, which show relatively stable concentrations until March 2018, significant increasing trends between March 2018 and December 2018, followed by a return to more typically observed values between February 2019 and May 2020. As noted in **Section 3.2**, the observed temporal patterns for these constituents are consistent with a scenario of a volume of water containing a higher than usual concentration of sulfate moving through the area of MW-LF-10 during the period of March through December 2018 followed by a return to more typical concentrations after passage of the high-sulfate water. Further, concentrations of sulfate in groundwater at GW-LF-10A, while showing a generally increasing trend since September 2019, fall within the range typically observed for sulfate in groundwater at adjacent monitoring well MW-LF-10. In addition, the patterns of variation of concentrations of chloride, sulfate and TDS in groundwater at MW-LF-10A are very similar to those observed in groundwater at MW-LF-10 since the inception of monitoring at MW-LF-10A indicating that groundwater quality at MW-LF-10A is similar to that at MW-LF-10. Based on these observations, the results of the major ion analysis with respect to groundwater at MW-LF-10 and MW-LF-10A further support the conclusion that the SSIs for chloride at MW-LF-10A and sulfate

at MW-LF-10 and MW-LF-10A are not the result of a release of leachate from the Class 3 landfill to groundwater.

### **4.3 Ion Ratios**

Ion ratios are useful for identifying separate source waters or for determining if a separate source water (e.g., leachate) is being added to groundwater along a flow path.<sup>1</sup> Data analyses of ion ratios are based on the premise that two constituents in groundwater with similar mobility will remain in the same relative concentrations during transport unless water from another source that has a significantly different ratio of the same constituents is mixed with the groundwater.<sup>1</sup> Consequently, the release of leachate to groundwater should result in relative concentrations (i.e., ion ratios) in groundwater at down gradient monitoring wells that are similar to those in leachate even as the total concentrations of the constituents are diluted due to mixing with background groundwater during transport. Conversely, if ion ratios observed at the down gradient monitoring wells are similar to those observed at the background wells, this constitutes evidence that no other source water has been introduced to groundwater along the flow path. Highly mobile, non-reactive constituents such as boron, chloride, lithium, molybdenum and sulfate are the best candidates for use in ion ratio analyses.

**Table 5** presents concentration ratios of lithium/chloride for landfill leachate collected from Outfalls 1 and 2, landfill runoff water collected from the drainage ditch located along the perimeter of the Class 3 landfill in the area where the runoff is conveyed to the leachate pond via underground piping, as well as groundwater collected from the up-gradient EPA CCR Rule and ASD monitoring wells and down gradient EPA CCR Rule monitoring wells. The table presents date-specific and average ion ratio values.

The average lithium/chloride ratios for the groundwater samples collected from the up-gradient EPA CCR Rule monitoring wells (MW-LF-01, MW-LF-06 and MW-BG-73) range from 0.13 (MW-LF-01) to 0.71 (MW-BG-73). The average lithium/chloride ratios for the groundwater samples collected from the up gradient ASD monitoring wells range from 0.26 (AS-LF-01) to 12.81 (AS-LF-02). The average ratio for AS-LF-02 is a significant outlier compared to the ratios at AS-LF-01 (0.26) and AS-LF-03 (0.55), indicating geochemical influence from source water not influencing groundwater at the other two well locations. Consequently, the average ratio for AS-LF-02 is considered atypical for background groundwater in the area of the Class 3 landfill.



The average lithium/chloride ratios for groundwater at all of the EPA CCR Rule down gradient monitoring wells, except MW-LF-08, fall within the range observed for the up-gradient EPA CCR Rule and ASD monitoring wells (0.13 to 0.71), excluding the ratio observed for groundwater at AS-LF-02 (see discussion above). The average lithium/chloride ratio for MW-LF-08 (1.76) is significantly higher than the average ratios for the up-gradient monitoring wells, the leachate samples from Outfalls 1 and 2, and the landfill runoff water samples. The relatively elevated average ratio at MW-LF-08 is likely a manifestation of geochemical influence from the source water affecting the average ratio at up gradient ASD monitoring well AS-LF-02. Although the average lithium/chloride ratios observed at the remaining down gradient EPA CCR Rule monitoring wells also fall within the average ratios observed for the landfill leachate, the fact that they also fall within the range of the average ratios for the up gradient, background monitoring wells is consistent with the conclusion that landfill leachate has not affected the chemistry of the groundwater at those locations. These observations are also consistent with and supportive of the conclusions of the key indicators analysis presented in **Section 4.1**. Therefore, the results of the lithium/chloride ion ratio analysis provide supporting evidence that leachate from the Class 3 landfill is not responsible for the SSIs observed for chloride in groundwater at down gradient EPA CCR Rule compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate at down gradient EPA CCR Rule compliance monitoring wells MW-LF-10 and MW-LF-10A.



## 5.0 CONCLUSIONS

Several conclusions can be drawn from the ASD evaluation presented in the previous sections.

1. Monitoring wells MW-LF-07 and MW-LF-22 are located immediately adjacent to and hydraulically down gradient from Phase 2 of the Class 3 landfill. The landfill cells and perimeter fabric-formed concrete lined ditches of Phase 2 of the Class 3 landfill include a liner system comprised of 2 feet of  $10^{-7}$  cm/sec clay overlain by a 60-mil HDPE liner that was electronically leak tested after placement of the protective cover with results indicating the liner was free of holes. No physical evidence of leakage (e.g., seeps around the perimeter berm) has been observed at the landfill since its construction. Moreover, no coal ash was disposed in Phase 2 of the landfill up gradient of MW-LF-07 and MW-LF-22 prior to the first detection of apparently elevated concentrations of EPA CCR Rule Appendix III constituents (chloride and TDS) in groundwater at MW-LF-07 and MW-LF-22. These observations, along with the predominant east-southeast direction of groundwater flow beneath the landfill, as well as the lack of boron in groundwater at MW-LF-07, MW-LF-10A and MW-LF-22, while boron has been shown to be present in high concentrations in the landfill leachate and landfill runoff water, support the conclusion that the SSIs for chloride detected in groundwater were not caused by a release of leachate from the landfill.
2. Graphs of chloride concentrations versus time for groundwater samples collected from CCR compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22 since May 2016 indicate that the concentrations of chloride in groundwater at MW-LF-07 and MW-LF-22 remained essentially stable over the period of monitoring, whereas the concentrations of chloride in groundwater at MW-LF-10A have shown highly fluctuating values ranging from 3.83 to 10.4 mg/L since the inception of monitoring at that location in December 2018, but the values detected are similar to those detected in groundwater at MW-LF-07 and MW-LF-22.
3. The graph of sulfate versus time for groundwater at monitoring well MW-LF-10 shows a pattern of relatively stable concentrations until March 2018, significant increasing trends between March 2018 and December 2018, followed mostly by more typically observed values between February 2019 and May 2020. The observed pattern is consistent with a scenario of a volume of water containing higher than usual concentrations of sulfate moving through the area of MW-LF-

10 during the period of March through December 2018 followed by a return to more typical concentrations after passage of the high-sulfate water.

Concentrations of sulfate in groundwater at GW-LF-10A, while showing a generally increasing trend since September 2019, fall within the range typically observed for sulfate in groundwater at adjacent monitoring well MW-LF-10.

4. Inasmuch as boron has not been detected in groundwater at down-gradient monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22 and has only been infrequently detected in trace concentrations in groundwater at down gradient monitoring wells MW-LF-10 (two occasions) and MW-LF-08 and MW-LF-11 (one occasion each) since the inception of monitoring in May 2016, these observations further support the conclusion that the trends in chloride concentrations at MW-LF-07, MW-LF-10A and MW-LF-22 do not indicate a release of leachate or runoff water to groundwater from the adjacent Class 3 landfill.
5. The results of the key indicator analysis indicate that the landfill leachate samples collected to date for laboratory analysis contained significantly elevated concentrations of boron (1,160 to 17,364 µg/L) and sulfate (461 to 1,565 µg/L). However, boron was either not detected or only detected in trace concentrations in the groundwater samples collected from the down gradient EPA CCR Rule compliance monitoring wells during the September 2017, March and September 2018, March and August 2019, and March 2020 Detection Monitoring events and the supplemental groundwater monitoring conducted during the period of November 2018 to May 2020. In addition, boron has been detected in trace concentrations at up gradient, background monitoring wells MW-LF-01, AS-LF-02 and AS-LF-03. It is further noted that sulfate was not detected during any of the rounds of groundwater monitoring conducted to date at EPA CCR Rule down gradient monitoring wells MW-LF-07, MW-LF-11 and MW-LF-22 and only one time during the rounds of groundwater monitoring conducted to date at EPA CCR Rule down gradient monitoring well MW-LF-08. Inasmuch as boron and sulfate are essentially unreactive and highly mobile in natural groundwater, the general absence of boron and sulfate (key indicators of coal ash leachate and unwashed FGD waste) in groundwater at monitoring locations hydraulically down gradient of the Class 3 Landfill is strong evidence that the SSIs for chloride in groundwater at MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate at MW-LF-10 and MW-LF-10A, are attributable to a source other than a release of leachate from the Class 3 landfill.



6. The results of the key indicators analysis also provide further strong evidence that the SSI for chloride based on the March 2020 Detection Monitoring data are attributable to a source other than a release of leachate from the Class 3 landfill. In particular, the concentrations of chloride and sulfate detected in the landfill leachate are generally 2 to 3 orders-of-magnitude higher than the concentrations detected in groundwater at the EPA CCR Rule and ASD monitoring wells. Consequently, a release of landfill leachate to groundwater would be expected to be manifested as much higher concentrations of chloride and sulfate than were observed in groundwater at the down gradient compliance monitoring wells. Moreover, sulfate has not been detected in groundwater samples collected from EPA CCR Rule down-gradient compliance monitoring wells MW-LF-07, MW-LF-11 and MW-LF-22 since the inception of monitoring in May 2016. Inasmuch as EPA CCR Rule compliance monitoring wells MW-LF-07, MW-LF-10, MW-LF-10A and MW-LF-22 are located immediately adjacent to and hydraulically down gradient of the Class 3 landfill, these observations support the conclusion that the SSIs for chloride and sulfate in groundwater at monitoring wells MW-LF-07, MW-LF-10, MW-LF-10A and MW-LF-22 were not caused by a release of leachate from the landfill.
7. The results of the ion ratio analysis provide supporting evidence that leachate from the Class 3 landfill is not responsible for the SSIs observed for chloride in groundwater at down gradient EPA CCR Rule compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate at down gradient EPA CCR Rule compliance monitoring wells MW-LF-10 and MW-LF-10A. Although the average lithium/chloride ratios observed at the remaining down gradient EPA CCR Rule monitoring wells also fall within the average ratios observed for the landfill leachate, the fact that they also fall within the range of the average ratios for the up gradient, background monitoring wells is consistent with the conclusion that landfill leachate has not affected the chemistry of the groundwater at those locations. These observations are also consistent with and supportive of the conclusions of the key indicators analysis. Therefore, the results of the lithium/chloride ion ratio analysis provide supporting evidence that leachate from the Class 3 landfill is not responsible for the SSIs observed for chloride in groundwater at down gradient EPA CCR Rule compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate at down gradient EPA CCR Rule compliance monitoring wells MW-LF-10 and MW-LF-10A.

8. The results of the major ion analysis, particularly the anion and cation plots of the Piper diagrams, indicate the overall chemistry of groundwater at down gradient compliance monitoring wells MW-LF-07 and MW-LF-22 is similar to that at the up-gradient EPA CCR Rule and ASD monitoring wells and that landfill leachate is not affecting the chemistry of the groundwater at those wells. In addition, the major ion analysis results provide supporting evidence to the results of analysis of key indicators that leachate from the Class 3 landfill is not responsible for the SSIs observed for chloride in groundwater at MW-LF-07 and MW-LF-22. Inasmuch as the geochemical signatures of the groundwater from MW-LF-07 and MW-LF-22 are similar to those of groundwater from the background monitoring wells and distinct from that of the landfill leachate and runoff water, the results of the major ion analysis with respect to groundwater at MW-LF-07 and MW-LF-22 further support the conclusion that the SSIs for chloride are not the result of a release of leachate from the Class 3 landfill to groundwater.
9. The temporal changes in groundwater quality as depicted in the Piper diagrams from October 2017 to March 2019 for MW-LF-10 are consistent with the temporal trends of concentrations of chloride, sulfate and TDS in groundwater at MW-LF-10 since the inception of monitoring, which show relatively stable concentrations until March 2018, significant increasing trends between March 2018 and December 2018, followed by a return to more typically observed values between February 2019 and May 2020. The observed temporal patterns for these constituents are consistent with a scenario of a volume of water containing a higher than usual concentration of sulfate moving through the area of MW-LF-10 during the period of March through December 2018 followed by a return to more typical concentrations after passage of the high-sulfate water. Further, concentrations of sulfate in groundwater at GW-LF-10A, while showing a generally increasing trend since September 2019, fall within the range typically observed for sulfate in groundwater at adjacent monitoring well MW-LF-10. In addition, the patterns of variation of concentrations of chloride, sulfate and TDS in groundwater at MW-LF-10A are very similar to those observed in groundwater at MW-LF-10 since the inception of monitoring at MW-LF-10A indicating that groundwater quality at MW-LF-10A is similar to that at MW-LF-10. Based on these observations, the results of the major ion analysis with respect to groundwater at MW-LF-10 and MW-LF-10A further support the conclusion that the SSIs for chloride at MW-LF-10A and sulfate at MW-LF-10 and MW-LF-10A



are not the result of a release of leachate from the Class 3 landfill to groundwater.

10. The preponderance of the evidence from the key indicators analysis, major ions analysis and ion ratios analysis presented herein support the conclusion that leachate from the Class 3 landfill is not responsible for the SSIs observed for chloride in groundwater at down gradient EPA CCR Rule compliance monitoring wells MW-LF-07, MW-LF-10A and MW-LF-22, and sulfate at down gradient EPA CCR Rule compliance monitoring wells MW-LF-10 and MW-LF-10A.

The preceding information serves as the ASD prepared in accordance with 40 CFR 257.94(e)(2) and supports the position that the SSI for chloride evident from statistical analysis of groundwater quality data collected during the August 2019 Detection Monitoring events are not due to a release of leachate from the Class 3 landfill at the site. Therefore, no further action is warranted and the Class 3 landfill will remain in detection monitoring.

## **FIGURES**

- 1 Site Location Map: Wateree Station Class 3 Landfill
- 2 Site Map: Wateree Station Class 3 Landfill
- 3 Total Chloride Isoconcentration Contour Map: March 2019
- 4 Groundwater Elevation Contour Map: March 2019
- 5 Piper Diagram: October 2017
- 6 Piper Diagram: November 2017
- 7 Piper Diagram: March 2018
- 8 Piper Diagram: September 2018
- 9 Piper Diagram: March 2019
- 10 Piper Diagram: August 2019
- 11 Piper Diagram: March 2020

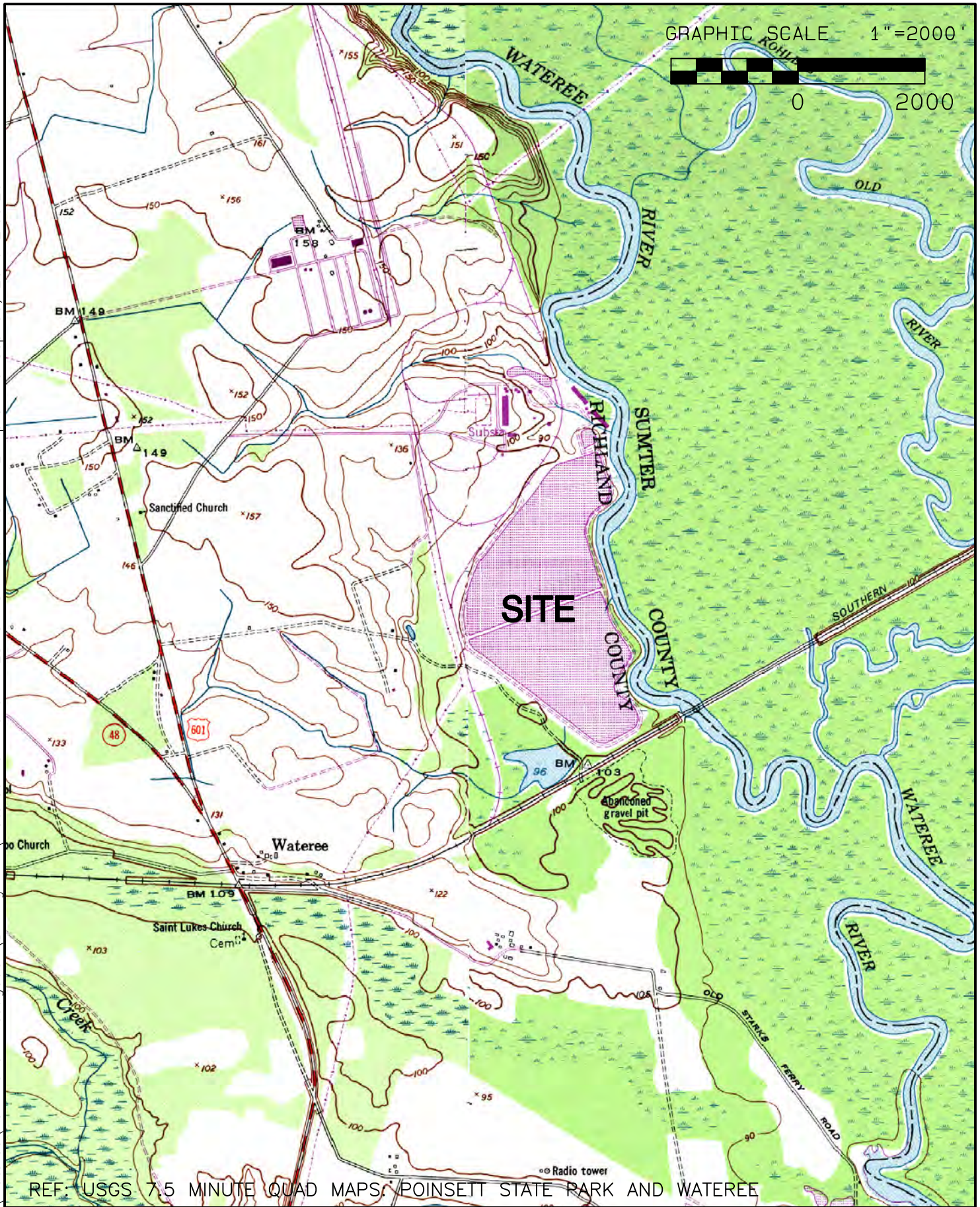


V:\SCE&G\Waterree\Ash Pond Investigation\Drilling RFP\Waterree Ash Pond INVESTIGATION Plan-WORK PLAN.pro Thu Sep 30, 2010 2:03:20PM

GRAPHIC SCALE 1"=2000'



0 2000



REF. USGS 7.5 MINUTE QUAD MAPS; POINSETT STATE PARK AND WATEREE



# DESC WATEREE STATION SITE LOCATION MAP

JOB

FIG

1



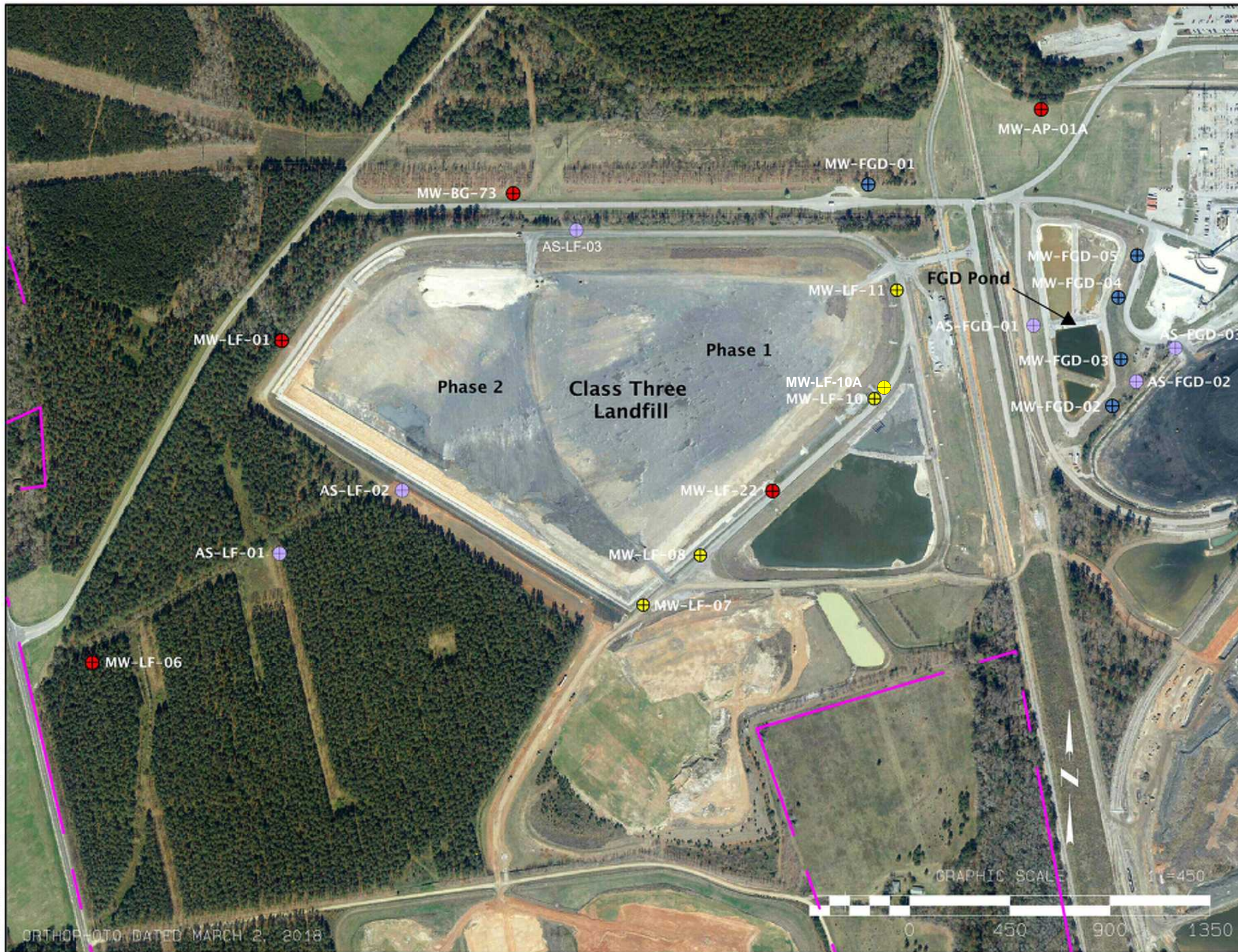
# EPA CCR Rule Compliance Groundwater Monitoring Wells

## Class Three Landfill

- Background and down gradient monitoring well
- ⊕ Well used for down gradient water quality monitoring
- ⊕ Alternate Source Demonstration monitoring well

## FGD Waste Water Pond

- ⊕ Background and down gradient monitoring well
- ⊕ Alternate Source Demonstration monitoring well



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ORTHOPHOTO DATED MARCH 2, 2018

GRAPHIC SCALE 1"=450'



DOMINION ENERGY SOUTH  
CAROLINA WATERREE STATION

**CCR RULE COMPLIANCE  
GROUNDWATER MONITORING WELLS  
FOR LANDFILL AND FGD POND**

JOB NUMBER  
  
SHEET  
2



# EPA CCR Rule Compliance Groundwater Monitoring Wells

## Class Three Landfill

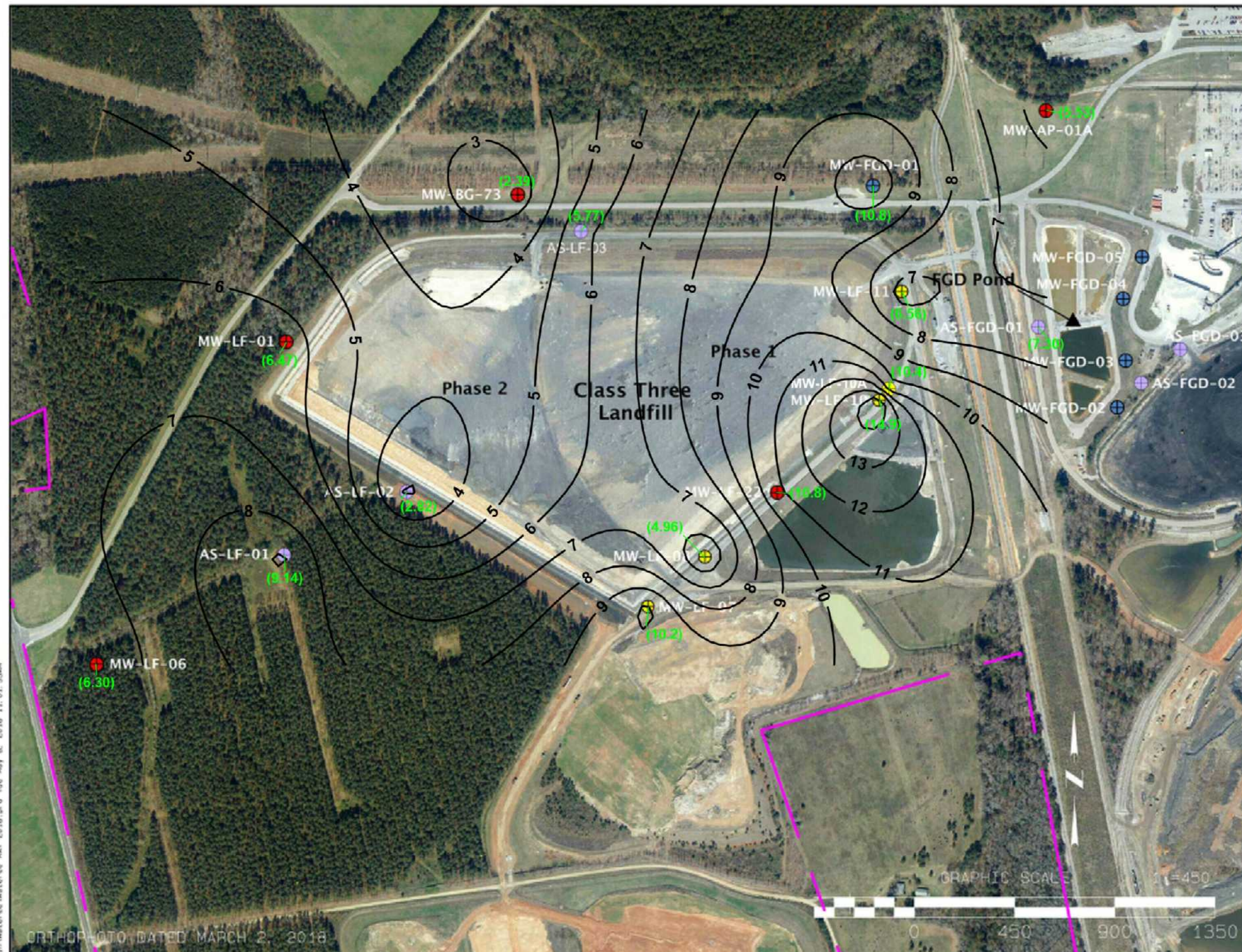
- Background and down gradient monitoring well
- Well used for down gradient water quality monitoring
- Alternate Source Demonstration monitoring well

## FGD Waste Water Pond

- Background and down gradient monitoring well
- Alternate Source Demonstration monitoring well

(5.49) Total Chloride Concentration (mg/L)

5 Total Chloride Isoconcentration Contour (mg/L)

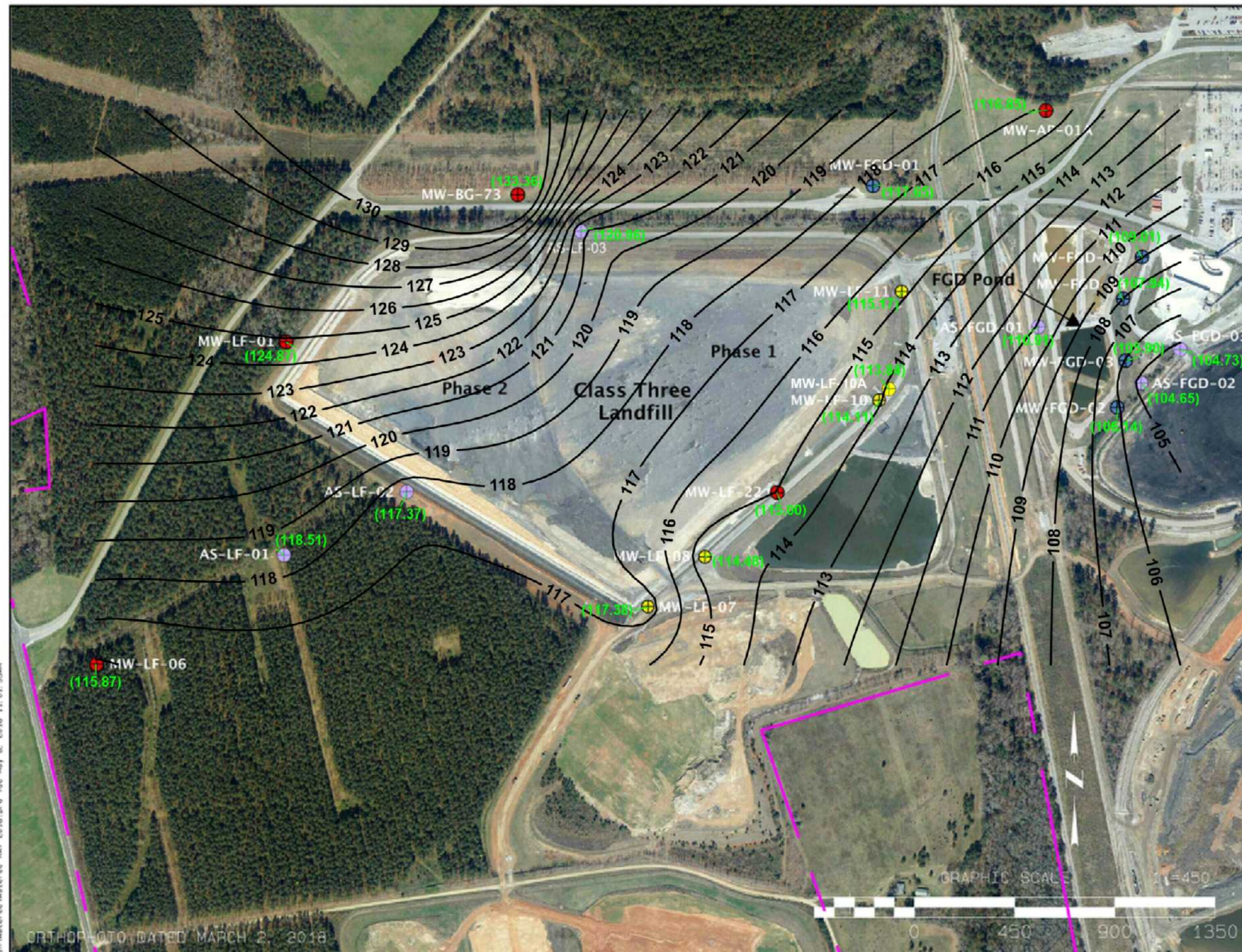


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# EPA CCR Rule Compliance Groundwater Monitoring Wells

- Class Three Landfill**
- Background and down gradient monitoring well
  - Well used for down gradient water quality monitoring
  - Alternate Source Demonstration monitoring well
- FGD Waste Water Pond**
- Background and down gradient monitoring well
  - Alternate Source Demonstration monitoring well
- (114.19) Groundwater Elevation (ft. MSL)
- 120 Groundwater Elevation Contour (ft. MSL)



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**DOMINION ENERGY SOUTH  
CAROLINA WATEREE STATION**

**Groundwater Elevation Contour Map  
Shallow Surficial Aquifer: March 2020**

<b>JOB NUMBER</b>
<b>SHEET</b>
<b>4</b>

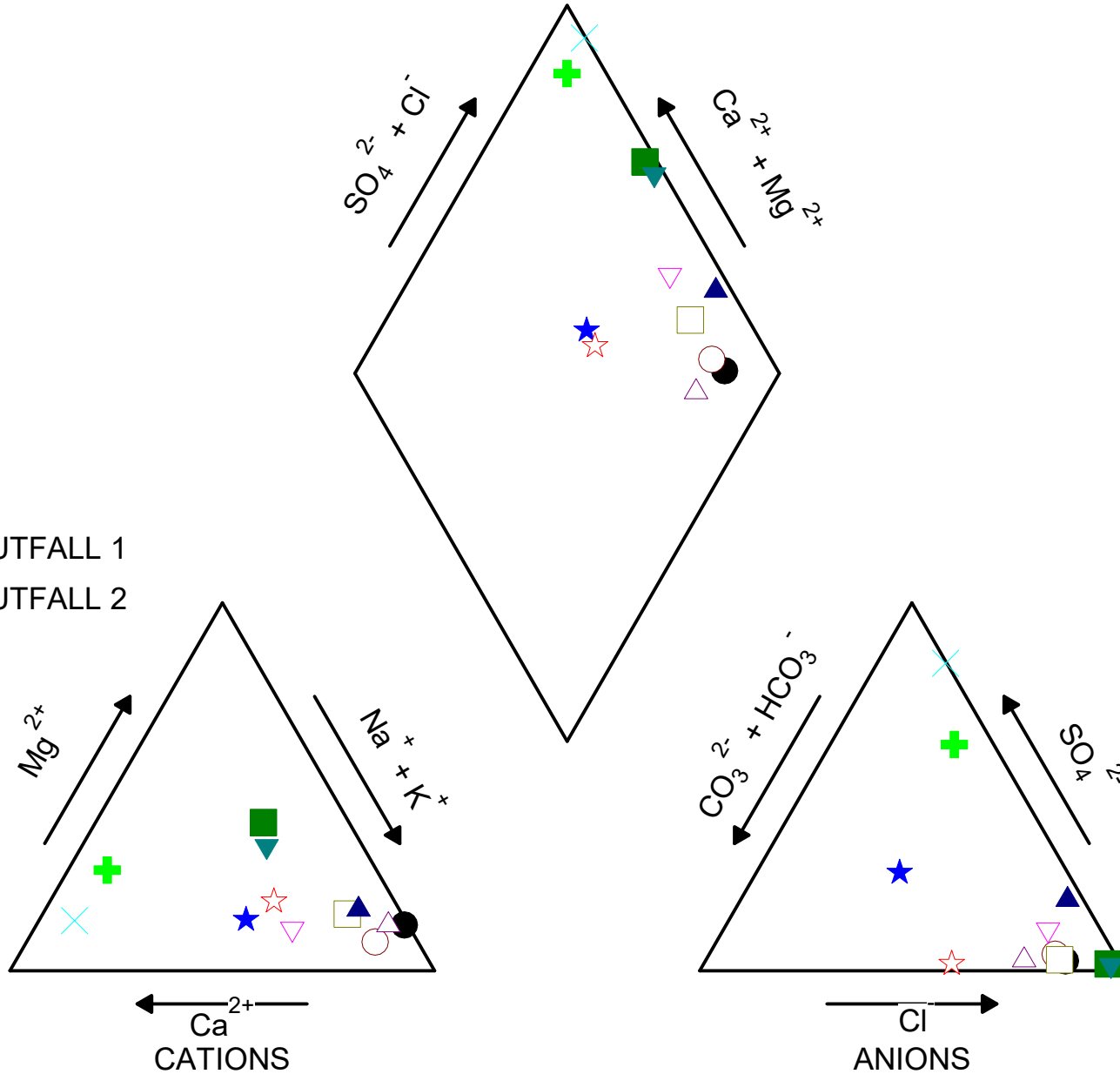


# Figure 5

## Wateree Station Class 3 Landfill 10/10-11/2017

EXPLANATION

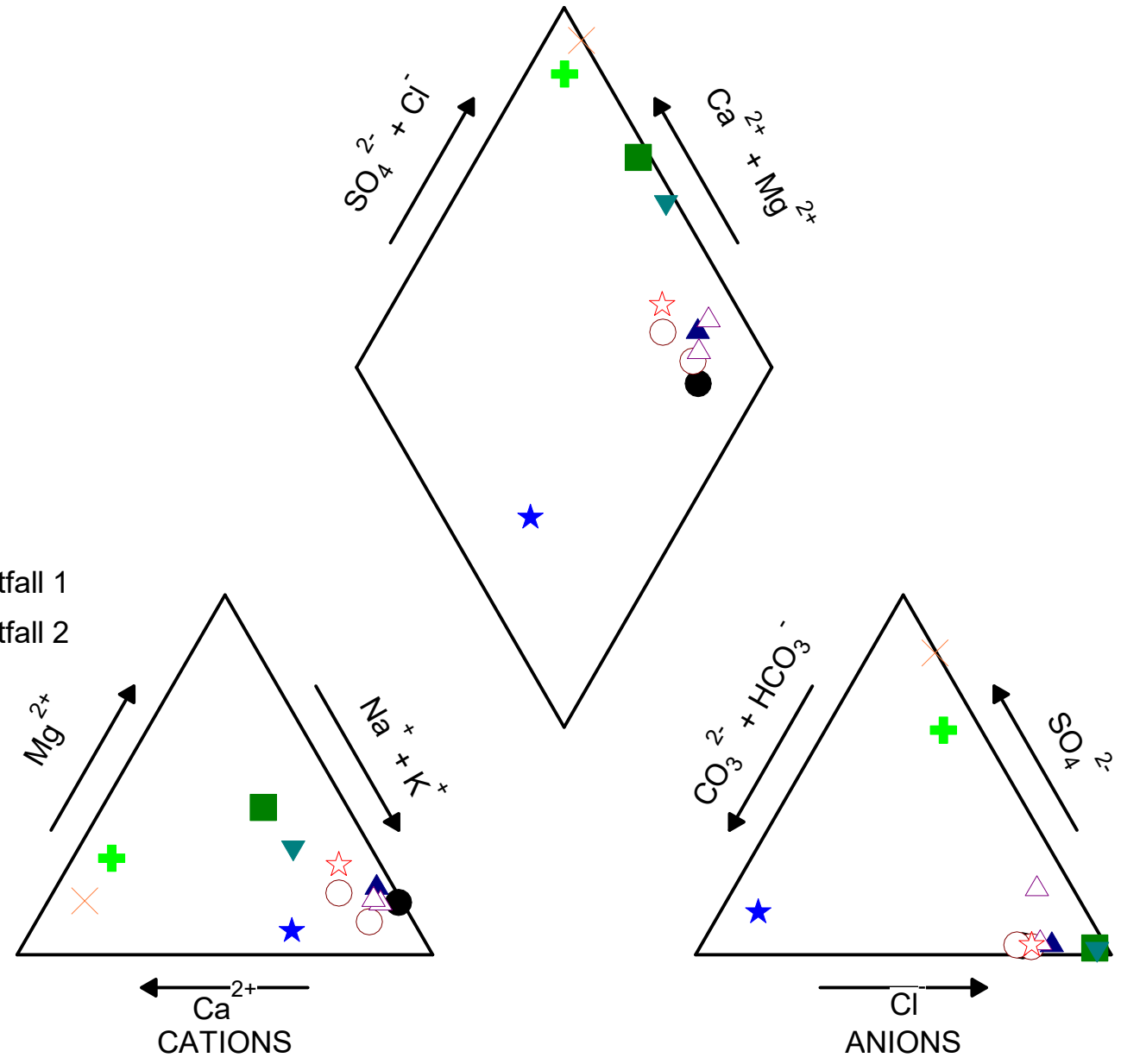
- MW-LF-01
  - MW-LF-06
  - MW-LF-07
  - MW-LF-08
  - ▲ MW-LF-10
  - △ MW-LF-11
  - ▼ MW-LF-22
  - ▽ AS-LF-01
  - ★ AS-LF-02
  - ☆ AS-LF-03
  - +
  - ×
- LEACHATE OUTFALL 1
- LEACHATE OUTFALL 2



# Figure 6 Wateree Station Class 3 Landfill 11/13-14/1/2017

**EXPLANATION**

- MW-LF-01
- MW-LF-06
- MW-LF-07
- MW-LF-08
- ▲ MW-LF-10
- △ MW-LF-11
- ▼ MW-LF-22
- △ AS-LF-01
- ★ AS-LF-02
- ☆ AS-LF-03
- ⊕ Leachate Outfall 1
- ⊗ Leachate Outfall 2

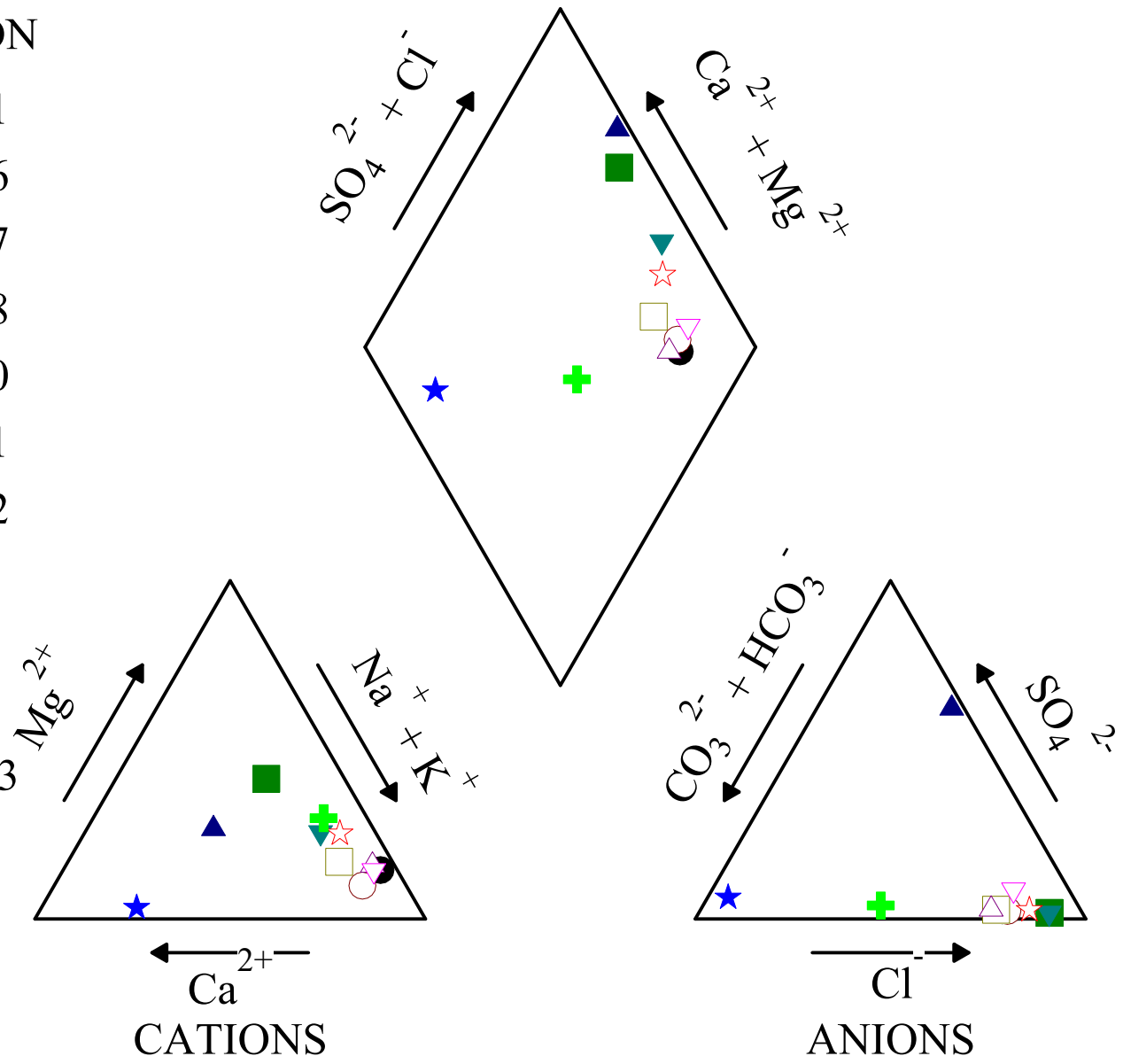


# FIGURE 7

## Wateree Class 3 Landfill Piper Diagram March 2018 Monitoring

### EXPLANATION

- MW-LF-01
- MW-LF-06
- MW-LF-07
- MW-LF-08
- ▲ MW-LF-10
- △ MW-LF-11
- ▼ MW-LF-22
- ▽ AS-LF-01
- ★ AS-LF-02
- ☆ AS-LF-03
- ⊕ MW-BG-73

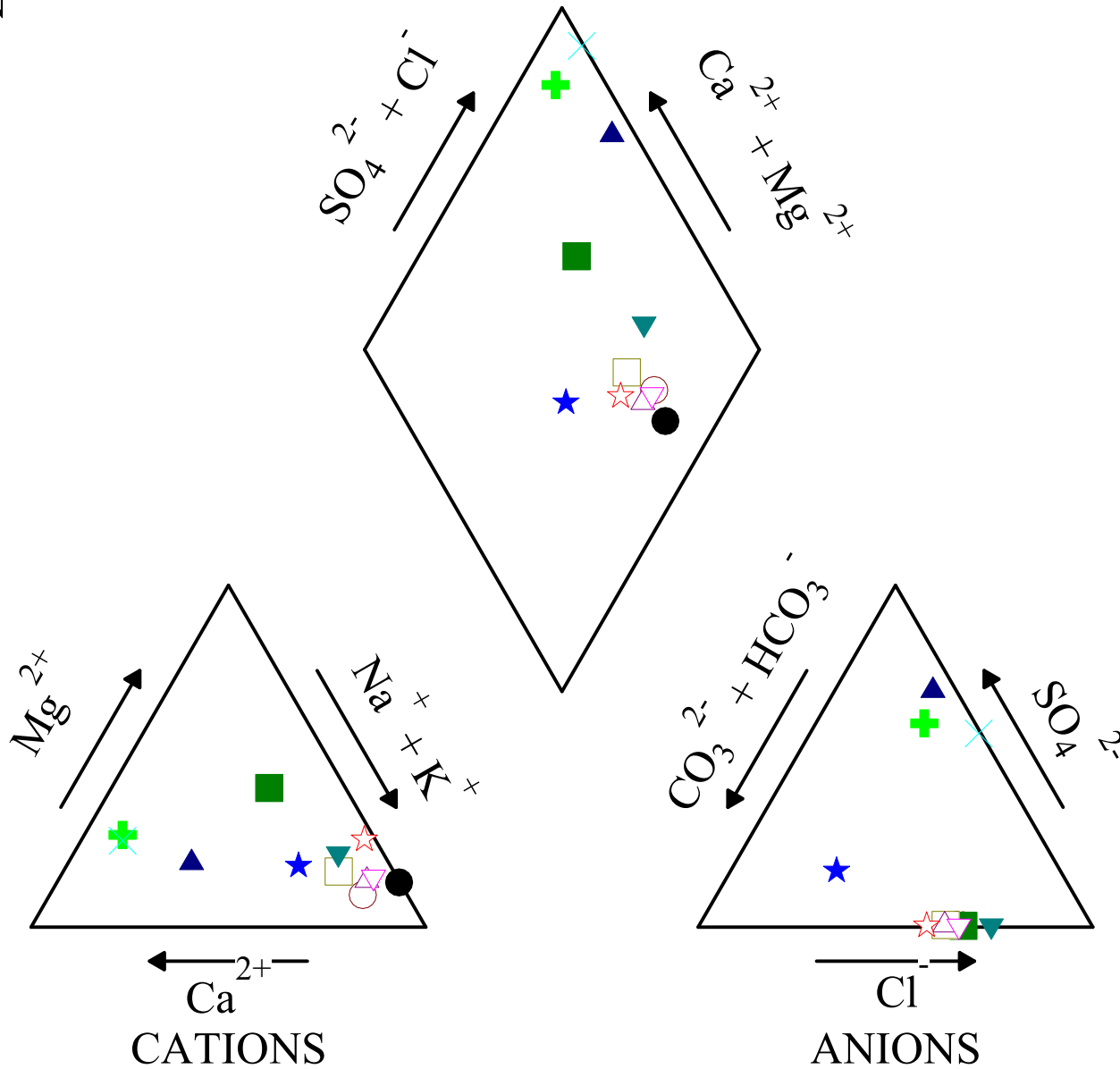


# FIGURE 8

## Wateree Station Class 3 Landfill: September 2018

### EXPLANATION

- MW-LF-01
- MW-LF-06
- MW-LF-07
- MW-LF-08
- ▲ MW-LF-10
- △ MW-LF-11
- ▼ MW-LF-22
- ▽ AS-LF-01
- ★ AS-LF-02
- ☆ AS-LF-03
- +
- ×

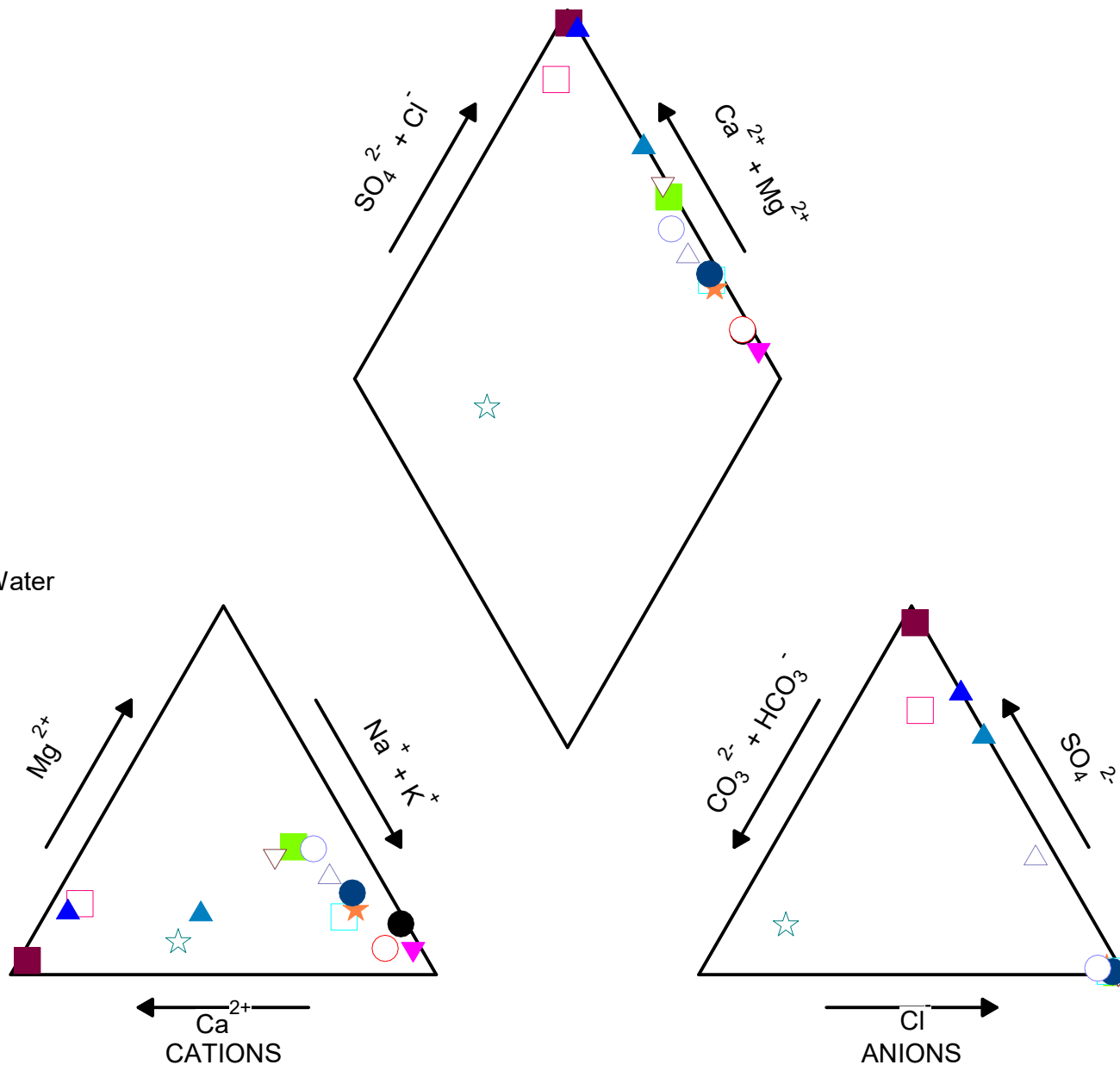


# FIGURE 9

## Wateree Class 3 Landfill March 2019

### EXPLANATION

- MW-LF-01
- MW-LF-06
- MW-LF-07
- MW-LF-08
- ▲ MW-LF-10
- △ MW-LF-10A
- ▼ MW-LF-11
- ▽ MW-LF-22
- ★ AS-LF-01
- ☆ AS-LF-02
- AS-LF-03
- MW-BG-73
- Landfill Runoff Water
- Leachate 1
- ▲ Leachate 2

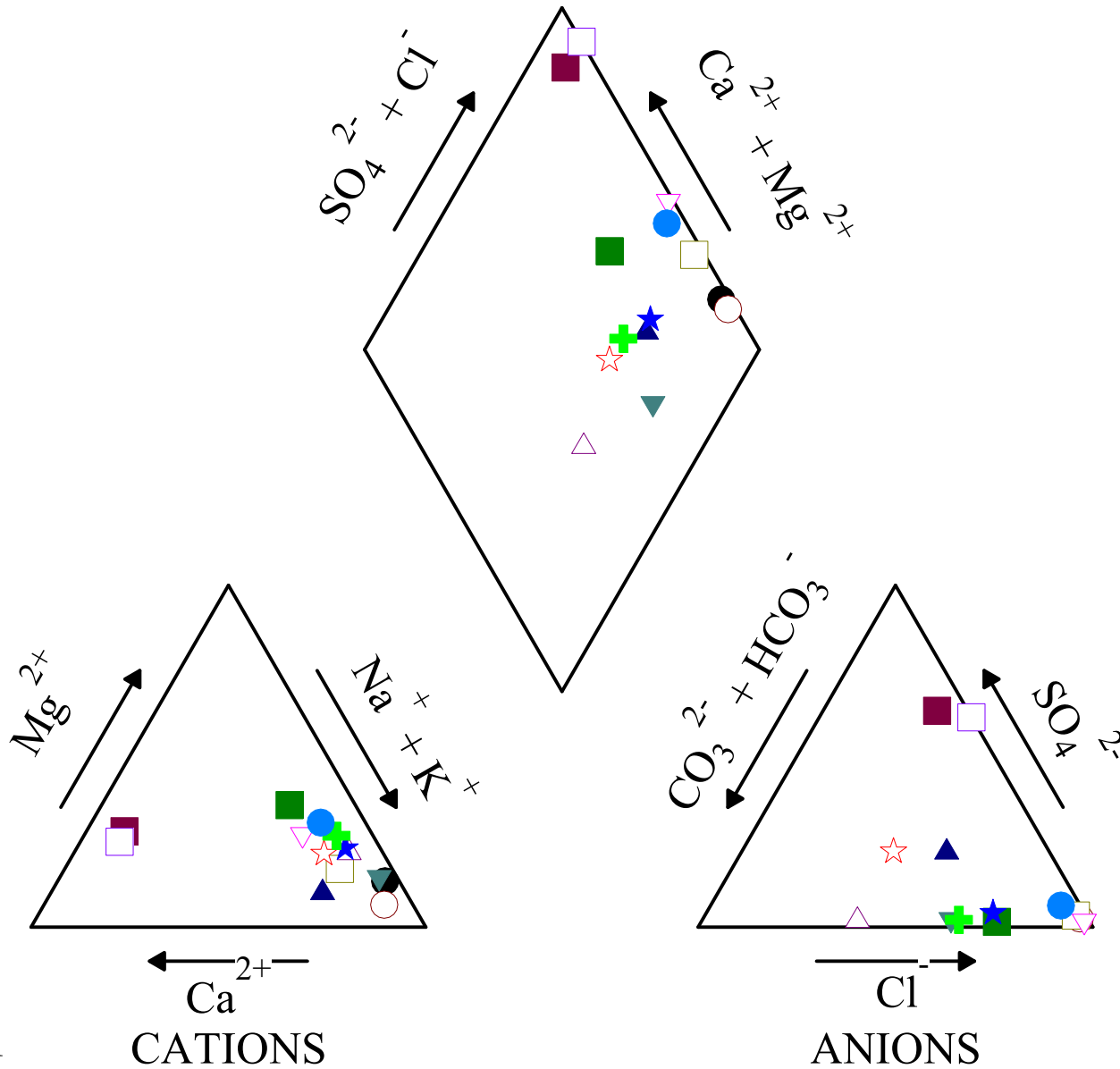


# FIGURE 10

## Wateree Station Class 3 Landfill August 2019

### EXPLANATION

- MW-LF-01
- MW-LF-06
- MW-LF-07
- MW-LF-08
- ▲ MW-LF-10
- △ MW-LF-10A
- ▼ MW-LF-11
- ▽ MW-LF-22
- ★ AS-LF-01
- ☆ AS-LF-02
- ✚ AS-LF-03
- MW-BG-73
- LF Leachate 1
- LF Leachate 2

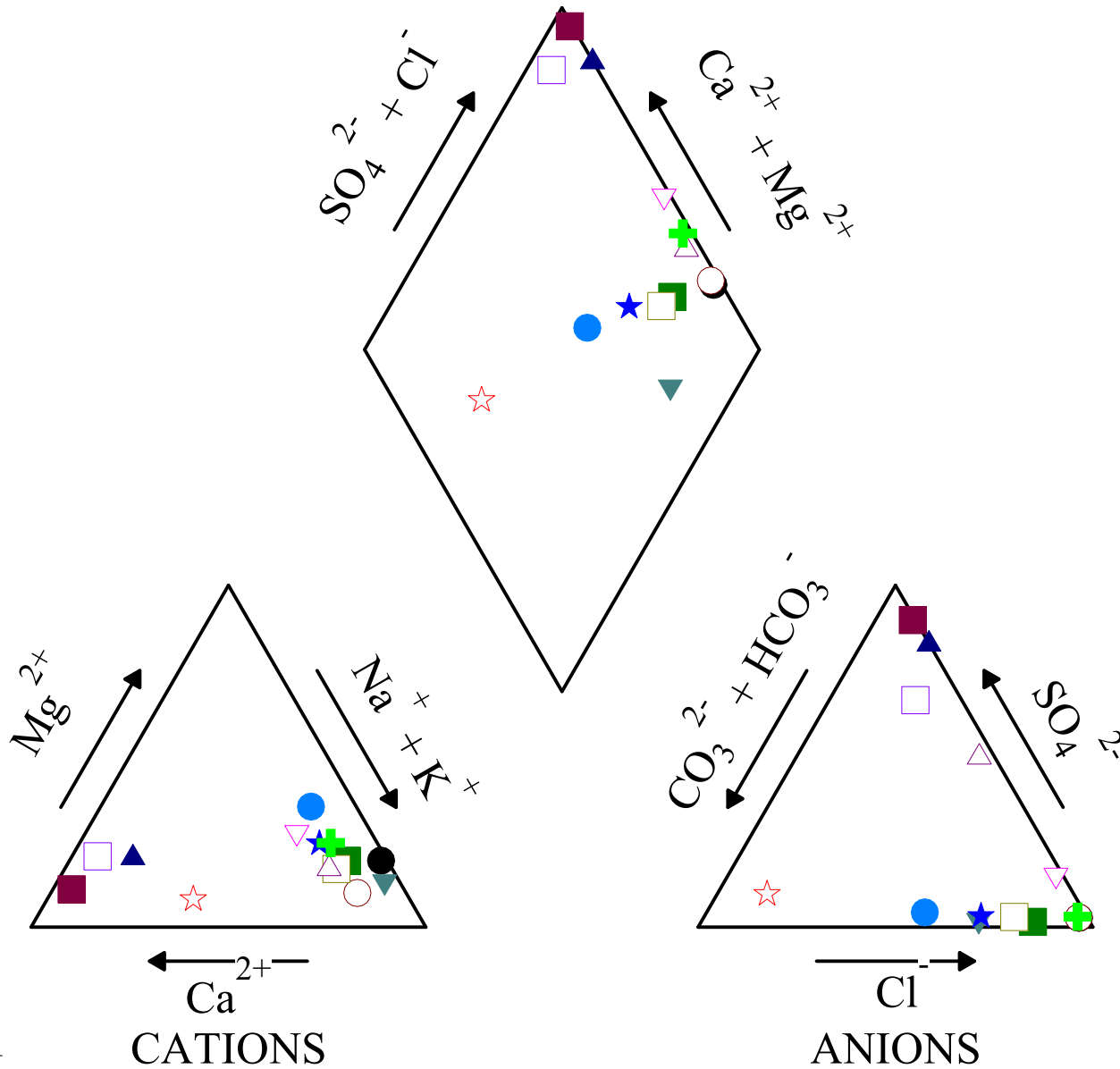


# FIGURE 11

## Wateree Station Class 3 Landfill March 2020

### EXPLANATION

- MW-LF-01
- MW-LF-06
- MW-LF-07
- MW-LF-08
- ▲ MW-LF-10
- △ MW-LF-10A
- ▼ MW-LF-11
- ▽ MW-LF-22
- ★ AS-LF-01
- ☆ AS-LF-02
- ✚ AS-LF-03
- MW-BG-73
- LF Leachate 1
- LF Leachate 2





## **TABLES**

- 1 EPA CCR Rule Compliance Monitoring Well Construction Data and Specifications
- 2 Results of Field and Laboratory Analyses of Groundwater and Leachate Samples
- 3 Major Ions in Groundwater and Leachate
- 4 Charge Balance of Major Ions in Groundwater and Leachate
- 5 Ion Ratios in Groundwater and Landfill Leachate



**Table 1**  
**EPA CCR Rule Compliance Monitoring Well Construction Data and Specifications**  
**Dominion Energy South Carolina**  
**Wateree Station Class Three Landfill**

**Wateree Station Class Three Landfill**

Monitoring Well ID	Boring Date	Northing	Easting	Elevation Data			Test Boring Data		Monitoring Well Construction Data			
				PVC Pipe Elev.	Ground Elev.	Stickup feet	Total Depth, ft.	Bottom Elevation	Top of Well Screen		Bottom of Well Screen	
									Depth, ft.	Elev.	Depth, ft.	Elev.
MW-LF-01 <sup>1</sup>	2/6/2010	724422.17	2109943.03	148.65	146.40	2.25	31.5	114.90	15.00	131.40	30.00	116.40
MW-LF-06 <sup>1</sup>	2/6/2010	722,969.30	2,109,089.00	145.97	143.40	2.57	38.0	105.39	23.01	120.39	38.01	105.39
MW-LF-07	3/23/2016	723225.3	2111568.876	139.98	137.21	2.77	30.0	107.21	18.00	119.21	28.00	109.21
MW-LF-08	3/23/2016	723452.614	2111821.22	137.68	134.86	2.82	33.0	101.86	23.00	111.86	33.00	101.86
MW-LF-10	3/22/2016	724155.074	2112609.649	131.53	128.81	2.72	25.0	103.81	14.00	114.81	24.00	104.81
MW-LF-10A	11/28/2018	724224.104	2112662.666	132.49	129.52	2.96	25.0	104.52	15.00	114.52	25.00	104.52
MW-LF-11	3/22/2016	724642.461	2112705.854	135.26	132.68	2.58	27.0	105.68	17.00	115.68	27.00	105.68
MW-LF-22 <sup>1</sup>	8/6/2013	723740	2112144	135.75	132.25	3.50	31.0	101.25	16.00	116.25	31.00	101.25
AS-LF-01	6/23/2017	723447.18	2109886.93	149.90	147.08	2.82	45.0	102.08	35.00	112.08	45.00	102.08
AS-LF-02	6/26/2017	723707.62	2110529.03	149.56	146.77	2.79	53.0	93.77	42.00	104.77	52.00	94.77
AS-LF-03	6/21/2017	724920.02	211264.43	146.15	143.42	2.73	35.0	108.42	25.00	118.42	35.00	108.42
MW-BG-73	11/27/2017	725076.534	2110942.085	139.07	136.55	2.52	20.0	116.55	10.00	126.55	20.00	116.55

NOTES:

1 - Existing monitoring wells; installed prior to March 2016 for use in groundwater monitoring under other regulatory programs but included in EPA CCR Rule compliance monitoring.







**TABLE 3**  
**Major Ions in Groundwater**  
**Alternate Source Demonstration**  
**DESC Wateree Station Class 3 Landfill**  
**Eastover, Richland County, South Carolina**

Sample Location	Sampling Date	Major Ion Concentrations (mg/L)							
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	TDS
MW-LF-01	10/10/17	<0.1	0.441	5.53	<1.00	1.49	5.87	<0.50	13.54*
MW-LF-06	10/10/17	0.789	0.374	7.13	<1.00	1.98	6.68	<1.00	17.16*
MW-LF-07	10/11/17	1.83	2.22	3.51	1.06	<1.00	9.59	<0.50	18.76*
MW-LF-08	10/11/17	0.796	0.58	4.46	1.11	1.49	5.25	<0.50	13.34*
MW-LF-10	10/11/17	0.678	0.713	5.29	1.18	<1.00	6.01	2.04	16.21*
MW-LF-11	10/10/17	0.209	0.336	3.95	<1.00	2.48	4.87	<0.50	11.60*
MW-LF-22	10/11/17	2.31	2.09	3.79	2.21	<1.00	11.7	<0.50	22.65*
AS-LF-01	10/10/17	3.002	0.742	6.75	1.32	1.98	7.07	1.4	37
AS-LF-02	10/10/17	2.79	0.629	2.75	2.41	5.45	2.7	2.9	28
AS-LF-03	10/10/17	2.02	0.816	3.59	1.22	6.44	5.49	<0.50	24
Landfill Leachate Outfall 1	10/10/17	642	168	78.3	50.1	271	499	1420	3563
Landfill Leachate Outfall 2	10/10/17	175	18.5	19.4	3.9	2.48	65.6	461	928

Sample Location	Sampling Date	Major Ion Concentrations (mg/L)							
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	TDS
MW-LF-01	11/13/17	<0.1	0.491	5.38	<0.1	2.55	5.75	<0.50	13.50*
MW-LF-06	11/13/17	0.762	0.396	6.3	<1.0	2.55	6.53	<0.50	16.27*
MW-LF-07	11/14/17	1.82	2.22	3.36	1.06	<1.0	9.38	<0.50	18.39*
MW-LF-08	11/14/17	0.893	0.664	4.39	1.14	2.55	5.28	<0.50	14.15*
MW-LF-10	11/14/17	0.26	0.711	4.86	1.22	1.53	5.82	<0.50	14.04*
MW-LF-11	11/14/17	0.252	0.404	3.68	1.03	1.53	4.69	<0.50	11.22*
MW-LF-22	11/14/17	1.86	1.8	4.77	1.93	<1.0	11	<0.50	21.91*
AS-LF-01	11/13/17	0.534	0.752	6.51	1.34	1.53	7.45	2.53	46
AS-LF-02	11/13/17	5.5	0.733	7.38	9.49	39.8	2.67	4.73	75
AS-LF-03	11/13/17	0.22	0.331	1.33	<1.0	2.04	5.3	<0.50	35
Landfill Leachate Outfall 1	11/14/17	664	169	81	53.5	291	528	1565	3179
Landfill Leachate Outfall 2	11/14/17	191	22.8	22.6	4.53	3.57	77.7	563	964

Sample Location	Sampling Date	Major Ion Concentrations (mg/L)							
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	TDS
MW-LF-01	3/6/18	<0.50	0.521	5.25	<1.0	2.55	5.71	<0.50	35
MW-LF-06	3/6/18	0.777	0.412	5.98	<1.0	2.55	6.18	<0.50	35
MW-LF-07	3/6/18	1.66	2.08	3.37	<1.0	1.53	9.53	<0.50	42
MW-LF-08	3/5/18	0.819	0.609	4.16	1.02	2.55	5.19	<0.50	31
MW-LF-10	3/5/18	4.81	3.09	6.27	1.39	1.53	9.57	23.4	67
MW-LF-11	3/5/18	<0.50	0.419	3.64	<1.0	2.55	4.83	<0.50	25
MW-LF-22	3/5/18	1.32	1.45	5.61	1.47	1.53	9.41	<0.50	39
AS-LF-01	3/6/18	0.539	0.771	7.39	1.22	2.55	8.07	1.22	43
AS-LF-02	3/6/18	24.8	0.696	6.17	5.82	81.6	2.82	4.6	102
AS-LF-03	3/6/18	0.52	0.865	3.56	1.15	1.53	5.73	<0.50	32
MW-BG-73	3/6/18	<0.50	0.403	1.22	<1.0	4.08	2.14	<0.50	25

Sample Location	Sampling Date	Major Ion Concentrations (mg/L)							
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	TDS
MW-LF-01	9/11/18	<0.0219	0.462	5.36	0.741	4.97	5.49	<0.129	65
MW-LF-06	9/11/18	0.791	0.398	5.79	1.01	4.97	5.93	<0.129	45
MW-LF-07	9/11/18	1.63	2.09	3.36	0.902	7.45	8.9	<0.129	60
MW-LF-08	9/11/18	0.817	0.576	4.08	1.03	4.97	4.88	<0.129	46
MW-LF-10	9/11/18	12.3	2.81	7.78	1.79	4.97	12.1	45.6	125
MW-LF-11	9/11/18	0.42	0.429	4.09	0.986	4.97	4.83	<0.129	46
MW-LF-22	9/11/18	1.04	1.19	6.21	1.37	4.97	8.41	<0.129	47
AS-LF-01	9/11/18	0.535	0.802	7.5	1.25	7.45	8.45	<0.129	45
AS-LF-02	9/11/18	1.18	0.555	2.24	2.01	9.93	2.73	2.29	43
AS-LF-03	9/11/18	0.562	0.935	4.21	1.23	7.45	5.95	<0.129	54
MW-BG-73	9/10/18	0.161	0.267	1.21	0.694	7.45	2.16	<0.129	22
Landfill Leachate Outfall 1	9/11/18	641	165	80.5	54.3	410	511	1497	3487
Landfill Leachate Outfall 2	9/11/18	225	53.8	38.9	6.18	7.45	308	553	1506

Sample Location	Sampling Date	Major Ion Concentrations (mg/L)							
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	TDS
MW-LF-01	3/4/19	0.0879	0.503	5.35	0.875	0.25	5.96	0.065	54
MW-LF-06	3/5/19	0.592	0.303	6.27	0.891	0.25	6.31	0.065	27
MW-LF-07	3/5/19	1.38	1.79	4.31	0.858	0.25	9.3	0.065	32
MW-LF-08	3/4/19	0.832	0.571	4.25	1.06	0.25	4.99	0.065	24
MW-LF-10	3/4/19	5.46	1.15	4.3	0.925	0.25	6.55	16.5	44
MW-LF-10A	3/4/19	0.935	1.27	4.89	1.19	1	7.22	4.87	42
MW-LF-11	3/4/19	0.218	0.467	10.9	1.02	0.25	11.6	0.065	47
MW-LF-22	3/4/19	2.23	2	4.06	2.3	0.25	12.3	0.065	42
AS-LF-01	3/5/19	0.926	0.982	6.75	1.47	0.5	8.7	0.25	373
AS-LF-02	3/5/19	6.3	0.604	2.85	2.79	24.8	2.73	3.61	62
AS-LF-03	3/4/19	0.519	0.812	4.09	1.2	0.25	6.08	0.065	39
MW-BG-73	3/5/19	0.338	0.595	1.34	0.756	0.25	2.54	0.065	20
Landfill Runoff Water	3/5/19	489	12	7.39	8.5	27	34.4	1421	2146
Landfill Leachate Outfall 1	3/5/19	579	91	40	34.6	300	234	1398	2822
Landfill Leachate Outfall 2	3/5/19	306	40.1	18.9	6.45	4	193	852	1606

Sample Location	Sampling Date	Major Ion Concentrations (mg/L)							
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	TDS
MW-LF-01	8/29/19	0.25	0.56	6.1	0.823	0.25	5.85	0.25	33
MW-LF-06	8/29/19	0.587	0.322	7.65	0.633	0.25	7	0.25	21
MW-LF-07	8/29/19	1.5	1.95	4.41	0.896	4.9	9.06	0.25	32
MW-LF-08	8/29/19	0.906	0.707	4.82	1.12	0.25	5.2	0.25	20
MW-LF-10	8/29/19	1.74	0.501	5.75	1.3	4.9	5.69	3.25	26
MW-LF-10A	8/29/19	0.403	0.617	3.08	1.13	9.8	3.83	0.25	17
MW-LF-11	8/28/19	0.256	0.502	4.68	1	4.9	5.15	0.25	5
MW-LF-22	8/29/19	1.98	1.85	5.84	2.18	0.25	10.4	0.25	43
AS-LF-01	8/28/19	0.858	1.36	6.56	1.72	4.9	8.94	0.7	48
AS-LF-02	8/29/19	0.738	0.64	2.34	2.11	4.9	2.78	2.17	47
AS-LF-03	8/28/19	0.575	0.999	3.83	1.2	4.9	5.64	0.25	38
MW-BG-73	8/28/19	0.343	0.564	1.57	0.783	0.25	2.62	0.25	18
Landfill Leachate Outfall 1	8/28/19	690	188	87.6	60.4	237	514	1520	4014
Landfill Leachate Outfall 2	8/28/19	280	65.1	45.1	6.79	0.25	326	702	1834

Sample Location	Sampling Date	Major Ion Concentrations (mg/L)							
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	TDS
MW-LF-01	3/10/20	0.102	0.753	5.23	0.979	0.25	6.47	0.25	29
MW-LF-06	3/11/20	0.866	0.425	5.63	1.07	0.25	6.3	0.25	31
MW-LF-07	3/11/20	1.07	1.22	7.92	0.724	3	10.2	0.25	40
MW-LF-08	3/11/20	0.867	0.633	4.21	1.1	2	4.96	0.25	23
MW-LF-10	3/11/20	26.7	5.12	6.28	2.05	0.25	14.9	97.7	169
MW-LF-10A	3/11/20	2.19	1.42	9.88	1.06	1.5	10.4	15.1	68
MW-LF-11	3/11/20	0.245	0.535	5.7	1.01	4.5	6.56	0.25	27
MW-LF-22	3/11/20	1.91	1.7	4.94	2.14	0.25	7.2	1.79	18
AS-LF-01	3/11/20	1.33	1.35	5.37	1.62	6	9.14	0.58	38
AS-LF-02	3/11/20	6.67	0.608	3.34	3.11	30	2.82	2.94	91
AS-LF-03	3/10/20	0.689	0.879	3.61	1.17	0.25	5.77	0.25	19
MW-BG-73	3/11/20	0.335	0.622	1.34	0.751	3	2.39	0.25	10
Landfill Leachate Outfall 1	3/9/20	400	31.8	21.3	7.94	11	86.1	1103	1819
Landfill Leachate Outfall 2	3/9/20	695	120	47.9	40.4	330	358	1471	3148

TDS = Total Dissolved Solids

\*TDS calculated by the following formula: TDS = (0.6 x Total Alkalinity) + Ca<sup>+</sup> + Mg<sup>2+</sup> + Na<sup>+</sup> + K<sup>+</sup> + Cl<sup>-</sup> + SO<sub>4</sub><sup>=</sup>

Analyte concentrations reported as below the reporting limit (RL) assigned a value of 1/2 the RL.

**TABLE 4**  
**Charge Balance of Major Ions in Groundwater and Leachate**  
**EPA CCR Rule Alternate Source Demonstration**  
**DESC Wateree Station Class 3 Landfill**  
**Eastover, Richland County, South Carolina**

Sample Location	Sampling Date	Major Ion Concentrations (meq/L)							Charge Balance Error
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	
MW-LF-01	10/10/17	0.025	0.037	0.240	0.013	0.03	0.165	0.005	0.22
MW-LF-06	10/10/17	0.039	0.031	0.310	0.013	0.04	0.188	0.010	0.24
MW-LF-07	10/11/17	0.092	0.185	0.153	0.027	0.01	0.270	0.005	0.23
MW-LF-08	10/11/17	0.040	0.048	0.194	0.028	0.03	0.148	0.005	0.26
MW-LF-10	10/11/17	0.034	0.059	0.230	0.030	0.01	0.169	0.042	0.23
MW-LF-11	10/10/17	0.010	0.028	0.172	0.013	0.05	0.137	0.005	0.07
MW-LF-22	10/11/17	0.116	0.174	0.165	0.057	0.01	0.330	0.005	0.19
AS-LF-01	10/10/17	0.150	0.062	0.293	0.034	0.04	0.199	0.029	0.34
AS-LF-02	10/10/17	0.140	0.052	0.120	0.062	0.109	0.076	0.060	0.21
AS-LF-03	10/10/17	0.101	0.068	0.156	0.031	0.129	0.155	0.005	0.10
Leachate Outfall 1	10/10/17	32.10	13.994	3.404	1.283	5.411	14.057	29.579	0.02
Leachate Outfall 2	10/10/17	8.75	1.541	0.844	0.100	0.050	1.848	9.603	-0.01

Sample Location	Sampling Date	Major Ion Concentrations (meq/L)							Charge Balance Error
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	
MW-LF-01	11/13/17	0.003	0.041	0.234	0.001	0.051	0.162	0.005	0.12
MW-LF-06	11/13/17	0.038	0.033	0.274	0.013	0.051	0.184	0.005	0.20
MW-LF-07	11/14/17	0.091	0.185	0.146	0.027	0.010	0.264	0.005	0.23
MW-LF-08	11/14/17	0.045	0.055	0.191	0.029	0.051	0.149	0.005	0.22
MW-LF-10	11/14/17	0.013	0.059	0.211	0.031	0.031	0.164	0.005	0.22
MW-LF-11	11/14/17	0.013	0.034	0.160	0.026	0.031	0.132	0.005	0.16
MW-LF-22	11/14/17	0.093	0.150	0.207	0.049	0.010	0.310	0.005	0.21
AS-LF-01	11/13/17	0.027	0.063	0.283	0.034	0.031	0.210	0.053	0.16
AS-LF-02	11/13/17	0.275	0.061	0.321	0.243	0.795	0.075	0.099	-0.04
AS-LF-03	11/13/17	0.011	0.028	0.058	0.013	0.041	0.149	0.005	-0.28
Leachate Outfall 1	11/14/17	33.20	14.08	3.52	1.37	5.81	14.87	32.60	-0.01
Leachate Outfall 2	11/14/17	9.55	1.90	0.98	0.12	0.07	2.19	11.73	-0.05

Sample Location	Sampling Date	Major Ion Concentrations (meq/L)							Charge Balance Error
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	
MW-LF-01	3/6/18	0.013	0.043	0.228	0.013	0.051	0.161	0.005	0.16
MW-LF-06	3/6/18	0.039	0.034	0.260	0.013	0.051	0.174	0.005	0.20
MW-LF-07	3/6/18	0.083	0.173	0.147	0.013	0.031	0.268	0.005	0.15
MW-LF-08	3/5/18	0.041	0.051	0.181	0.026	0.051	0.146	0.005	0.19
MW-LF-10	3/5/18	0.241	0.257	0.273	0.036	0.031	0.270	0.487	0.01
MW-LF-11	3/5/18	0.013	0.035	0.158	0.013	0.051	0.136	0.005	0.06
MW-LF-22	3/5/18	0.066	0.121	0.244	0.038	0.031	0.265	0.005	0.22
AS-LF-01	3/6/18	0.027	0.064	0.321	0.031	0.051	0.227	0.025	0.19
AS-LF-02	3/6/18	1.240	0.058	0.268	0.149	1.632	0.079	0.096	-0.03
AS-LF-03	3/6/18	0.026	0.072	0.155	0.029	0.031	0.161	0.005	0.18
MW-BG-73	3/6/18	0.013	0.034	0.053	0.013	0.082	0.060	0.005	-0.14

Sample Location	Sampling Date	Major Ion Concentrations (meq/L)							Charge Balance Error
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	
MW-LF-01	9/11/18	0.001	0.039	0.233	0.019	0.099	0.157	0.0002	0.06
MW-LF-06	9/11/18	0.040	0.033	0.252	0.026	0.099	0.169	0.0002	0.06
MW-LF-07	9/11/18	0.082	0.174	0.146	0.023	0.149	0.254	0.0002	0.03
MW-LF-08	9/11/18	0.041	0.048	0.177	0.026	0.099	0.139	0.0002	0.10
MW-LF-10	9/11/18	0.615	0.234	0.338	0.046	0.099	0.346	0.9500	-0.06
MW-LF-11	9/11/18	0.021	0.036	0.178	0.025	0.099	0.138	0.0002	0.04
MW-LF-22	9/11/18	0.052	0.099	0.270	0.035	0.099	0.240	0.0002	0.15
AS-LF-01	9/11/18	0.027	0.067	0.326	0.032	0.149	0.241	0.0002	0.07
AS-LF-02	9/11/18	0.059	0.046	0.097	0.052	0.199	0.078	0.0477	-0.12
AS-LF-03	9/11/18	0.028	0.078	0.183	0.032	0.149	0.170	0.0002	0.00
MW-BG-73	9/10/18	0.008	0.022	0.053	0.018	0.149	0.062	0.0002	-0.35
Landfill Leachate Outfall 1	9/11/18	32.05	13.75	3.50	1.39	8.20	14.60	31.19	-0.03
Landfill Leachate Outfall 2	9/11/18	11.25	4.48	1.69	0.16	0.15	8.80	11.52	-0.08

Sample Location	Sampling Date	Major Ion Concentrations (meq/L)							Charge Balance Error
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	
MW-LF-01	3/4/19	0.004	0.042	0.233	0.022	0.005	0.170	0.0014	0.26
MW-LF-06	3/5/19	0.030	0.025	0.273	0.023	0.005	0.180	0.0014	0.30
MW-LF-07	3/5/19	0.069	0.149	0.187	0.022	0.005	0.266	0.0014	0.22
MW-LF-08	3/4/19	0.042	0.048	0.185	0.027	0.005	0.143	0.0014	0.34
MW-LF-10	3/4/19	0.273	0.096	0.187	0.024	0.005	0.187	0.3438	0.04
MW-LF-10A	3/4/19	0.047	0.106	0.213	0.031	0.020	0.206	0.1015	0.09
MW-LF-11	3/4/19	0.011	0.039	0.474	0.026	0.005	0.331	0.0014	0.24
MW-LF-22	3/4/19	0.112	0.167	0.177	0.059	0.005	0.351	0.0014	0.18
AS-LF-01	3/5/19	0.046	0.082	0.293	0.038	0.010	0.249	0.0052	0.27
AS-LF-02	3/5/19	0.315	0.050	0.124	0.072	0.496	0.078	0.0752	-0.07
AS-LF-03	3/4/19	0.026	0.068	0.178	0.031	0.005	0.174	0.0014	0.25
MW-BG-73	3/5/19	0.017	0.050	0.058	0.019	0.005	0.073	0.0014	0.29
Landfill Runoff Water	3/5/19	24.450	1.000	0.321	0.218	0.540	0.983	29.6042	-0.09
Landfill Leachate Outfall 1	3/5/19	28.95	7.58	1.74	0.89	6.00	6.69	29.13	-0.03
Landfill Leachate Outfall 2	3/5/19	15.30	3.34	0.82	0.17	0.08	5.51	17.75	-0.09

Sample Location	Sampling Date	Major Ion Concentrations (meq/L)							Charge Balance Error
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	
MW-LF-01	8/29/19	0.013	0.047	0.265	0.021	0.005	0.167	0.0052	0.32
MW-LF-06	8/29/19	0.029	0.027	0.333	0.016	0.005	0.200	0.0052	0.32
MW-LF-07	8/29/19	0.075	0.163	0.192	0.023	0.098	0.259	0.0052	0.11
MW-LF-08	8/29/19	0.045	0.059	0.210	0.029	0.005	0.149	0.0052	0.37
MW-LF-10	8/29/19	0.087	0.042	0.250	0.033	0.098	0.163	0.0677	0.11
MW-LF-10A	8/29/19	0.020	0.051	0.134	0.029	0.196	0.109	0.0052	-0.14
MW-LF-11	8/28/19	0.013	0.042	0.203	0.026	0.098	0.147	0.0052	0.06
MW-LF-22	8/29/19	0.099	0.154	0.254	0.056	0.005	0.297	0.0052	0.29
AS-LF-01	8/28/19	0.043	0.113	0.285	0.044	0.098	0.255	0.0146	0.14
AS-LF-02	8/29/19	0.037	0.053	0.102	0.054	0.098	0.079	0.0452	0.05
AS-LF-03	8/28/19	0.029	0.083	0.167	0.031	0.098	0.161	0.0052	0.08
MW-BG-73	8/28/19	0.017	0.047	0.068	0.020	0.005	0.075	0.0052	0.28
Landfill Leachate Outfall 1	8/28/19	34.50	15.67	3.81	1.55	4.74	14.69	31.67	0.04
Landfill Leachate Outfall 2	8/28/19	14.00	5.43	1.96	0.17	0.01	9.31	14.63	-0.05

Sample Location	Sampling Date	Major Ion Concentrations (meq/L)							Charge Balance Error
		Ca <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	Total Alkalinity	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-</sup>	
MW-LF-01	3/10/20	0.005	0.063	0.227	0.025	0.005	0.185	0.0052	0.24
MW-LF-06	3/11/20	0.043	0.035	0.245	0.027	0.005	0.180	0.0052	0.30
MW-LF-07	3/11/20	0.054	0.102	0.344	0.019	0.060	0.291	0.0052	0.18
MW-LF-08	3/11/20	0.043	0.053	0.183	0.028	0.040	0.142	0.0052	0.24
MW-LF-10	3/11/20	1.335	0.427	0.273	0.053	0.005	0.426	2.0354	-0.08
MW-LF-10A	3/11/20	0.110	0.118	0.430	0.027	0.030	0.297	0.3146	0.03
MW-LF-11	3/11/20	0.012	0.045	0.248	0.026	0.090	0.187	0.0052	0.08
MW-LF-22	3/11/20	0.096	0.142	0.215	0.055	0.005	0.206	0.0373	0.34
AS-LF-01	3/11/20	0.067	0.113	0.233	0.042	0.120	0.261	0.0121	0.07
AS-LF-02	3/11/20	0.334	0.051	0.145	0.080	0.600	0.081	0.0613	-0.10
AS-LF-03	3/10/20	0.034	0.073	0.157	0.030	0.005	0.165	0.0052	0.25
MW-BG-73	3/11/20	0.017	0.052	0.058	0.019	0.060	0.068	0.0052	0.05
Landfill Leachate Outfall 1	3/9/20	20.00	2.65	0.93	0.20	0.22	2.46	22.98	-0.04
Landfill Leachate Outfall 2	3/9/20	34.75	10.00	2.08	1.04	6.60	10.23	30.65	0.00

Analyte concentrations reported as below the reporting limit (RL) assigned a value of 1/2 the RL for calculating charge balance error. Charge balance error calculated as  $(\text{[Cations]} - \text{[Anions]}) / (\text{[Cations]} + \text{[Anions]})$  in meq/L.



**TABLE 5**  
**ION RATIOS IN GROUNDWATER AND LANDFILL LEACHATE**  
 EPA CCR Rule Alternate Source Demonstration  
 Dominion Energy South Carolina Wateree Station Class 3 Landfill  
 Eastover, Richland County, South Carolina

Sampling Date	Lithium/Chloride Concentration Ratio												Landfill Runoff Water	Landfill Leachate Outfall 1	Landfill Leachate Outfall 2
	MW-LF-01	MW-LF-06	MW-LF-07	MW-LF-08	MW-LF-10	MW-LF-10A	MW-LF-11	MW-LF-22	AS-LF-01	AS-LF-02	AS-LF-03	MW-BG-73			
5/12/16	---	---	0.24	1.65	0.41	---	0.55	0.18	---	---	---	---	---	---	---
7/12/16	---	---	0.23	8.26*	12.60*	---	0.57	0.28	---	---	---	---	---	---	---
9/20/16	---	---	0.32	1.77	0.53	---	0.64	0.15	---	---	---	---	---	---	---
11/16/16	---	---	0.44	0.56	0.51	---	0.68	0.13	---	---	---	---	---	---	---
1/18/17	---	---	0.47	2.12	0.52	---	0.30	0.39	---	---	---	---	---	---	---
3/21/17	---	---	0.51	2.42	0.48	---	0.72	0.22	---	---	---	---	---	---	---
5/23/17	---	---	0.99	2.21	0.40	---	0.49	0.14	---	---	---	---	---	---	---
7/24/17	---	---	0.45	1.74	0.25	---	0.31	0.17	0.21	18.13	0.78	---	---	---	---
9/27/17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/10/17	---	---	---	---	---	---	---	---	0.34	9.07	0.67	---	---	0.50	0.04
11/1/17	---	---	---	---	---	---	---	---	0.30	9.89	0.59	---	---	0.58	0.04
11/13/17	---	---	---	---	---	---	---	---	0.27	19.40	0.28	---	---	0.62	0.03
9/11/18	---	---	---	---	---	---	---	---	---	---	---	0.60	---	0.63	0.01
2/20/19	---	---	---	---	---	---	---	---	---	---	---	---	1.04	0.84	0.005
2/26/19	---	---	---	---	0.34	---	---	---	---	---	---	---	1.01	0.76	0.004
3/5/19	0.13	0.17	0.39	1.84	0.32	0.33	0.21	0.13	0.23	10.37	0.48	0.67	1.36	0.74	0.008
8/29/19	0.14	0.14	0.46	1.29	0.49	0.81	0.54	0.17	0.26	9.82	0.59	0.95	---	0.56	0.010
3/11/20	0.13	0.21	0.15	1.94	0.24	0.23	0.36	0.13	0.23	13.01	0.49	0.61	---	0.01	0.377
Average:	0.13	0.18	0.42	1.76	0.41	0.46	0.49	0.19	0.26	12.81	0.55	0.71	1.14	0.58	0.06

NOTES:

Analyte concentrations reported as below the reporting limit (RL) assigned a value of 1/2 the RL for calculating ion ratios.

\* - Data outlier not used in calculating average ion ratio.



## **APPENDIX A**

### **Results of Laboratory Analyses of Groundwater Samples**



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09351**

**Wateree Landfill MW-01LF-RCRA/CCR**

Date & Time Sampled: March 10, 2020 15:50

Date & Time Submitted: March 11, 2020 14:26

Collected by: J.HILL

Location Code: WAG01LFTM

MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	102.00 (J)	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	0.83 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	753	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	979.00 (J)	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5230	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashley M Bonatto*



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09352**

**Wateree Landfill AS-3-LF-RCRA/CCR**

Date & Time Sampled: March 10, 2020 15:50  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGAS3LFTM

MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	689	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.84	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	879	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1170	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	3610	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashley M. Bennett*



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09353**

**Wateree Landfill Well GW 6-RCRA**

Date & Time Sampled: March 11, 2020 11:30  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG06LFTM

GW 6

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	866	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.33 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	425	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1070	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5630	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Shelly M. Burt*



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09354**

**Wateree Landfill MW-07LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 08:35  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG07LFTM

MW-07LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	1070	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.52 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1220	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	724.00 (J)	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	7920	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09355**

**Wateree Landfill MW-08LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG08LFTM

MW-08LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	867	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	9.60	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	633	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1100	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	4210	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

March 19, 2020

<b>REPORT TO:</b>
Rashida Marlowe

Sample ID: **BA09356**

**Wateree Landfill MW-10LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 11:20  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10LFTM

MW-10LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	26700	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	3.52	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	5120	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	2050	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	6280	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashlynn Brunette*





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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09357**

**Wateree Landfill MW-10A LF-RCRA/CCR Metals**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10ALFTM

MW-10ALF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	2190	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.37	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1420	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1060	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	9880	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: *Ashley M. Bennett*



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09358**

**Wateree Landfill MW-11LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG11LFTM

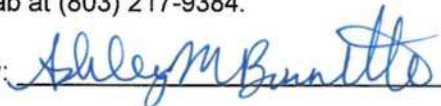
MW-11LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	245.00 (J)	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.34	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	535	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1010	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5700	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09359**

**Wateree Landfill MW-22LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:15  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG22LFTM

MW-22LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	1910	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.36 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1700	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	2140	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	4940	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Ashley M Bonnetts



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09360**

**Wateree Landfill AS-1-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGASLF1TM

MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	1330	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	2.10	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	1350	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	1620	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	5370	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09361**

**Wateree Landfill AS-2-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGAS2LFTM

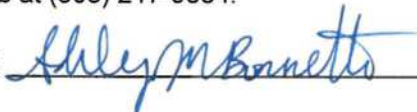
MW-01LF

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	6670	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	36.7	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	608	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	3110	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	3340	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09362**

**Wateree Well MW BG-73 TM (NPDES/CCR)**

Date & Time Sampled: March 11, 2020 09:20  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAMWBG73TM


AP1-01

Login Record File: 200312001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than MDL	200	38.458	ppb	3/16/20 14:16	AMB/C
Calcium EPA 200.7	335.00 (J)	500	83.8	ppb	3/16/20 14:16	AMB/C
Lithium (CWA) 200.7	1.46 (J)	2.0	0.758	ppb	3/16/20 14:16	AMB/C
Magnesium EPA 200.7	622	50	18.7	ppb	3/16/20 14:16	AMB/C
Potassium EPA 200.7	751.00 (J)	1000	310	ppb	3/16/20 14:16	AMB/C
Sodium EPA 200.7	1340	1000	254	ppb	3/16/20 14:16	AMB/C

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09315**

**Wateree LF Leechate 1 CCR**

Date & Time Sampled: March 09, 2020 14:03  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH1HM

Login Record File: 200311002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	0.11 (J)	1.0	0.090	ppb	3/13/20 15:30	LS
Arsenic by ICP_MS 200.8	7.30	1.0	0.292	ppb	3/13/20 15:30	LS
Barium by ICP-OES 200.7	45.3	10.0	1.113	ppb	3/12/20 14:22	AMB/C
Beryllium EPA 200.7	Less than MDL	2.0	0.148	ppb	3/12/20 14:22	AMB/C
Boron - EPA 200.7	1690	200	38.458	ppb	3/12/20 14:22	AMB/C
Cadmium by ICP_MS EPA 200.8	0.39 (J)	1.0	0.035	ppb	3/13/20 15:30	LS
Calcium EPA 200.7	400000	500	83.8	ppb	3/12/20 14:22	AMB/C
Chromium by ICP_MS 200.8	0.23 (J)	1.0	0.130	ppb	3/13/20 15:30	LS
Cobalt by ICP_MS 200.8	3.91	1.0	0.072	ppb	3/13/20 15:30	LS
Lead by ICP-MS 200.8	3.38	1.0	0.085	ppb	3/13/20 15:30	LS
Lithium (CWA) 200.7	1.29 (J)	2.0	0.758	ppb	3/12/20 14:22	AMB/C
Magnesium EPA 200.7	31800	50	18.7	ppb	3/12/20 14:22	AMB/C
Mercury (CWA) by EPA 245.2	Less than MDL	0.2	0.071	ppb	3/18/20 16:01	PRC
Molybdenum - EPA 200.8	41.9	1.0	0.111	ppb	3/13/20 15:30	LS
Potassium EPA 200.7	7940	1000	310	ppb	3/12/20 14:22	AMB/C
Selenium by ICP-MS 200.8	319	50.0	20.6	ppb	3/16/20 11:33	AMB
Sodium EPA 200.7	21300	1000	254	ppb	3/12/20 14:22	AMB/C
Thallium by ICP-MS 200.8	0.22 (J)	0.5	0.071	ppb	3/13/20 15:30	LS

*Ashley m Bonnetto*





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March 19, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09316**

**Wateree LF Leechate 2 CCR**

Date & Time Sampled: March 09, 2020 14:08  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH2HM

Login Record File: 200311002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	0.76 (J)	1.0	0.090	ppb	3/13/20 15:30	LS
Arsenic by ICP_MS 200.8	1.76	1.0	0.292	ppb	3/13/20 15:30	LS
Barium by ICP-OES 200.7	32.2	10.0	1.113	ppb	3/12/20 14:22	AMB/C
Beryllium EPA 200.7	Less than MDL	2.0	0.148	ppb	3/12/20 14:22	AMB/C
Boron - EPA 200.7	10100	200	38.458	ppb	3/12/20 14:22	AMB/C
Cadmium by ICP_MS EPA 200.8	1.13	1.0	0.035	ppb	3/13/20 15:30	LS
Calcium EPA 200.7	695000	1000	167	ppb	3/16/20 14:24	AMB/C
Chromium by ICP_MS 200.8	0.51 (J)	1.0	0.130	ppb	3/13/20 15:30	LS
Cobalt by ICP_MS 200.8	2.36	1.0	0.072	ppb	3/13/20 15:30	LS
Lead by ICP-MS 200.8	Less than MDL	1.0	0.085	ppb	3/13/20 15:30	LS
Lithium (CWA) 200.7	135	2.0	0.758	ppb	3/12/20 14:22	AMB/C
Magnesium EPA 200.7	120000	50	18.7	ppb	3/12/20 14:22	AMB/C
Mercury (CWA) by EPA 245.2	Less than MDL	0.2	0.071	ppb	3/18/20 16:01	PRC
Molybdenum - EPA 200.8	297	10	1.11	ppb	3/16/20 11:33	AMB
Potassium EPA 200.7	40400	1000	310	ppb	3/12/20 14:22	AMB/C
Selenium by ICP-MS 200.8	311	50	20.6	ppb	3/16/20 11:33	AMB
Sodium EPA 200.7	47900	1000	254	ppb	3/12/20 14:22	AMB/C
Thallium by ICP-MS 200.8	0.895	0.5	0.071	ppb	3/13/20 15:30	LS

*Ashley M. Bennett*





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09284**


**Wateree Well Field Blank (NPDES)**

Date & Time Sampled: March 09, 2020 13:50  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WAFBTDS

Login Record File: 200311001

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than PQL	0.50	0.038	mg/L	3/14/20 00:14	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 00:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.33			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 00:14	BB
Total Alkalinity by SM2320B	2.5	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	15	2.0	2.0	mg/L	3/12/20 14:00	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09286**

**Wateree LF Leechate 1 CCR**

Date & Time Sampled: March 09, 2020 14:03  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH1AN

Login Record File: 200311001

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	86.1	10.00	0.76	mg/L	3/14/20 00:14	BB
Fluoride by IC EPA 300.0	Less than PQL	2.00	0.16	mg/L	3/14/20 00:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.29			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	1103	10.00	1.26	mg/L	3/14/20 00:14	BB
Total Alkalinity by SM2320B	11	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	1819	2.0	2.0	mg/L	3/12/20 14:00	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 26, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09287**

**Wateree LF Leechate 2 CCR**

Date & Time Sampled: March 09, 2020 14:08  
 Date & Time Submitted: March 11, 2020 07:39  
 Collected by: J.HILL Location Code: WALFLEACH2AN

Login Record File: 200311001

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	358	5.00	0.38	mg/L	3/14/20 00:14	BB
Fluoride by IC EPA 300.0	1.39	1.00	0.08	mg/L	3/14/20 00:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.84			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	1471	10.0	1.26	mg/L	3/23/20 21:47	BB
Total Alkalinity by SM2320B	330	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	3148	2.0	2.0	mg/L	3/12/20 14:00	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09339**

**Wateree Landfill MW-01LF-RCRA/CCR**

Date & Time Sampled: March 10, 2020 15:50  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG01LFTDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.47	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.83			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	29	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_





Central Laboratory (P-08)  
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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09340**

**Wateree Landfill AS-3-LF-RCRA/CCR**

Date & Time Sampled: March 10, 2020 15:50  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGLFAS3TDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.77	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.8			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	19	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09341**

**Wateree Landfill Well GW 6 -RCRA**

Date & Time Sampled: March 11, 2020 11:30  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG06LFTDS

GW 6

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.30	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.17			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	31	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09342**

**Wateree Landfill MW-07LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 08:35  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG07LFTDS

MW-07LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.2	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.11			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	3	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	40	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09343**

**Wateree Landfill MW-08LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG08LFTDS

MW-08LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.96	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.59			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	2	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	23	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09344**

**Wateree Landfill MW-10LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 11:20  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10LFTDS

MW-10LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	14.9	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.46			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	97.7	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	169	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09345**

**Wateree Landfill MW-10A LF-RCRA/CCR TDS**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG10ALFTDS

MW-10ALF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.4	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.11			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	15.1	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	1.5	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	68	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: \_\_\_\_\_



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09346**

**Waterree Landfill MW-11LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG11LFTDS

MW-11LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.56	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.32			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	4.5	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	27	2.0	2.0	mg/L	3/16/20 10:35	MS466

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09347**

**Wateree Landfill MW-22LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:15  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAG22LFTDS

MW-22LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.8	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	4.67			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	49	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09348**

**Wateree Landfill AS-1-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 10:40  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGLFAS1TDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.14	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.26			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	0.58	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	6	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	38	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 20, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09349**

**Wateree Landfill AS-2-LF-RCRA/CCR**

Date & Time Sampled: March 11, 2020 12:00  
 Date & Time Submitted: March 11, 2020 14:26  
 Collected by: J.HILL Location Code: WAGLFAS2TDS

MW-01LF

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.82	0.50	0.038	mg/L	3/14/20 23:33	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/14/20 23:33	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.12			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	2.94	0.50	0.063	mg/L	3/14/20 23:33	BB
Total Alkalinity by SM2320B	30	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	91	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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March 25, 2020

REPORT TO:
Rashida Marlowe

Sample ID: **BA09350**

**Wateree Well MW BG-73 (NPDES/CCR)**

Date & Time Sampled: March 11, 2020 09:20

Date & Time Submitted: March 11, 2020 14:26

Collected by: J.HILL

Location Code: WAMWBG73TDS

AP1-01

Login Record File: 200311004

CERTIFIED BY SCDHEC (LAI ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.39	0.50	0.038	mg/L	3/17/20 04:03	BB
Fluoride by IC EPA 300.0	Less than PQL	0.10	0.008	mg/L	3/17/20 04:03	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.38			S.U.	3/11/20 15:50	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	3/17/20 04:03	BB
Total Alkalinity by SM2320B	3	0.50	0.50	mg/L	3/11/20 15:50	PRC
Total Dissolved Solid-SM2540C	10	2.0	2.0	mg/L	3/16/20 10:35	MS469

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09964**

**Wataree Landfill MW-LF-01 TDS**

Date & Time Sampled: May 26, 2020 11:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: J.HILL Location Code: WAG01LFTDS

Login Record File: 200528001

MW-01LF

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.00	0.50	0.038	mg/L	5/28/20 00:05	BB
Conductivity, EPA 120.1 (1982)	46.6	0.050	0.050	umhos	5/28/20 12:17	PRC
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.61			S.U.	5/28/20 12:17	PRC
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Dissolved Solid-SM2540C	29	2.0	2.0	mg/L	5/29/20 11:39	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Copern





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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09978**

**Wateree Well MW BG-73 CCR/TDS**

Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAMWBG73TDS

Login Record File: 200528002

AP1-01

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.37	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09979**

**Wateree Landfill Duplicate-CCR/TDS**

Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGDUPTDS

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.26	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capone



Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09980**

**Wateree Landfill Field Blank-CCR/TDS**

Date & Time Sampled: May 26, 2020 13:05  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGFBTDS

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than PQL	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09981**

**Waree Landfill MW-10LF CCR/TDS**

Date & Time Sampled: May 26, 2020 13:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG10LFTDS

MW-10LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.94	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	12.1	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capete



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09982**

**Wateree Landfill MW-10A LF CCR/TDS**

Date & Time Sampled: May 26, 2020 14:26  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG10ALFTDS

MW-10ALF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	11.2	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	25.7	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	1.5	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Cooper



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09983**

**Wateree Landfill MW-07LF CCR/TDS**

Date & Time Sampled: May 26, 2020 15:08  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG07LFTDS

Login Record File: 200528002

MW-07LF

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.2	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers



Central Laboratory (P-08)  
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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09984**

**Wateree Landfill MW-22LF CCR/TDS**

Date & Time Sampled: May 26, 2020 15:52  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG22LFTDS

MW-22LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.1	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Copern



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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09985**

**Wataree Landfill AS-2-LF CCR/TDS**

Date & Time Sampled: May 27, 2020 09:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGLFAS2TDS

MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.92	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	2.37	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Capers





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June 01, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09986**

**Wateree Landfill AS-1-LF CCR/TDS**

Date & Time Sampled: May 27, 2020 12:00  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGLFAS1TDS

MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.85	0.50	0.038	mg/L	5/28/20 00:05	BB
Sulfates by IC EPA 300.0	Less than PQL	0.50	0.063	mg/L	5/28/20 00:05	BB
Total Alkalinity by SM2320B	Less than PQL	0.50	0.50	mg/L	5/29/20 14:55	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: Phillip Cooper



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09989**

**Wateree Well MW BG-73 CCR/Metals**

Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAMWBG73TM

AP1-01

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	340.00 (J)	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	594	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	777.00 (J)	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	1470	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Fax: (803) 217-9911

May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09990**

**Wateree Landfill Duplicate-CCR/Metals**

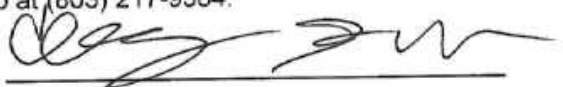
Date & Time Sampled: May 26, 2020 12:03  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGDUPTM

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	324.00 (J)	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	596	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	826.00 (J)	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	1520	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 

May 29, 2020

<b>REPORT TO:</b>
Rocky Archer Rashida Marlowe

 Sample ID: **BA09991**
**Wateree Landfill Field Blank-CCR/Metals**


 Date & Time Sampled: May 26, 2020 13:05  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGFBTM

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	Less than MDL	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	Less than MDL	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	Less than MDL	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	Less than MDL	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

 Approved By: 



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May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09998**

**Wateree AS-LF-02 CCR/Metals**

Date & Time Sampled: May 27, 2020 09:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGASLF1TM


MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	910	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	559	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	2120	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	2420	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 





Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09999**

**Wateree AS-LF-01 CCR/Metals**

Date & Time Sampled: May 27, 2020 12:00  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAGAS2LFTM

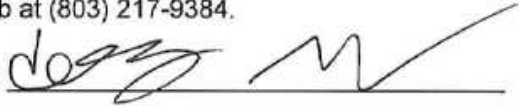
MW-01LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	918	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	1300	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	1610	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	5560	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)  
 2102 North Lake Drive  
 Columbia, SC 29212  
 Tel: (803)217-9384  
 Fax: (803) 217-9911

May 29, 2020

REPORT TO:
Rocky Archer Rashida Marlowe

Sample ID: **BA09992**

**Wateree Landfill MW-LF-10 CCR/Metals**

Date & Time Sampled: May 26, 2020 13:42  
 Date & Time Submitted: May 27, 2020 15:35  
 Collected by: A.HILL Location Code: WAG10LFM


MW-10LF

Login Record File: 200528002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(PQL)	Detection Limit(MDL)	Units	Completed Analysis Date & Time	Chemist
Calcium EPA 200.7	4860	500	83.8	ppb	5/28/20 16:24	CHG
Magnesium EPA 200.7	930	50	18.7	ppb	5/28/20 16:24	CHG
Potassium EPA 200.7	1230	1000	310	ppb	5/28/20 16:24	CHG
Sodium EPA 200.7	4910	1000	254	ppb	5/28/20 16:24	CHG

A result marked by "J" is an estimated result that is less than the Reporting Limit and greater than or equal to the Detection Limit. The "J" value is not to be used for regulatory or compliance reporting.

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



## **APPENDIX B**

### **Results of Statistical Analysis of Data**



**DOMINION ENERGY  
SOUTH CAROLINA**

**WATEREE STATION  
CLASS III LANDFILL**

**RICHLAND COUNTY, SOUTH CAROLINA**

**CCR GROUNDWATER  
DETECTION MONITORING  
STATISTICAL ANALYSIS REPORT**

**for the**

**March 2020 Sampling Event**

**Prepared on  
July 15, 2020**



## **STATISTICAL ANALYSIS REPORT**

### **Groundwater Sampling**

In accordance with 40 CFR Part 257.94, the 2020 first semi-annual groundwater sampling event for Detection Monitoring at the Wateree Station Class III Landfill began on March 11, 2020. This event included groundwater sampling from background monitoring wells MW-BG-73, MW-LF-01, AS-LF-01, AS-LF-02 and AS-LF-03; and the downgradient compliance monitoring wells MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22. The groundwater samples were analyzed for the constituents listed in Appendix III of the EPA CCR Rule which include Boron, Calcium, Chloride, Fluoride, pH, Sulfate, and Total Dissolved Solids.

### **Statistical Analysis**

The statistical analysis indicates that the concentrations of chloride in the groundwater samples collected from monitoring wells MW-LF-07, MW-LF-10A, and MW-LF-22 show statistically significant increases (SSI) above background concentrations. The statistical analysis indicates that the concentrations of sulfate in the groundwater samples collected from monitoring wells MW-LF-10 and MW-LF-10A show statistically significant increases (SSI) above background concentrations. No other statistically significant increases above background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from the Class III Landfill monitoring wells during the 2020 first semi-annual Detection Monitoring event.

**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 1

**Location Id:** MW-LF-07

**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09354	--	--	< 200.000	n	n	--

Run Id: 2

**Location Id:** MW-LF-07

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	03/11/2020	BA09354	1 of 2	24800.000	1070.000	n	n	--

Run Id: 3

**Location Id:** MW-LF-07

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	03/11/2020	BA09342	1 of 2	9.140	10.200	y	n	None
Chloride, tot mg/L	05/26/2020	BA09983	1 of 2	9.140	10.200	y	y	None

Run Id: 4

**Location Id:** MW-LF-07

**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	5.080	n/n	n	--

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 4

Location Id: MW-LF-07

Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.180	n/n	n	--
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Run Id: 5

Location Id: MW-LF-07

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	03/11/2020	BA09342	--	--	< 0.100	n	n	--

Run Id: 6

Location Id: MW-LF-07

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Sulfate, tot mg/L	03/11/2020	BA09342	1 of 2	7.890	< 0.500	n	n	--
Sulfate, tot mg/L	05/26/2020	BA09983	1 of 2	7.890	< 0.500	n	n	--

Run Id: 7

Location Id: MW-LF-07

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
TDS mg/L	03/11/2020	BA09342	1 of 2	373.000	40.000	n	n	--

Run Id: 8

Location Id: MW-LF-08

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 8

Location Id: MW-LF-08

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Boron, total ug/L	03/11/2020	BA09355	--	--	< 200.000	n	n	--

Run Id: 9

Location Id: MW-LF-08

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Calcium, tot ug/L	03/11/2020	BA09355	1 of 2	24800.000	867.000	n	n	--

Run Id: 10

Location Id: MW-LF-08

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	03/11/2020	BA09343	1 of 2	9.140	4.960	n	n	--

Run Id: 11

Location Id: MW-LF-08

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.750	n/n	n	--

Run Id: 12

Location Id: MW-LF-08

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 12

**Location Id:** MW-LF-08  
**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Fluoride, total mg/L	03/11/2020	BA09343	--	--	< 0.100	n	n	--

Run Id: 13

**Location Id:** MW-LF-08  
**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	03/11/2020	BA09343	1 of 2	7.890	< 0.500	n	n	--

Run Id: 14

**Location Id:** MW-LF-08  
**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09343	1 of 2	373.000	23.000	n	n	--

Run Id: 15

**Location Id:** MW-LF-10  
**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09356	--	--	< 200.000	n	n	--

Run Id: 16

**Location Id:** MW-LF-10

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 16

**Location Id:** MW-LF-10

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	03/11/2020	BA09356	1 of 2	24800.000	26700.000	y	n	Upward
Calcium, tot ug/L	05/26/2020	BA09992	1 of 2	24800.000	4860.000	n	n	--

Run Id: 17

**Location Id:** MW-LF-10

**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	03/11/2020	BA09344	1 of 2	9.140	14.900	y	n	None
Chloride, tot mg/L	05/26/2020	BA09981	1 of 2	9.140	5.940	n	n	--

Run Id: 18

**Location Id:** MW-LF-10

**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.170	n/n	n	--
Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.030	n/n	n	--

Run Id: 19

**Location Id:** MW-LF-10

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 19

Location Id: MW-LF-10

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Fluoride, total mg/L	03/11/2020	BA09344	--	--	< 0.100	n	n	--

Run Id: 20

Location Id: MW-LF-10

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	03/11/2020	BA09344	1 of 2	7.890	97.700	y	n	Upward
Sulfate, tot mg/L	05/26/2020	BA09981	1 of 2	7.890	12.100	y	y	Upward

Run Id: 21

Location Id: MW-LF-10

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09344	1 of 2	373.000	169.000	n	n	--

Run Id: 22

Location Id: MW-LF-10A

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09357	--	--	< 200.000	n	n	--

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.



## Wateree Station

## Wateree Station Class III Landfill

Run Id: 23

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Calcium, tot ug/L	03/11/2020	BA09357	1 of 2	24800.000	2190.000	n	n	--

Run Id: 24

Location Id: MW-LF-10A

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	03/11/2020	BA09345	1 of 2	9.140	10.400	y	n	Insufficient E
Chloride, tot mg/L	05/26/2020	BA09982	1 of 2	9.140	11.200	y	y	Insufficient E

Run Id: 25

Location Id: MW-LF-10A

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.500	n/n	n	--
Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.120	n/n	n	--

Run Id: 26

Location Id: MW-LF-10A

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 26**Location Id:** MW-LF-10A

Fluoride, total mg/L	03/11/2020	BA09345	--	--	< 0.100	n	n	--
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Run Id: 27**Location Id:** MW-LF-10A**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	03/11/2020	BA09345	1 of 2	7.890	15.100	y	n	Insufficient E
Sulfate, tot mg/L	05/26/2020	BA09982	1 of 2	7.890	25.700	y	y	Insufficient E

Run Id: 28**Location Id:** MW-LF-10A**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09345	1 of 2	373.000	68.000	n	n	--

Run Id: 29**Location Id:** MW-LF-11**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09358	--	--	< 200.000	n	n	--

Run Id: 30**Location Id:** MW-LF-11

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 30

Location Id: MW-LF-11

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Calcium, tot ug/L	03/11/2020	BA09358	1 of 2	24800.000	< 500.000	n	n	--

Run Id: 31

Location Id: MW-LF-11

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Chloride, tot mg/L	03/11/2020	BA09346	1 of 2	9.140	6.560	n	n	--

Run Id: 32

Location Id: MW-LF-11

Compliance Test: Parametric Prediction Interval on Background

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Lower Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.590	n/n	n	--

Run Id: 33

Location Id: MW-LF-11

Compliance Test: Double Quantification Rule

Parameter	Sample Date	Lab Id	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend
Fluoride, total mg/L	03/11/2020	BA09346	--	--	< 0.100	n	n	--

Run Id: 34

Location Id: MW-LF-11

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 34**Location Id:** MW-LF-11**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	03/11/2020	BA09346	1 of 2	7.890	< 0.500	n	n	--

Run Id: 35**Location Id:** MW-LF-11**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09346	1 of 2	373.000	27.000	n	n	--

Run Id: 36**Location Id:** MW-LF-22**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, total ug/L	03/11/2020	BA09359	--	--	< 200.000	n	n	--

Run Id: 37**Location Id:** MW-LF-22**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	03/11/2020	BA09359	1 of 2	24800.000	1910.000	n	n	--

Run Id: 38**Location Id:** MW-LF-22

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station

## Wateree Station Class III Landfill

Run Id: 38

Location Id: MW-LF-22

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	03/11/2020	BA09347	1 of 2	9.140	10.800	y	n	None
Chloride, tot mg/L	05/26/2020	BA09984	1 of 2	9.140	10.100	y	y	None

Run Id: 39

Location Id: MW-LF-22

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	03/11/2020	FLD20200311	1 of 2	5.938	3.235	4.270	n/n	n	--
Field pH S.U.	05/26/2020	FLD20200526	1 of 2	5.938	3.235	4.010	n/n	n	--

Run Id: 40

Location Id: MW-LF-22

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Fluoride, total mg/L	03/11/2020	BA09347	--	--	< 0.100	n	n	--

Run Id: 41

Location Id: MW-LF-22

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
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NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

**Wateree Station**  
**Wateree Station Class III Landfill**

Run Id: 41

**Location Id:** MW-LF-22

Sulfate, tot mg/L	03/11/2020	BA09347	1 of 2	7.890	< 0.500	n	n	--
Sulfate, tot mg/L	05/26/2020	BA09984	1 of 2	7.890	< 0.500	n	n	--

Run Id: 42

**Location Id:** MW-LF-22

**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
TDS mg/L	03/11/2020	BA09347	1 of 2	373.000	49.000	n	n	--

2020 1st Semi-annual Detection Monitoring

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

## Wateree Station Parametric Prediction Interval on Background - Background Data Calculation

<u>Number Of Locations:</u> 6	<u>Annual Site Wide False Positive Rate (SWFPR):</u> 0.10	
<u>Number Of Parameters:</u> 7	<u>Sample Events per Year:</u> 2	
<u>Sampling Plan:</u> Interwell	<u>Verification Sampling:</u> Pass 1 of 2 (one resample)	

**Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01**

Insufficient Background: 0

DQR Tests: 2

**Parameter Name: Field pH, S.U.**

Background Date Range: 05/01/2016 to 05/27/2020

Alpha Per Test FPR: 0.00174

Option for LT Pts: 0% to <= 15% Substitute ½ PQL

Total Pts 47

Kappa for Selected Verification Plan: 1.961

LT Pts 0

Mean 4.587

%LT Pts 0.00

StdDev 0.689

Normal/Log Normal y/n

In Mean 1.511

Log Transformed: n

In StdDev 0.161

Upper Limit: 5.938

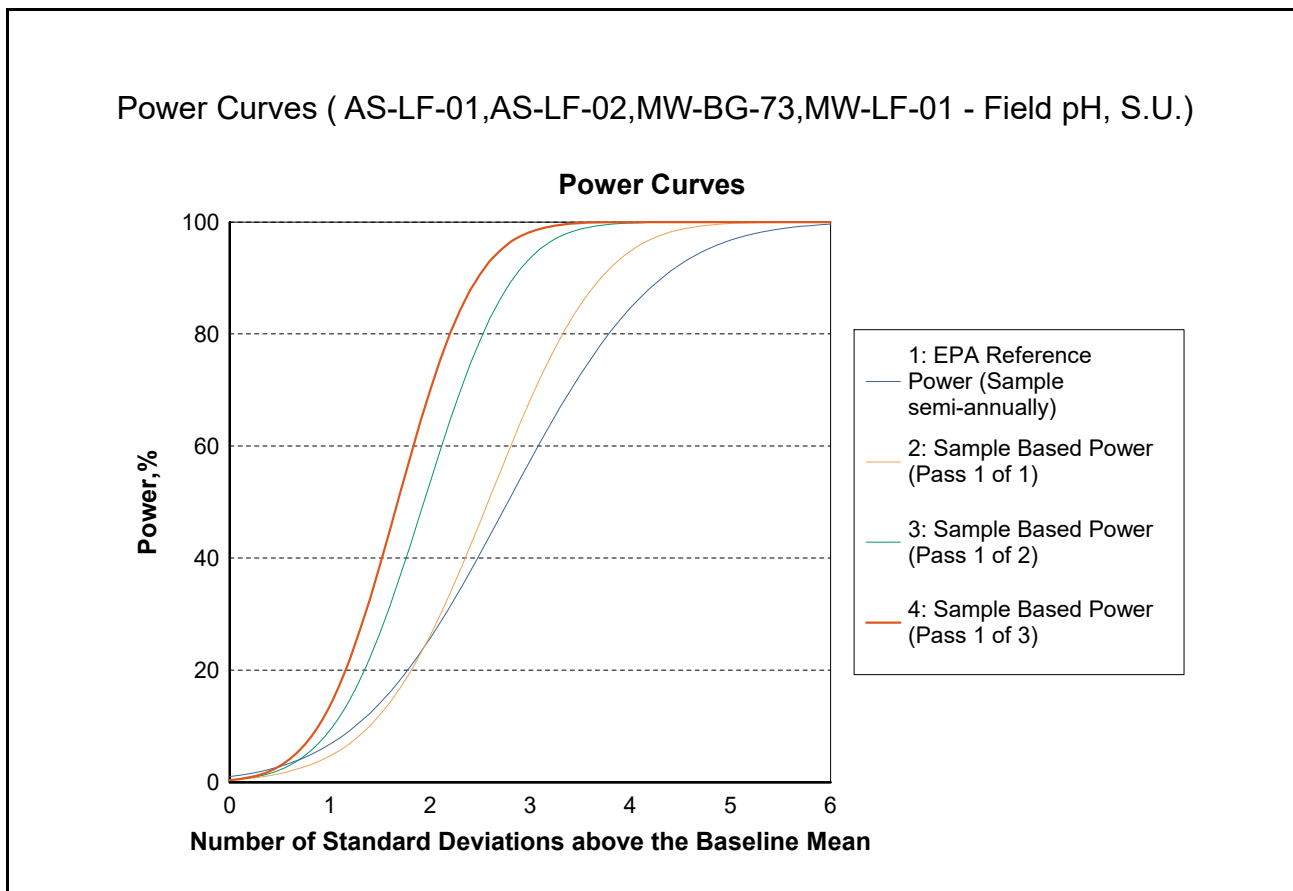
Lower Limit: 3.235

## Wateree Station Parametric Prediction Interval on Background - Background Data Calculation

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<u>Number Of Locations:</u> 6	<u>Annual Site Wide False Positive Rate (SWFPR):</u> 0.10	
<u>Number Of Parameters:</u> 7	<u>Sample Events per Year:</u> 2	
<u>Sampling Plan:</u> Interwell	<u>Verification Sampling:</u> Pass 1 of 2 (one resample)	

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## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 2

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper  
Confidence Level, %  
  
99.6

PU (Upper) Value:  
  
24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-07	03/11/2020	1070	n

Run Id: 3

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %  
  
99.61

PU (Upper) Value:  
  
9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-07	03/11/2020	10.2	y
MW-LF-07	05/26/2020	10.2	y

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 6

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-07	03/11/2020	<0.5	n
MW-LF-07	05/26/2020	<0.5	n

Run Id: 7

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.43

PU (Upper) Value:

373.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-07	03/11/2020	40	n

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 9

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.6 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-08	03/11/2020	867	n

Run Id: 10

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>
MW-LF-08	03/11/2020	4.96	n

Run Id: 13

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	Greater than <u>PU (Upper)</u>



## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 17

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

<b>One-Sided Upper Confidence Level, %</b>	<b>PU (Upper) Value:</b>
<b>99.61</b>	<b>9.140</b>

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	03/11/2020	14.9	y
MW-LF-10	05/26/2020	5.94	n

Run Id: 20

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

<b>One-Sided Upper Confidence Level, %</b>	<b>PU (Upper) Value:</b>
<b>99.61</b>	<b>7.890</b>

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	03/11/2020	97.7	y
MW-LF-10	05/26/2020	12.1	y

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 21

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.43 373.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10	03/11/2020	169	n

Run Id: 23

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.6 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	03/11/2020	2190	n

Run Id: 24

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

**Background Date Range:** 05/01/2016 to 05/27/2020  
**Compliance Date Range:** 03/01/2020 to 5/27/2020  
**No. of Verification Resamples:** 1

MW-LF-10A	03/11/2020	10.4	y
MW-LF-10A	05/26/2020	11.2	y

Run Id: 27

**Background Locations:** AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<b><u>Parameter Code</u></b>	<b><u>Parameter Name</u></b>	<b><u>Units</u></b>	<b><u>Background Sample Count</u></b>	<b><u>Option for LT Pts.</u></b>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

**One-Sided Upper Confidence Level, %** **PU (Upper) Value:**  
**99.61** **7.890**

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	03/11/2020	15.1	y
MW-LF-10A	05/26/2020	25.7	y

Run Id: 28

**Background Locations:** AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<b><u>Parameter Code</u></b>	<b><u>Parameter Name</u></b>	<b><u>Units</u></b>	<b><u>Background Sample Count</u></b>	<b><u>Option for LT Pts.</u></b>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

**One-Sided Upper Confidence Level, %** **PU (Upper) Value:**  
**99.43** **373.000**

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-10A	03/11/2020	68	n

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 30

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	53	> 15% to <= 50% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.6 24800.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-11	03/11/2020	<500	n

Run Id: 31

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-11	03/11/2020	6.56	n

Run Id: 34

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper Confidence Level, % PU (Upper) Value:  
 99.61 7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>





## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 38

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00940	Chloride, tot	mg/L	54	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

9.140

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	03/11/2020	10.8	y
MW-LF-22	05/26/2020	10.1	y

Run Id: 41

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<b>Background Sample Count</b>	<b><u>Option for LT Pts.</u></b>
00945	Sulfate, tot	mg/L	54	> 50% to <= 100% Substitute PQL

One-Sided Upper  
Confidence Level, %

99.61

PU (Upper) Value:

7.890

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	03/11/2020	<0.5	n
MW-LF-22	05/26/2020	<0.5	n

## Wateree Station Non-Parametric Prediction Interval on Background

### User Supplied Information

Background Date Range: 05/01/2016 to 05/27/2020  
 Compliance Date Range: 03/01/2020 to 5/27/2020  
 No. of Verification Resamples: 1

Run Id: 42

Background Locations: AS-LF-01,AS-LF-02,MW-BG-73,MW-LF-01

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	TDS	mg/L	44	0% to <= 15% Substitute PQL

One-Sided Upper  
Confidence Level, %  
  
**99.43**

PU (Upper) Value:  
  
**373.000**

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-LF-22	03/11/2020	49	n

Wateree Station

July 15, 2020

1:13:55 PM

All Background Results Non-Detect

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Location Id: MW-LF-07

Run Id: 1

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

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All Background Results Non-Detect

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Location Id: MW-LF-07

Run Id: 5

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-08

Run Id: 8

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-08

Run Id: 12

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

Location Id: MW-LF-10

Run Id: 15

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N



All Background Results Non-Detect

---

Location Id: MW-LF-10

Run Id: 19

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-10A

Run Id: 22

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-10A

Run Id: 26

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

---

All Background Results Non-Detect

---

Location Id: MW-LF-11

Run Id: 29

Parameter: Boron, total, ug/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

---

All Background Results Non-Detect

Location Id: MW-LF-11

Run Id: 33

Parameter: Fluoride, total, mg/L

Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

**All Background Results Non-Detect**

**Location Id:** MW-LF-22

Run Id: 36

**Parameter:** Boron, total, ug/L

Double Quantification Rule

**Percent ND:** 100

**ND Approach:** > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	200.000	200	38.458	0	200	Y	N

**All Background Results Non-Detect**

**Location Id:** MW-LF-22

Run Id: 40

**Parameter:** Fluoride, total, mg/L

Double Quantification Rule

**Percent ND:** 100

**ND Approach:** > 50% to <= 100% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>RL</u>	<u>PQL</u>	<u>Non Detect</u>	<u>Exceedance</u>
03/11/2020	0.100	0.1	0.008	0	0.1	Y	N

**All Background Results Non-Detect**

---



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 1

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 01022
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Boron, total
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> ug/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 ug/L per year
Lower Confidence Limit of Slope, M1:	-291.454 ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.631
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 2

**Location ID:** MW-LF-07

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 5

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-134.893 ug/L per year
Lower Confidence Limit of Slope, M1:	-272.214 ug/L per year
Upper Confidence Limit of Slope, M2+1:	147.245 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.805
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 3

**Location ID:** MW-LF-07

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.045 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.263 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.208 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.332
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 4

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.080	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.055	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.217	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.023
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 5

**Location ID:** MW-LF-07

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 93

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.215
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 6

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 mg/L per year
Lower Confidence Limit of Slope, M1:	0.000 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.694
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 7

<b>Location ID:</b> MW-LF-07	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-2.148 mg/L per year
Lower Confidence Limit of Slope, M1:	-5.218 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.677
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 8

**Location ID:** MW-LF-08

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 01022

**Parameter:** Boron, total

**Units:** ug/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 ug/L per year
Lower Confidence Limit of Slope, M1:	-257.626 ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.758
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 9

**Location ID:** MW-LF-08

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-15.161 ug/L per year
Lower Confidence Limit of Slope, M1:	-50.897 ug/L per year
Upper Confidence Limit of Slope, M2+1:	13.267 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.833
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 10

**Location ID:** MW-LF-08

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.052 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.069 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.213 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.660
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 11

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.011 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.154 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.246 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.055
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 12

**Location ID:** MW-LF-08

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.004
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 13

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 94

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 mg/L per year
Lower Confidence Limit of Slope, M1:	0.000 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.895
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 14

<b>Location ID:</b> MW-LF-08	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-3.337 mg/L per year
Lower Confidence Limit of Slope, M1:	-7.745 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.764
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 15

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 01022
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Boron, total
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> ug/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-213.706	ug/L per year
Lower Confidence Limit of Slope, M1:	-326.425	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.986
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 16

**Location ID:** MW-LF-10

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	1491.364	ug/L per year
Lower Confidence Limit of Slope, M1:	592.633	ug/L per year
Upper Confidence Limit of Slope, M2+1:	3974.501	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.277
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 17

**Location ID:** MW-LF-10

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 5

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.936 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.053 mg/L per year
Upper Confidence Limit of Slope, M2+1:	3.017 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.238
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 18

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.084 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.148 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.023 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.319
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 19

**Location ID:** MW-LF-10

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 94

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.070
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 20

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 15% to <= 50% Substitute PQL	<b>Percent of ND:</b> 27

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	4.517 mg/L per year
Lower Confidence Limit of Slope, M1:	2.432 mg/L per year
Upper Confidence Limit of Slope, M2+1:	13.963 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.280
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 21

<b>Location ID:</b> MW-LF-10	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	26.166 mg/L per year
Lower Confidence Limit of Slope, M1:	5.704 mg/L per year
Upper Confidence Limit of Slope, M2+1:	41.561 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.391
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 29

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 01022
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Boron, total
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> ug/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000 ug/L per year
Lower Confidence Limit of Slope, M1:	-257.756 ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.758
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

---

### Post Hoc Trend Analysis

Run Id: 30

**Location ID:** MW-LF-11

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 15% to <= 50% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 18

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	22.650 ug/L per year
Lower Confidence Limit of Slope, M1:	-16.811 ug/L per year
Upper Confidence Limit of Slope, M2+1:	99.017 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.992
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 31

**Location ID:** MW-LF-11

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.193 mg/L per year
Lower Confidence Limit of Slope, M1:	0.068 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.512 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.464
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Upward



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 32

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.080 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.219 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.050 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.091
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 33

**Location ID:** MW-LF-11

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.004
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 34

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00945
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Sulfate, tot
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> > 50% to <= 100% Substitute PQL	<b>Percent of ND:</b> 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 35

<b>Location ID:</b> MW-LF-11	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.991 mg/L per year
Lower Confidence Limit of Slope, M1:	-4.373 mg/L per year
Upper Confidence Limit of Slope, M2+1:	8.778 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.219
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 36

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 01022

**Parameter:** Boron, total

**Units:** ug/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	-257.561	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.758
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	Downward

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 37

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00916

**Parameter:** Calcium, tot

**Units:** ug/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	19.007 ug/L per year
Lower Confidence Limit of Slope, M1:	-167.731 ug/L per year
Upper Confidence Limit of Slope, M2+1:	235.145 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.227
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 38

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** 0% to <= 15% Substitute PQL

**Parameter Code:** 00940

**Parameter:** Chloride, tot

**Units:** mg/L

**Percent of ND:** 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.113 mg/L per year
Lower Confidence Limit of Slope, M1:	-0.379 mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.604 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.357
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 39

<b>Location ID:</b> MW-LF-22	<b>Parameter Code:</b> 00400
<b>Confidence Level:</b> 95%	<b>Parameter:</b> Field pH
<b>Date Range:</b> 05/12/2016 to 05/26/2020	<b>Units:</b> S.U.
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.016 S.U. per year
Lower Confidence Limit of Slope, M1:	-0.119 S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.128 S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.083
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None



## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 40

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 03/11/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00951

**Parameter:** Fluoride, total

**Units:** mg/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.004
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 41

**Location ID:** MW-LF-22

**Confidence Level:** 95%

**Date Range:** 05/12/2016 to 05/26/2020

**Option for LT Points:** > 50% to <= 100% Substitute PQL

**Parameter Code:** 00945

**Parameter:** Sulfate, tot

**Units:** mg/L

**Percent of ND:** 100

---

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

## Wateree Station Theil Sen Mann-Kendall Trend Analysis

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### Post Hoc Trend Analysis

Run Id: 42

<b>Location ID:</b> MW-LF-22	<b>Parameter Code:</b> 00515
<b>Confidence Level:</b> 95%	<b>Parameter:</b> TDS
<b>Date Range:</b> 05/12/2016 to 03/11/2020	<b>Units:</b> mg/L
<b>Option for LT Points:</b> 0% to <= 15% Substitute PQL	<b>Percent of ND:</b> 0

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Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.956 mg/L per year
Lower Confidence Limit of Slope, M1:	-2.453 mg/L per year
Upper Confidence Limit of Slope, M2+1:	3.564 mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.348
Z test:	1.645
At the 95% Confidence Level (One-Sided Test):	None

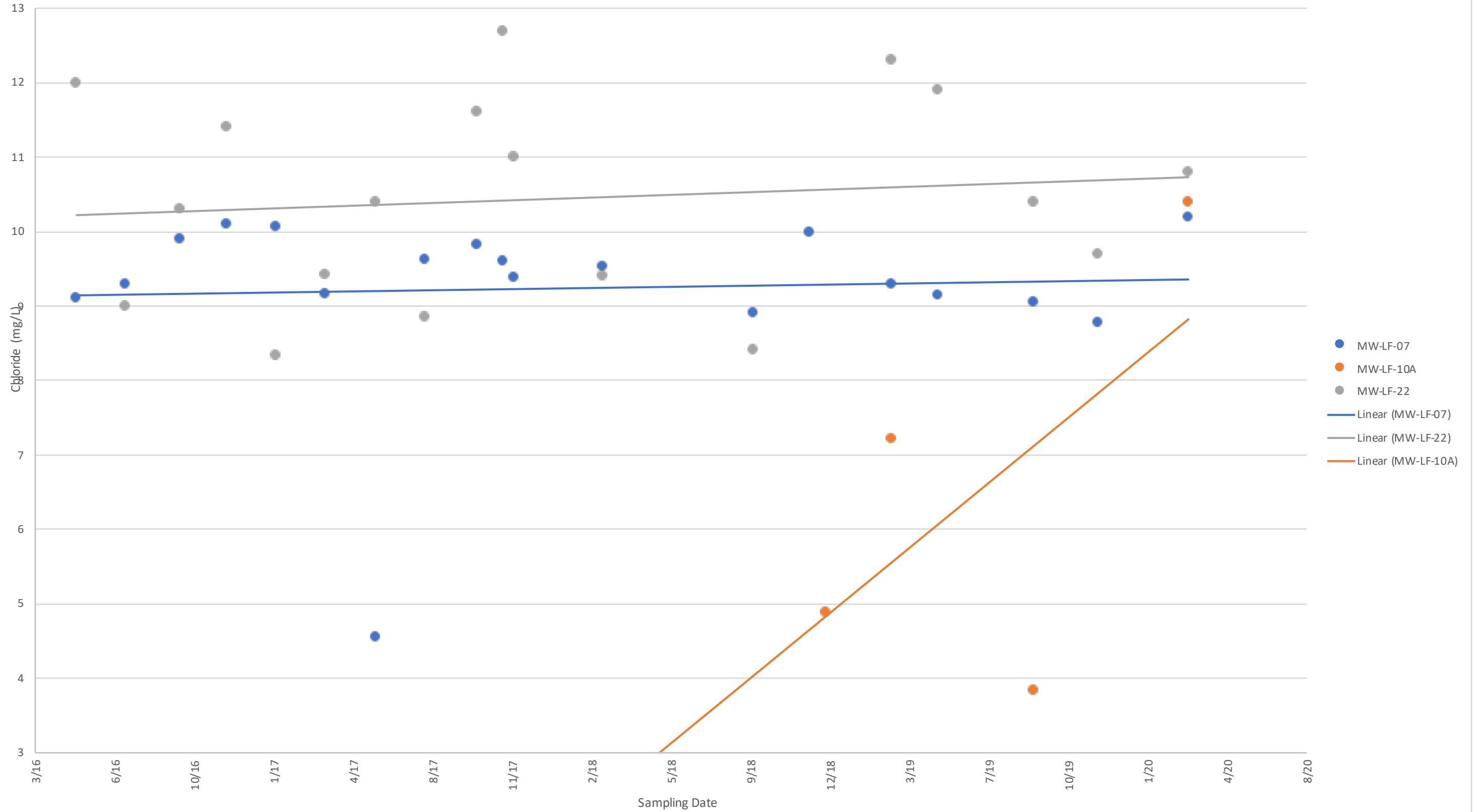
**Wateree Station**  
**Theil Sen Mann-Kendall Trend Analysis**



## **APPENDIX C**

### **Concentrations versus Time Graphs**

Chloride Concentration Versus Time  
MW-LF-07, MW-LF-10A  
and MW-LF-22



Sulfate Concentration Versus Time  
MW-LF-10, and MW-LF-10A

