

**2022 ANNUAL GROUNDWATER MONITORING AND  
CORRECTIVE ACTION REPORT**

**MISSISSIPPI POWER COMPANY  
PLANT VICTOR DANIEL  
NORTH ASH MANAGEMENT UNIT**

**January 31, 2023**

Prepared for

Mississippi Power Company  
Gulfport, Mississippi

By


Southern Company Services  
Earth Science and Environmental Engineering



**Mississippi Power**

## CERTIFICATION STATEMENT

This *2022 Annual Groundwater Monitoring and Corrective Action Report*, Mississippi Power Company – Plant Daniel North Ash Management Unit has been prepared to comply with the United States Environmental Protection Agency coal combustion residual rule (40 Code of Federal Regulations (CFR) Part 257, Subpart D) under the supervision of a licensed Professional Geologist with Southern Company Services.



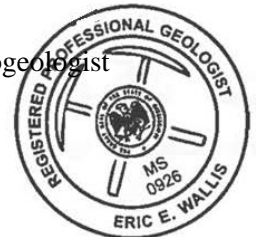
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## **SITE SUMMARY**

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D), this *2022 Annual Groundwater Monitoring and Corrective Action Report* has been prepared to document 2022 semi-annual detection groundwater monitoring activities at the Plant Daniel North Ash Management Unit (NAMU) and to satisfy the requirements of § 257.90(e). Semi-annual detection monitoring and associated reporting for Plant Daniel NAMU is performed in accordance with the monitoring requirements § 257.90 through § 257.94.

Statistical evaluations identified statistically significant increases (SSIs) of Appendix III constituents above the GWPS during the March 2022 detection monitoring event. However, an ASD report for SSIs identified during the first semi-annual detection monitoring event was submitted in January 2022 that addresses these SSIs. As discussed in the ASD report, the apparent exceedances observed during the monitoring period were not likely the result of a release from the CCR unit. Therefore, in accordance with § 257.94, MPC will continue detection monitoring.

The following future actions will be taken or are recommended for the Site:

- Continue semi-annual assessment monitoring in 2023.
- Submit 2023 Annual Groundwater Monitoring and Corrective Action Report by January 31, 2024.

Pursuant to 40 CFR 257.90(e)(6), the table titled **Monitoring Period Summary** has been prepared to describe the status of groundwater monitoring and corrective action during the monitoring period for this report.

**Monitoring Period Summary**  
**Plant Daniel - North Ash Management Unit**

Monitoring Period: January 1 - December 31, 2022  
 Beginning Status: Detection  
 Ending Status: Detection

**STATISTICAL ANALYSIS RESULTS\***

**Appendix III SSIs**

Parameter	Wells
Boron	None
Calcium	MW-19
Chloride	None
Fluoride	None
pH	MW-19
Sulfate	None
TDS	None

**Appendix IV SSLs**

Site Remains in Detection Monitoring (§ 257.94)

\* See the attached report for further details regarding statistical exceedances.

**ASSESSMENT OF CORRECTIVE MEASURES & GROUNDWATER REMEDY**

**Assessment of Corrective Measures**

Site Remains in Detection Monitoring (§ 257.94)

**Groundwater Remedy**

Site Remains in Detection Monitoring (§ 257.94)

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## **1.0 INTRODUCTION**

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations (CFR) § 257 Subpart D), Southern Company Services (SCS) has prepared this *2022 Annual Groundwater Monitoring and Corrective Action Report* document groundwater monitoring activities at Mississippi Power Company (MPC) Plant Daniel North Ash Management Unit (NAMU).

Groundwater monitoring and reporting for the CCR unit is performed in accordance with the monitoring requirements § 257.90 through § 257.94 of the Federal CCR rule. This report has been prepared to document the 2022 semi-annual groundwater monitoring events at the NAMU and to satisfy the requirements of § 257.90(e).

## 2.0 SITE DESCRIPTION

The Site is located within Section 35, Township 5 South, Range 6 West, Sections 37, 10, 15, East half of Section 9, Southwest ¼ of Section 2, Northwest ¼ and south half of Section 11, and the north half and northwest ¼ of the southwest ¼ of Section 14, all of Township 6 South, Range 6 West. The Site is situated immediately northwest of the intersection of Mississippi State Highways 63 and 613, between the Pascagoula River to the west and Highway 63 to the east. The site address is 13201 Highway 63 N, Escatawpa, Mississippi 39562.

NAMU is located in the northernmost portion of the property. **Figure 1, Site Location Map**, depicts the location of Plant Daniel relative to site features and the surrounding area.

### 2.1 Regional Geology & Hydrogeologic Setting

Jackson County lies in the Pascagoula River Drainage Basin in the Gulf Coastal Plain physiographic province. Topographically, the province is gently rolling to flat with local salt marshes. Rock outcrops are sedimentary in origin and range in age from late Miocene to Recent (Gandl, 1982). A dominant regional structural feature which affects the sediments of Miocene and younger age is the Gulf Coast geosyncline. The sediments dip toward the Gulf of Mexico. Where formations are near the surface, dips are from 15 to 35 feet/mile. Further from the outcrop, dips increase dramatically with depth. Fresh-water aquifers in the Pascagoula area are sand or sand and gravel beds of Miocene age or younger, generally less than 1,000 feet below the surface.

The surface geology of soils near Plant Daniel results from present-day weathering processes dictated by southern Mississippi's semi-tropical climate and the parent geologic materials. The soil profile formed from a wide variety of sediments of recent age, and from Pleistocene terrace deposits. The soils therefore contain sand, silt, clay, gravel and organics.

Studies prepared by SCS, establish five geologic units underlying the immediate Plant Daniel property:

- Unit 1 is a sandy clay aquitard. The unit is discontinuous across the Plant Daniel site and extends from the surface to approximately 32 feet deep in some areas.
- Unit 2 is a sand aquifer, which extends to approximately 70 feet and is considered the uppermost aquifer for groundwater monitoring purposes.
- Unit 3 is a clay aquitard underlying Unit 2 with thicknesses ranging from 2.5 to 9.5 feet at Plant Daniel.
- Unit 4 is a sand and gravel aquifer with a thickness of 34 feet or greater.



- Unit 5 is a clay aquitard.

## **2.2 Uppermost Aquifer**

Two aquifers supply water to the Pascagoula area. These are the Pliocene-age Citronelle and the Miocene Aquifer System, which includes the Graham Ferry Aquifer. Plant Daniel is located in the Citronelle outcrop area.

The Citronelle Aquifers are the shallowest aquifers in the Pascagoula area. Although principally a sand and gravel formation, the Citronelle is characterized by occasional lenses and layers of clay which may cause semi-artesian conditions. Sediments become coarse near the irregular contact with the underlying Pascagoula or Graham Ferry Formation. Also, the Citronelle and overlying coastal deposits are generally considered one hydrogeologic unit. The Citronelle is primarily a water table aquifer with a saturated thickness of about 45 feet. Recharge is primarily by rainfall which moves vertically and down dip to recharge underlying aquifers and to sustain local streams (Wasson, 1978).

For groundwater monitoring purposes, the Unit 2 sand is the uppermost aquifer screened by site monitoring wells.

### **3.0 GROUNDWATER MONITORING SYSTEM AND ACTIVITY**

Pursuant to § 257.91, MPC installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer (Unit 2). The Professional Engineer (PE)-certified groundwater monitoring system for the NAMU is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. As required by § 257.90(e), the following also describes monitoring-related activities performed during the preceding year.

#### **3.1 Groundwater Monitoring System**

The groundwater monitoring network is comprised of seven monitoring wells as presented on **Figure 2, Monitoring Well Location Map. Table 1, Monitoring Well Network Summary**, summarizes the monitoring well construction details and design purpose for the NAMU.

Monitoring well locations MW-11, MW-14, and MW-18 serve as upgradient locations for the NAMU. Upgradient wells are screened within the same uppermost aquifer as downgradient locations and are representative of background groundwater quality at the site. Monitoring well locations MW-15, MW-16, MW-17 and MW-19 are utilized as downgradient locations for NAMU. Downgradient locations were determined by water level monitoring and potentiometric surface maps constructed for the site.

#### **3.2 Monitoring Well Installation and Maintenance**

There was no change to the groundwater monitoring system in 2022; the network remained the same as in the previous reporting year. Monitoring well-related activities were limited to visual inspection of well conditions prior to sampling, recording the site conditions, and performing exterior maintenance to perform sampling under safe and clean conditions.

#### **3.3 Detection Monitoring**

Based on results provided in previous Annual Groundwater and Corrective Action Monitoring Reports, the NAMU is performing detection monitoring. Samples were collected from wells in the PE-certified monitoring system shown on **Figure 2**. Analytical data from the semi-annual monitoring events are included as **Appendix A, Laboratory Analytical and Field Sampling Reports**, in accordance with the requirements of § 257.90(e)(3).

## 4.0 SAMPLE METHODOLOGY & ANALYSIS

The following describes the methods used to complete groundwater monitoring at NAMU.

### 4.1 Groundwater Flow Direction, Gradient, and Velocity

Prior to each sampling event, groundwater levels were measured and recorded to the nearest 0.01 foot within a 24-hour period. Groundwater levels recorded during the monitoring events are summarized in **Table 2, Groundwater Elevations Summary – 2022**. Groundwater levels and top of casing elevations were used to calculate groundwater elevation and develop the potentiometric surface elevation contour map provided as **Figures 3 and 4, Potentiometric Surface Contour Map(s)**. As shown on **Figures 3 and 4**, the general direction of groundwater flow is west-southwest. The groundwater flow pattern observed during the 2022 monitoring events is consistent with historic observations.

Groundwater flow velocities at the site were calculated based on hydraulic gradients, hydraulic conductivity from previous slug test results, and an estimated effective porosity of the screened horizon. Based on slug test data at the site the average hydraulic conductivity at the site is 25 feet per day. The hydraulic gradient was calculated between well pairs shown on **Table 3, Groundwater Flow Velocity Calculations - 2022**. An effective porosity of 0.2 was used based on the default values for effective porosity recommended by USEPA for a silty sand-type soil (U.S. USEPA, 1996).

Horizontal flow velocity was calculated using the commonly used derivative of Darcy's Law:

$$V = \frac{K * i}{n_e}$$

Where:

$V$  = Groundwater flow velocity  $\left(\frac{feet}{day}\right)$

$K$  = Average permeability of the aquifer  $\left(\frac{feet}{day}\right)$

$i$  = Horizontal hydraulic gradient

$n_e$  = Effective porosity

Using this equation, groundwater flow velocities are calculated for various areas of the site and are tabulated on **Table 3**.

Groundwater monitoring wells MW-14 and MW-16 were used as points for calculating Flow Path A and MW-11 and MW-19 were used to calculate Flow Path B. The horizontal hydraulic gradients ranged from 0.0030 feet per foot (ft/ft) to 0.0039 ft/ft. As presented on **Table 3**, groundwater flow velocity at the site ranges from approximately 0.38 feet per day (ft/day) (or approximately 137.37 feet per year) to 0.049

feet/day (or approximately 178.01 feet per year). These calculated groundwater flow velocities across the site are consistent with historical calculations and with expected velocities.

#### **4.2 Groundwater Sampling**

Groundwater samples were collected from monitoring wells using low-flow sampling procedures in accordance with § 257.93(a). All monitoring wells at the Site are equipped with a dedicated pump. Monitoring wells were purged and sampled using low-flow sampling procedures whereby samples are collected when field water quality parameters (pH, turbidity, conductivity, and dissolved oxygen (DO)) were measured to determine stabilization. Groundwater samples were collected when the following stabilization criteria were met:

- 0.2 standard units for pH
- 5% for specific conductance
- 0.2 mg/L or 10% for DO > 0.5 mg/l (whichever is greater)
- Turbidity measurements less than 5 nephelometric turbidity unit (NTU)
- Temperature and oxidation reduction potential (ORP) – record only, no stabilization criteria

During purging and sampling a SmarTroll instrument was used to monitor and record field parameters. Once stabilization was achieved, samples were collected and submitted to the laboratory following standard chain-of-custody (COC) protocol.

#### **4.3 Laboratory Analysis**

Laboratory analyses was performed by Eurofins Environmental Testing TestAmerica, Inc. (TAL) of Pittsburgh, Pennsylvania and St. Louis, Missouri. TAL is accredited by National Environmental Laboratory Accreditation Program (NELAP). TestAmerica maintains a NELAP certification for all parameters analyzed for this project. Groundwater analytical data and chain-of-custody records for the monitoring events are presented in **Appendix A**.

#### **4.4 Quality Assurance and Quality Control**

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every 10 detection samples. Equipment blanks and duplicate samples were also collected during each sampling event. QA/QC sample data was evaluated during data validation and is included in **Appendix A**. When values are followed by a "J" flag, this indicates that the value is an estimated analyte concentration detected between the method detection limit (MDL) and the laboratory reporting limit (RL). The estimated value is positively identified but is below lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory operating conditions.

Analytical precision is measured through the calculation of the relative percent difference (RPD) of two data sets generated from a similar source. Here, a comparison of results between samples and field duplicate samples are used as measure of laboratory precision. For groundwater analytical data, quality control procedures include calculating the relative percent difference (where field duplicates are collected, the RPD) between the sample and duplicate sample duplicate concentrations. This is calculated as:

$$RPD = \frac{Conc1 - Conc2}{(Conc1 + Conc2) / 2}$$

Where:

RPD = Relative Percent Difference (%)

Conc1 = Higher concentration of the sample or field duplicate

Conc2 = Lower concentration of the sample or field duplicate

Relative percent differences are calculated for all detected concentrations above the RL. Where the RPD is below 20%, the difference is considered acceptable, and no further action is needed. Where an RPD is greater than 20%, further evaluation is required to attempt to determine the cause of the difference and potentially result in qualified data. **Table 4, Relative Percent Difference Calculations**, provides the relative percent differences for sample and sample duplicates during 2022 sampling events.

During the first 2022 semi-annual sampling event, RPD exceeded 20% for chloride, sulfate, and Total Dissolved Solids (TDS) for the sample and field duplicate collected at MW-15, and fluoride and TDS for the sample and field duplicate collected at MW-17. The sulfate concentration detected at MW-15 and the fluoride concentration detected at MW-17 and their respective field duplicates are less than five times the RL, and the difference between the results is less than the RL. Therefore, no further data qualification is required for those constituents. A summary of qualified data from the first semi-annual sampling event of 2022 is provided below.

Sample Location	Constituent	Sample Concentration (mg/L)	Field Duplicate Concentration (mg/L)	RPD (%)	Reporting Limit (mg/L)	Data Qualifier
MW-15	Chloride	5.55 mg/L	6.95 mg/L	22.4%	1.0 mg/L	(+) J
MW-15	Fluoride	51.0 mg/L	20.0 mg/L	87.3%	10 mg/L	(+) J
MW-17	TDS	55.0 mg/L	27.0 mg/L	68.3%	10 mg/L	(+) J

During the second 2022 semi-annual sampling event, RPD exceeded 20% for TDS for the sample and field duplicate collected at MW-11. A summary of qualified data from the second semi-annual sampling event of 2022 is provided below.

2022 Annual Groundwater Monitoring and Corrective Action Report  
Plant Daniel – North Ash Management Unit

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Sample Location	Constituent	Sample Concentration (mg/L)	Field Duplicate Concentration (mg/L)	RPD (%)	Reporting Limit (mg/L)	Data Qualifier
MW-11	Chloride	53.0 mg/L	40.0 mg/L	28%	10 mg/L	(+) J

No additional data qualification is required for the first or second semi-annual detection events of 2022.

## 5.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III groundwater monitoring data was performed on samples collected from the certified groundwater monitoring network pursuant to 40 CFR § 257.93 and following the appropriate PE-certified method. The statistical method used at the site was developed by Groundwater Stats Consulting, LLC (GSC), in accordance with 40 CFR § 257.93(f) using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, EPA 530/R-09-007 (USEPA, 2009). Results are included in **Appendix B, Statistical Data Evaluation**.

### 5.1 Statistical Method

At NAMU, intrawell prediction limits (PL) are used to compare the most recent sample to prediction limits constructed from screened historical data from within the same well for each of the Appendix III parameters and determine whether any concentrations exceed background levels. The selected statistical method includes a 1-of-2 verification resample plan. If the intrawell PL is exceeded, the two-step analysis procedure is enacted whereby interwell PL are constructed using pooled upgradient well data to evaluate the apparent intrawell PL exceedances among downgradient wells. When an initial (or apparent) statistically significant increase or questionable result occurs, a second sample may be collected to verify the initial result or determine if the result was an outlier. If the second sample exceeds its respective background statistical limit, a statistically significant increase (SSI) is identified. If the second sample is below its respective background limit there is no SSI.

### 5.2 Statistical Analysis Results

Analytical data from the 2022 semi-annual monitoring events in March and October were statistically analyzed in accordance with the PE-certified Statistical Analysis Plan (October 2017), Statistical Background Update by GSC (December 2019), and revised Statistical Analysis Plan (October 2022).

A review of the Sanitas results, presented in **Appendix B**, identified the following Appendix III SSIs during the first semi-annual monitoring event:

- MW-19: Calcium, pH

During the second semi-annual monitoring event, no SSIs were identified, including those previously reported at MW-19.

As discussed in the following section, an alternate source demonstration (ASD) was prepared and submitted in January 2022 pursuant to 40 CFR § 257.94(e)(2) demonstrating that the SSIs at MW-19 are not the result of a release from the CCR unit.

## **6.0 ALTERNATE SOURCE DEMONSTRATION**

Section 257.94(e)(2) allows the owner or operator to demonstrate that a source other than the CCR Unit has caused an SSI or that the SSI was the result of an alternate source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. An ASD report for SSIs identified during the 2021 semi-annual detection monitoring events was submitted on January 31, 2022. As discussed in the ASD report, the apparent exceedances observed were not the result of a release from the CCR unit and are likely caused by natural variability in groundwater quality.. Based on the ASD, the NAMU remains in detection monitoring.



## **7.0 MONITORING PROGRAM STATUS**

Presently, Plant Daniel NAMU is in detection monitoring. SSIs of Appendix III parameters have been identified during the first semi-annual event of 2022. Pursuant to § 257.94(e)(1), MPC has prepared a demonstration that a source other than the CCR unit was the cause. MPC has addressed the reported SSIs in accordance with the requirements, and options, of § 257.94(e)(1-3) and (f) by providing an ASD, submitted January 31, 2022 as described in Section 6.0.

## **8.0 CONCLUSIONS & FUTURE ACTIONS**

Based on results reported in the *2022 Annual Groundwater and Corrective Action Monitoring Report*, MPC remained in detection monitoring. Groundwater samples were subsequently collected from the certified well network and analyzed for Appendix III parameters.

The certified compliance monitoring well network was resampled on a semi-annual basis. The groundwater samples were analyzed for all Appendix III parameters. Statistical evaluations of the March and October 2022 detection monitoring data identified SSIs of Appendix III constituents above the GWPS. However, an ASD report submitted in January 2022 addresses these SSIs.. As discussed in the ASD report, the apparent exceedances observed during the monitoring period were not likely the result of a release from the CCR unit.

Therefore, in accordance with § 257.94, MPC will continue detection monitoring. The following future actions will be taken or are recommended for the Site:

- Continue semi-annual detection monitoring in 2023.
- Submit 2023 Annual Groundwater Monitoring and Corrective Action Report by January 31, 2024.

## 9.0 REFERENCES

- Gandl, L.A. “Characterization of Aquifers Designated as Potential Drinking Water Sources in Mississippi,” Water Resources Investigation Open-File Report 81-550, Mississippi Department of Natural Resources, Bureau of Pollution Control. 1982. 90 pp.
- Southern Company Services, Inc., Alternate Source Demonstration, 2021 Semi-Annual Monitoring Events, Mississippi Power Company, Plant Victor Daniel, North Ash Management Unit, January 31, 2022.
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- USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule.* [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN-2050-AE81. April.
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- USEPA. 2017. National Functional Guidelines for Inorganic Superfund Methods Data Review. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-135 [EPA-540-R-2017-001]. Washington, DC. January.
- Wasson, B.E., 1978, Availability of additional ground-water supplies in the Pascagoula area, Mississippi: Mississippi Research and Development Center Bulletin, 32 p.

# Tables

**Table 1.  
Monitoring Well Network Summary**

<b>Well ID</b>	<b>Purpose</b>	<b>Installation Date</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Total Well Depth (feet)</b>	<b>Top of Casing Elevation (feet MSL )</b>	<b>Ground Elevation (feet MSL)</b>	<b>Top of Screen Elevation (feet MSL)</b>	<b>Bottom of Screen Elevation (feet MSL)</b>
MW-11	Upgradient	5/2/2006	30.55781	-88.56425	34.02	25.24	23.22	-3.78	-8.78
MW-14	Upgradient	7/24/2015	30.55575	-88.56435	40.78	23.65	20.87	-11.83	-16.83
MW-15	Downgradient	7/24/2015	30.55426	-88.56544	39.44	21.53	18.69	-12.41	-17.61
MW-16	Downgradient	7/24/2015	30.55451	-88.56775	28.36	16.12	13.16	-6.94	-11.94
MW-17	Downgradient	7/24/2015	30.55778	-88.56786	28.62	15.41	12.59	-7.91	-12.91
MW-18	Upgradient	7/24/2015	30.55917	-88.56479	44.43	28.86	26.33	-10.27	-15.27
MW-19	Downgradient	7/26/2016	30.55606	-88.56818	32.76	24.42	21.56	-3.04	-8.04

Notes:

1. Elevations shown are referenced Mean Sea Level (MSL) to NAVD 88 (G12) U.S. Survey Feet.
2. MSL refers to Mean Sea Level.

**Table 2.**  
**Groundwater Elevations Summary - 2022**

Well ID	Top of Casing Elevation  (feet MSL)	Groundwater Elevations (feet MSL)	
		March 14, 2022	October 3, 2022
MW-11	25.24	10.49	10.85
MW-14	23.65	9.38	9.56
MW-15	21.53	8.08	8.09
MW-16	16.12	5.33	4.98
MW-17	15.41	7.22	7.51
MW-18	28.86	10.62	11.08
MW-19	24.42	4.99	4.63

Notes:

1. MSL refers to Mean Sea Level

**Table 3.**  
**Groundwater Flow Velocity Calculations - 2022**

<b>Flow Path A</b>								
	<b>MW-14</b>	<b>MW-16</b>	<b>Distance</b>	<b>Hydraulic Gradient</b>	<b>Hydraulic Conductivity</b>	<b>Assumed Effective Porosity (ne)</b>	<b>Calculated Groundwater Flow Velocity (feet/day)</b>	<b>Calculated Groundwater Flow Velocity (feet/year)</b>
	<b>h<sub>1</sub> (ft)</b>	<b>h<sub>2</sub> (ft)</b>	<b>Δl (ft)</b>	<b>Δh/Δl (ft/ft)</b>	<b>K</b>			
<b>3/14/2022</b>	9.38	5.33	1350	0.0030	25.09	0.2	0.38	137.37
<b>10/3/2022</b>	9.56	4.98	1350	0.0034	25.09	0.2	0.43	155.34

<b>Flow Path B</b>								
	<b>MW-11</b>	<b>MW-19</b>	<b>Distance</b>	<b>Hydraulic Gradient</b>	<b>Hydraulic Conductivity</b>	<b>Assumed Effective Porosity (ne)</b>	<b>Calculated Groundwater Flow Velocity (feet/day)</b>	<b>Calculated Groundwater Flow Velocity (feet/year)</b>
	<b>h<sub>1</sub> (ft)</b>	<b>h<sub>2</sub> (ft)</b>	<b>Δl (ft)</b>	<b>Δh/Δl (ft/ft)</b>	<b>K</b>			
<b>3/14/2022</b>	10.49	4.99	1600	0.0034	25.09	0.2	0.43	157.40
<b>10/3/2022</b>	10.85	4.63	1600	0.0039	25.09	0.2	0.49	178.01

Notes:

ft=feet

ft/d = feet/day

ft/ft = feet per foot

ft/yr = feet per year

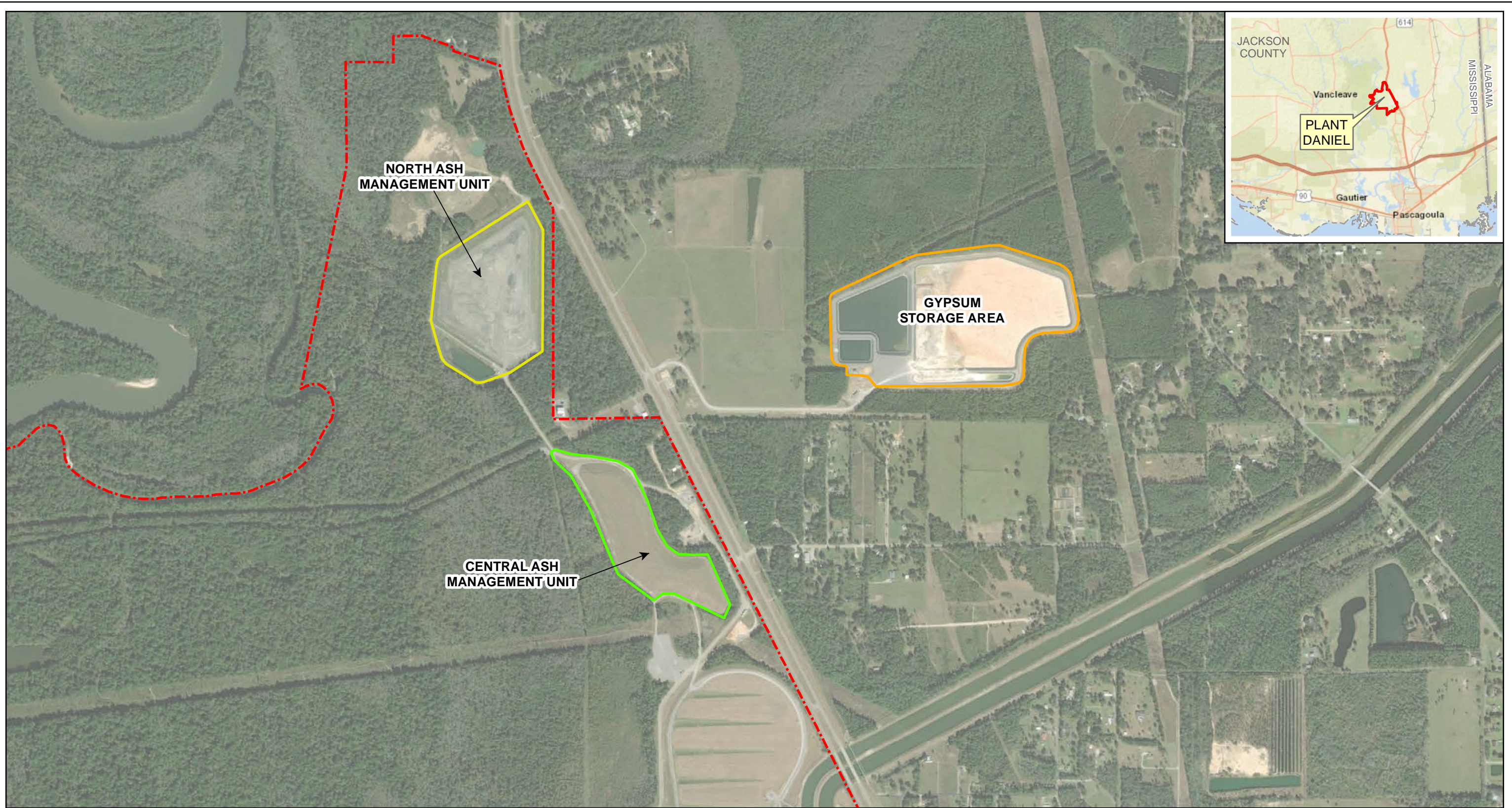
**Table 4.**  
**Relative Percent Difference Calculations**

<b>1st Semi-Annual Monitoring Event</b>				
<b>Parameter</b>	<b>Units</b>	<b>Monitoring Point Identification</b>		<b>Relative Percent Difference (RPD %)</b>
		<b>MW-15</b>	<b>Dup-01</b>	
Chloride	mg/L	5.55	6.95	22.4
Fluoride	mg/L	0.0302	0.0260	14.9
Sulfate	mg/L	1.33	1.66	22.1
Calcium	mg/L	0.703	0.640	9.4
TDS	mg/L	51.0	20.0	87.3
<b>Parameter</b>	<b>Units</b>	<b>Monitoring Point Identification</b>		<b>Relative Percent Difference (RPD %)</b>
		<b>MW-17</b>	<b>Dup-02</b>	
Chloride	mg/L	7.00	6.66	5.0
Fluoride	mg/L	0.0399	0.0586	38.0
Sulfate	mg/L	3.38	3.59	6.0
Calcium	mg/L	1.04	0.902	14.2
TDS	mg/L	55.0	27.0	68.3

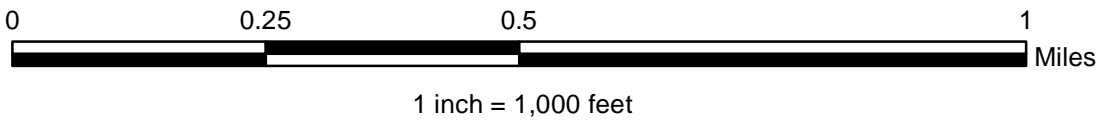
<b>2nd Semi-Annual Monitoring Event</b>				
<b>Parameter</b>	<b>Units</b>	<b>Monitoring Point Identification</b>		<b>Relative Percent Difference (RPD %)</b>
		<b>MW-11</b>	<b>Dup-02</b>	
Chloride	mg/L	12.0	12.1	0.8
Fluoride	mg/L	0.0281	0.0270	4.0
Sulfate	mg/L	2.04	2.2500	9.8
Calcium	mg/L	1.30	1.51	14.9
TDS	mg/L	53.0	40.0	28.0



# Figures



- Legend**
- Central Ash Management Unit
  - Gypsum Storage Area
  - North Ash Management Unit
  - Property Boundary (Approximate)







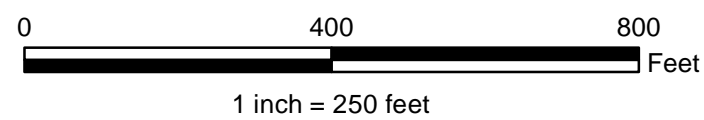
SCALE	1:12000
DATE	8/13/2021
DRAWN BY	KAR
CHECKED BY	RFS

DRAWING TITLE	
SITE LOCATION MAP PLANT DANIEL NORTH ASH MANAGEMENT UNIT	
DRAWING NO	<b>FIGURE 1</b>
Southern Company	




**Legend**

-  Upgradient Monitoring Well
-  Downgradient Monitoring Well
-  Piezometer (Water Level Only)
-  North Ash Management Unit

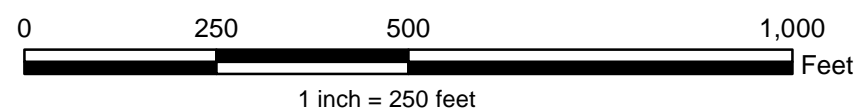


SCALE	1:3000
DATE	8/13/2021
DRAWN BY	KAR
CHECKED BY	RFS

DRAWING TITLE	
MONITORING WELL LOCATION MAP PLANT DANIEL NORTH ASH MANAGEMENT UNIT	
DRAWING NO	
<b>FIGURE 2</b>	



Legend	
	Upgradient Monitoring Well
	Downgradient Monitoring Well
	Piezometer (Water Level Only)
	Estimated Potentiometric Surface Contour (ft NAVD88)
	Approximate Groundwater Flow Direction
	North Ash Management Unit
<b>MW-11</b>	Well Name
10.49	Groundwater Elevation (ft NAVD88)



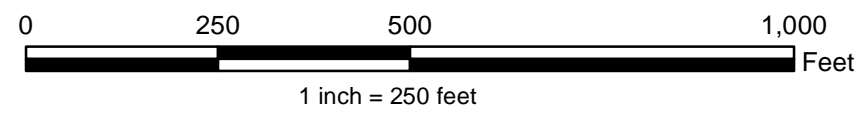
Note: ft NAVD88 indicates feet relative to the North American Vertical Datum of 1988.

SCALE	1:3000
DATE	8/11/2022
DRAWN BY	KAR
CHECKED BY	RFS

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP	
MARCH 14, 2022	
PLANT DANIEL	
NORTH ASH MANAGEMENT UNIT	
DRAWING NO	
<b>FIGURE 3</b>	



Legend	
	Upgradient Monitoring Well
	Downgradient Monitoring Well
	Piezometer (Water Level Only)
	Estimated Potentiometric Surface Contour (ft NAVD88)
	Approximate Groundwater Flow Direction
	North Ash Management Unit
<b>MW-11</b> 10.85	Well Name Groundwater Elevation (ft NAVD88)



Note: ft NAVD88 indicates feet relative to the North American Vertical Datum of 1988.

SCALE	1:3000
DATE	1/18/2023
DRAWN BY	KAR
CHECKED BY	RFS

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP	
OCTOBER 3, 2022	
PLANT DANIEL	
NORTH ASH MANAGEMENT UNIT	
DRAWING NO	
<b>FIGURE 4</b>	

# Appendix A

**1st**  
**Semi-Annual**  
**Monitoring Event**

## ANALYTICAL REPORT

Eurofins Pittsburgh  
301 Alpha Drive  
RIDC Park  
Pittsburgh, PA 15238  
Tel: (412)963-7058

Laboratory Job ID: 180-135320-1  
Client Project/Site: Plant Daniel NAMU CCR

For:  
Southern Company  
3535 Colonnade Parkway  
Bin S 530 EC  
Birmingham, Alabama 35243

Attn: Robert Singleton



Authorized for release by:  
4/11/2022 9:08:16 PM

Shali Brown, Project Manager II  
(615)301-5031  
[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

PA Lab ID: 02-00416





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# Case Narrative

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

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**Job ID: 180-135320-1**

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**Laboratory: Eurofins Pittsburgh**

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**Narrative**

**Job Narrative  
180-135320-1**

**Receipt**

The samples were received on 3/17/2022 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.2°C and 4.0°C

**HPLC/IC**

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

**Metals**

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

**General Chemistry**

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



# Definitions/Glossary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

Client: Southern Company  
 Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-22
California	State	2891	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	06-30-22
Georgia	State	PA 02-00416	04-30-22
Illinois	NELAP	004375	06-30-22
Kansas	NELAP	E-10350	03-31-22 *
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-22
Louisiana	NELAP	04041	06-30-22
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	12-31-22
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22 *
New Jersey	NELAP	PA005	06-30-23
New York	NELAP	11182	04-02-22 *
North Carolina (WW/SW)	State	434	12-31-22
North Dakota	State	R-227	04-30-22
Oregon	NELAP	PA-2151	02-06-22 *
Pennsylvania	NELAP	02-00416	04-30-22
Rhode Island	State	LAO00362	12-31-21 *
South Carolina	State	89014	06-30-22
Texas	NELAP	T104704528	03-31-23
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	09-15-22
West Virginia DEP	State	142	01-31-23
Wisconsin	State	998027800	08-31-22

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# Sample Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-135320-1	MW-11	Water	03/15/22 14:20	03/17/22 09:15
180-135320-2	MW-14	Water	03/15/22 12:05	03/17/22 09:15
180-135320-3	MW-15	Water	03/15/22 11:25	03/17/22 09:15
180-135320-4	MW-16	Water	03/15/22 11:26	03/17/22 09:15
180-135320-5	MW-17	Water	03/16/22 07:45	03/17/22 09:15
180-135320-6	MW-18	Water	03/16/22 12:50	03/17/22 09:15
180-135320-7	MW-19	Water	03/15/22 13:18	03/17/22 09:15
180-135320-8	DUP-01	Water	03/15/22 10:25	03/17/22 09:15
180-135320-9	EB-01	Water	03/16/22 07:00	03/17/22 09:15
180-135320-10	FB-01	Water	03/15/22 14:22	03/17/22 09:15
180-135320-11	DUP-02	Water	03/16/22 06:45	03/17/22 09:15

- 1
- 2
- 3
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- 9
- 10
- 11
- 12
- 13

# Method Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT

#### Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058



# Lab Chronicle

Client: Southern Company  
 Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

**Client Sample ID: MW-11**  
**Date Collected: 03/15/22 14:20**  
**Date Received: 03/17/22 09:15**

**Lab Sample ID: 180-135320-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393986	04/02/22 18:10	JRB	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	392733	03/23/22 10:51	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392994	03/24/22 13:47	RSK	TAL PIT
Instrument ID: NEMO										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392456	03/21/22 15:15	JCR	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: MW-14**  
**Date Collected: 03/15/22 12:05**  
**Date Received: 03/17/22 09:15**

**Lab Sample ID: 180-135320-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393714	03/31/22 14:29	JRB	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			25 mL	25 mL	392733	03/23/22 10:51	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392994	03/24/22 13:50	RSK	TAL PIT
Instrument ID: NEMO										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392456	03/21/22 15:15	JCR	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: MW-15**  
**Date Collected: 03/15/22 11:25**  
**Date Received: 03/17/22 09:15**

**Lab Sample ID: 180-135320-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393714	03/31/22 15:04	JRB	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			25 mL	25 mL	392733	03/23/22 10:51	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392994	03/24/22 13:53	RSK	TAL PIT
Instrument ID: NEMO										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392456	03/21/22 15:15	JCR	TAL PIT
Instrument ID: NOEQUIP										

**Client Sample ID: MW-16**  
**Date Collected: 03/15/22 11:26**  
**Date Received: 03/17/22 09:15**

**Lab Sample ID: 180-135320-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393714	03/31/22 15:16	JRB	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			25 mL	25 mL	392733	03/23/22 10:51	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392994	03/24/22 13:55	RSK	TAL PIT
Instrument ID: NEMO										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392456	03/21/22 15:15	JCR	TAL PIT
Instrument ID: NOEQUIP										

Eurofins Pittsburgh

# Lab Chronicle

Client: Southern Company  
 Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Client Sample ID: MW-17

Date Collected: 03/16/22 07:45

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393714	03/31/22 15:27	JRB	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			25 mL	25 mL	392733	03/23/22 10:51	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392994	03/24/22 13:58	RSK	TAL PIT
Instrument ID: NEMO										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392456	03/21/22 15:15	JCR	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: MW-18

Date Collected: 03/16/22 12:50

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393986	04/02/22 16:27	JRB	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	392735	03/23/22 10:53	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392993	03/24/22 13:50	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392458	03/21/22 15:16	JCR	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: MW-19

Date Collected: 03/15/22 13:18

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393986	04/02/22 16:41	JRB	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	392735	03/23/22 10:53	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392993	03/24/22 13:53	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392458	03/21/22 15:16	JCR	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: DUP-01

Date Collected: 03/15/22 10:25

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393986	04/02/22 16:57	JRB	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	392735	03/23/22 10:53	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392993	03/24/22 13:57	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392458	03/21/22 15:16	JCR	TAL PIT
Instrument ID: NOEQUIP										

Eurofins Pittsburgh



# Lab Chronicle

Client: Southern Company  
 Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Client Sample ID: EB-01

Lab Sample ID: 180-135320-9

Date Collected: 03/16/22 07:00

Matrix: Water

Date Received: 03/17/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393714	03/31/22 13:41	JRB	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			25 mL	25 mL	392735	03/23/22 10:53	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392993	03/24/22 14:01	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392458	03/21/22 15:16	JCR	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: FB-01

Lab Sample ID: 180-135320-10

Date Collected: 03/15/22 14:22

Matrix: Water

Date Received: 03/17/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			393714	03/31/22 13:54	JRB	TAL PIT
Instrument ID: CHIC2100A										
Total Recoverable	Prep	3005A			25 mL	25 mL	392735	03/23/22 10:53	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392993	03/24/22 14:04	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392458	03/21/22 15:16	JCR	TAL PIT
Instrument ID: NOEQUIP										

## Client Sample ID: DUP-02

Lab Sample ID: 180-135320-11

Date Collected: 03/16/22 06:45

Matrix: Water

Date Received: 03/17/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			394541	04/07/22 19:31	JRB	TAL PIT
Instrument ID: INTEGRION										
Total Recoverable	Prep	3005A			25 mL	25 mL	392735	03/23/22 10:53	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1			392993	03/24/22 14:08	RSK	TAL PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	392458	03/21/22 15:16	JCR	TAL PIT
Instrument ID: NOEQUIP										

**Laboratory References:**

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**

Lab: TAL PIT

Batch Type: Prep

RGM = Rebecca Manns

Batch Type: Analysis

JCR = Jessica Rodgers

JRB = James Burzio

RSK = Robert Kurtz

Eurofins Pittsburgh

# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Client Sample ID: MW-11

Date Collected: 03/15/22 14:20

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-1

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.6		1.00	0.713	mg/L			04/02/22 18:10	1
Fluoride	<0.0260		0.100	0.0260	mg/L			04/02/22 18:10	1
Sulfate	2.88		1.00	0.756	mg/L			04/02/22 18:10	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:51	03/24/22 13:47	1
Calcium	1.87		0.500	0.127	mg/L		03/23/22 10:51	03/24/22 13:47	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	53.0		10.0	10.0	mg/L			03/21/22 15:15	1

## Client Sample ID: MW-14

Date Collected: 03/15/22 12:05

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-2

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.36		1.00	0.713	mg/L			03/31/22 14:29	1
Fluoride	0.0364	J	0.100	0.0260	mg/L			03/31/22 14:29	1
Sulfate	2.10		1.00	0.756	mg/L			03/31/22 14:29	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:51	03/24/22 13:50	1
Calcium	2.59		0.500	0.127	mg/L		03/23/22 10:51	03/24/22 13:50	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	56.0		10.0	10.0	mg/L			03/21/22 15:15	1

## Client Sample ID: MW-15

Date Collected: 03/15/22 11:25

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-3

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.55		1.00	0.713	mg/L			03/31/22 15:04	1
Fluoride	0.0302	J	0.100	0.0260	mg/L			03/31/22 15:04	1
Sulfate	1.33		1.00	0.756	mg/L			03/31/22 15:04	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:51	03/24/22 13:53	1
Calcium	0.703		0.500	0.127	mg/L		03/23/22 10:51	03/24/22 13:53	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	51.0		10.0	10.0	mg/L			03/21/22 15:15	1

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# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Client Sample ID: MW-16

Date Collected: 03/15/22 11:26

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-4

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.8		1.00	0.713	mg/L			03/31/22 15:16	1
Fluoride	0.0438	J	0.100	0.0260	mg/L			03/31/22 15:16	1
Sulfate	2.29		1.00	0.756	mg/L			03/31/22 15:16	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:51	03/24/22 13:55	1
Calcium	1.18		0.500	0.127	mg/L		03/23/22 10:51	03/24/22 13:55	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34.0		10.0	10.0	mg/L			03/21/22 15:15	1

## Client Sample ID: MW-17

Date Collected: 03/16/22 07:45

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-5

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.00		1.00	0.713	mg/L			03/31/22 15:27	1
Fluoride	0.0399	J	0.100	0.0260	mg/L			03/31/22 15:27	1
Sulfate	3.38		1.00	0.756	mg/L			03/31/22 15:27	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:51	03/24/22 13:58	1
Calcium	1.04		0.500	0.127	mg/L		03/23/22 10:51	03/24/22 13:58	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	55.0		10.0	10.0	mg/L			03/21/22 15:15	1

## Client Sample ID: MW-18

Date Collected: 03/16/22 12:50

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-6

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.05		1.00	0.713	mg/L			04/02/22 16:27	1
Fluoride	<0.0260		0.100	0.0260	mg/L			04/02/22 16:27	1
Sulfate	7.04		1.00	0.756	mg/L			04/02/22 16:27	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0927		0.0800	0.0601	mg/L		03/23/22 10:53	03/24/22 13:50	1
Calcium	0.406	J	0.500	0.127	mg/L		03/23/22 10:53	03/24/22 13:50	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	25.0		10.0	10.0	mg/L			03/21/22 15:16	1

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# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Client Sample ID: MW-19

Date Collected: 03/15/22 13:18

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-7

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.91		1.00	0.713	mg/L			04/02/22 16:41	1
Fluoride	0.0423	J	0.100	0.0260	mg/L			04/02/22 16:41	1
Sulfate	4.86		1.00	0.756	mg/L			04/02/22 16:41	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:53	03/24/22 13:53	1
Calcium	5.84		0.500	0.127	mg/L		03/23/22 10:53	03/24/22 13:53	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36.0		10.0	10.0	mg/L			03/21/22 15:16	1

## Client Sample ID: DUP-01

Date Collected: 03/15/22 10:25

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-8

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.95		1.00	0.713	mg/L			04/02/22 16:57	1
Fluoride	<0.0260		0.100	0.0260	mg/L			04/02/22 16:57	1
Sulfate	1.66		1.00	0.756	mg/L			04/02/22 16:57	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:53	03/24/22 13:57	1
Calcium	0.640		0.500	0.127	mg/L		03/23/22 10:53	03/24/22 13:57	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20.0		10.0	10.0	mg/L			03/21/22 15:16	1

## Client Sample ID: EB-01

Date Collected: 03/16/22 07:00

Date Received: 03/17/22 09:15

## Lab Sample ID: 180-135320-9

Matrix: Water

### Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.713		1.00	0.713	mg/L			03/31/22 13:41	1
Fluoride	<0.0260		0.100	0.0260	mg/L			03/31/22 13:41	1
Sulfate	<0.756		1.00	0.756	mg/L			03/31/22 13:41	1

### Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:53	03/24/22 14:01	1
Calcium	<0.127		0.500	0.127	mg/L		03/23/22 10:53	03/24/22 14:01	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			03/21/22 15:16	1

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# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

**Client Sample ID: FB-01**

**Lab Sample ID: 180-135320-10**

Date Collected: 03/15/22 14:22

Matrix: Water

Date Received: 03/17/22 09:15

**Method: EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.713		1.00	0.713	mg/L			03/31/22 13:54	1
Fluoride	<0.0260		0.100	0.0260	mg/L			03/31/22 13:54	1
Sulfate	<0.756		1.00	0.756	mg/L			03/31/22 13:54	1

**Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:53	03/24/22 14:04	1
Calcium	<0.127		0.500	0.127	mg/L		03/23/22 10:53	03/24/22 14:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			03/21/22 15:16	1

**Client Sample ID: DUP-02**

**Lab Sample ID: 180-135320-11**

Date Collected: 03/16/22 06:45

Matrix: Water

Date Received: 03/17/22 09:15

**Method: EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.66		1.00	0.713	mg/L			04/07/22 19:31	1
Fluoride	0.0586	J	0.100	0.0260	mg/L			04/07/22 19:31	1
Sulfate	3.59		1.00	0.756	mg/L			04/07/22 19:31	1

**Method: EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:53	03/24/22 14:08	1
Calcium	0.902		0.500	0.127	mg/L		03/23/22 10:53	03/24/22 14:08	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	27.0		10.0	10.0	mg/L			03/21/22 15:16	1

# QC Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Method: EPA 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 180-393714/7**  
**Matrix: Water**  
**Analysis Batch: 393714**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.713		1.00	0.713	mg/L			03/31/22 10:08	1
Fluoride	<0.0260		0.100	0.0260	mg/L			03/31/22 10:08	1
Sulfate	<0.756		1.00	0.756	mg/L			03/31/22 10:08	1

**Lab Sample ID: LCS 180-393714/5**  
**Matrix: Water**  
**Analysis Batch: 393714**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	51.21		mg/L		102	80 - 120
Fluoride	2.50	2.733		mg/L		109	80 - 120
Sulfate	50.0	51.45		mg/L		103	80 - 120

**Lab Sample ID: 180-135320-2 MS**  
**Matrix: Water**  
**Analysis Batch: 393714**

**Client Sample ID: MW-14**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	8.36		50.0	59.03		mg/L		101	80 - 120
Fluoride	0.0364	J	2.50	2.745		mg/L		108	80 - 120
Sulfate	2.10		50.0	53.98		mg/L		104	80 - 120

**Lab Sample ID: 180-135320-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 393714**

**Client Sample ID: MW-14**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	8.36		50.0	60.68		mg/L		105	80 - 120	3	15
Fluoride	0.0364	J	2.50	2.805		mg/L		111	80 - 120	2	15
Sulfate	2.10		50.0	54.69		mg/L		105	80 - 120	1	15

**Lab Sample ID: MB 180-393986/7**  
**Matrix: Water**  
**Analysis Batch: 393986**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.713		1.00	0.713	mg/L			04/02/22 11:38	1
Fluoride	<0.0260		0.100	0.0260	mg/L			04/02/22 11:38	1
Sulfate	<0.756		1.00	0.756	mg/L			04/02/22 11:38	1

**Lab Sample ID: LCS 180-393986/6**  
**Matrix: Water**  
**Analysis Batch: 393986**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.14		mg/L		98	80 - 120
Fluoride	2.50	2.442		mg/L		98	80 - 120
Sulfate	50.0	48.28		mg/L		97	80 - 120

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# QC Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Method: EPA 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 180-394541/7**  
**Matrix: Water**  
**Analysis Batch: 394541**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.713		1.00	0.713	mg/L			04/07/22 12:03	1
Fluoride	<0.0260		0.100	0.0260	mg/L			04/07/22 12:03	1
Sulfate	<0.756		1.00	0.756	mg/L			04/07/22 12:03	1

**Lab Sample ID: LCS 180-394541/6**  
**Matrix: Water**  
**Analysis Batch: 394541**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.68		mg/L		101	80 - 120
Fluoride	2.50	2.564		mg/L		103	80 - 120
Sulfate	50.0	51.70		mg/L		103	80 - 120

## Method: EPA 6020B - Metals (ICP/MS)

**Lab Sample ID: MB 180-392733/1-A**  
**Matrix: Water**  
**Analysis Batch: 392994**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 392733**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:51	03/24/22 12:28	1
Calcium	<0.127		0.500	0.127	mg/L		03/23/22 10:51	03/24/22 12:28	1

**Lab Sample ID: LCS 180-392733/2-A**  
**Matrix: Water**  
**Analysis Batch: 392994**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 392733**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.25	1.252		mg/L		100	80 - 120
Calcium	25.0	28.37		mg/L		113	80 - 120

**Lab Sample ID: MB 180-392735/1-A**  
**Matrix: Water**  
**Analysis Batch: 392993**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 392735**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		03/23/22 10:53	03/24/22 13:21	1
Calcium	<0.127		0.500	0.127	mg/L		03/23/22 10:53	03/24/22 13:21	1

**Lab Sample ID: LCS 180-392735/2-A**  
**Matrix: Water**  
**Analysis Batch: 392993**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 392735**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.25	1.124		mg/L		90	80 - 120
Calcium	25.0	24.93		mg/L		100	80 - 120

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# QC Sample Results

Client: Southern Company  
 Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 180-392456/2**  
**Matrix: Water**  
**Analysis Batch: 392456**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			03/21/22 15:15	1

**Lab Sample ID: LCS 180-392456/1**  
**Matrix: Water**  
**Analysis Batch: 392456**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	469	460.0		mg/L		98	85 - 115

**Lab Sample ID: MB 180-392458/2**  
**Matrix: Water**  
**Analysis Batch: 392458**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			03/21/22 15:16	1

**Lab Sample ID: LCS 180-392458/1**  
**Matrix: Water**  
**Analysis Batch: 392458**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	469	440.0		mg/L		94	85 - 115

**Lab Sample ID: 180-135320-6 DU**  
**Matrix: Water**  
**Analysis Batch: 392458**

**Client Sample ID: MW-18**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	25.0		24.00		mg/L		4	10



# QC Association Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## HPLC/IC

### Analysis Batch: 393714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-2	MW-14	Total/NA	Water	EPA 9056A	
180-135320-3	MW-15	Total/NA	Water	EPA 9056A	
180-135320-4	MW-16	Total/NA	Water	EPA 9056A	
180-135320-5	MW-17	Total/NA	Water	EPA 9056A	
180-135320-9	EB-01	Total/NA	Water	EPA 9056A	
180-135320-10	FB-01	Total/NA	Water	EPA 9056A	
MB 180-393714/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-393714/5	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-135320-2 MS	MW-14	Total/NA	Water	EPA 9056A	
180-135320-2 MSD	MW-14	Total/NA	Water	EPA 9056A	

### Analysis Batch: 393986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-1	MW-11	Total/NA	Water	EPA 9056A	
180-135320-6	MW-18	Total/NA	Water	EPA 9056A	
180-135320-7	MW-19	Total/NA	Water	EPA 9056A	
180-135320-8	DUP-01	Total/NA	Water	EPA 9056A	
MB 180-393986/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-393986/6	Lab Control Sample	Total/NA	Water	EPA 9056A	

### Analysis Batch: 394541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-11	DUP-02	Total/NA	Water	EPA 9056A	
MB 180-394541/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-394541/6	Lab Control Sample	Total/NA	Water	EPA 9056A	

## Metals

### Prep Batch: 392733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-1	MW-11	Total Recoverable	Water	3005A	
180-135320-2	MW-14	Total Recoverable	Water	3005A	
180-135320-3	MW-15	Total Recoverable	Water	3005A	
180-135320-4	MW-16	Total Recoverable	Water	3005A	
180-135320-5	MW-17	Total Recoverable	Water	3005A	
MB 180-392733/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-392733/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Prep Batch: 392735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-6	MW-18	Total Recoverable	Water	3005A	
180-135320-7	MW-19	Total Recoverable	Water	3005A	
180-135320-8	DUP-01	Total Recoverable	Water	3005A	
180-135320-9	EB-01	Total Recoverable	Water	3005A	
180-135320-10	FB-01	Total Recoverable	Water	3005A	
180-135320-11	DUP-02	Total Recoverable	Water	3005A	
MB 180-392735/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-392735/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

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# QC Association Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-135320-1

## Metals

### Analysis Batch: 392993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-6	MW-18	Total Recoverable	Water	EPA 6020B	392735
180-135320-7	MW-19	Total Recoverable	Water	EPA 6020B	392735
180-135320-8	DUP-01	Total Recoverable	Water	EPA 6020B	392735
180-135320-9	EB-01	Total Recoverable	Water	EPA 6020B	392735
180-135320-10	FB-01	Total Recoverable	Water	EPA 6020B	392735
180-135320-11	DUP-02	Total Recoverable	Water	EPA 6020B	392735
MB 180-392735/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	392735
LCS 180-392735/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	392735

### Analysis Batch: 392994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-1	MW-11	Total Recoverable	Water	EPA 6020B	392733
180-135320-2	MW-14	Total Recoverable	Water	EPA 6020B	392733
180-135320-3	MW-15	Total Recoverable	Water	EPA 6020B	392733
180-135320-4	MW-16	Total Recoverable	Water	EPA 6020B	392733
180-135320-5	MW-17	Total Recoverable	Water	EPA 6020B	392733
MB 180-392733/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	392733
LCS 180-392733/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	392733

## General Chemistry

### Analysis Batch: 392456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-1	MW-11	Total/NA	Water	SM 2540C	
180-135320-2	MW-14	Total/NA	Water	SM 2540C	
180-135320-3	MW-15	Total/NA	Water	SM 2540C	
180-135320-4	MW-16	Total/NA	Water	SM 2540C	
180-135320-5	MW-17	Total/NA	Water	SM 2540C	
MB 180-392456/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-392456/1	Lab Control Sample	Total/NA	Water	SM 2540C	

### Analysis Batch: 392458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135320-6	MW-18	Total/NA	Water	SM 2540C	
180-135320-7	MW-19	Total/NA	Water	SM 2540C	
180-135320-8	DUP-01	Total/NA	Water	SM 2540C	
180-135320-9	EB-01	Total/NA	Water	SM 2540C	
180-135320-10	FB-01	Total/NA	Water	SM 2540C	
180-135320-11	DUP-02	Total/NA	Water	SM 2540C	
MB 180-392458/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-392458/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-135320-6 DU	MW-18	Total/NA	Water	SM 2540C	

**Eurofins TestAmerica, Pittsburgh**

301 Alpha Drive RIDC Park  
 Pittsburgh, PA 15238  
 Phone (412) 963-7058 Fax (412) 963-2468

**Chain of Custody Record**



<b>Client Information</b>		Sampler: <u>Brett Swales / Colten Evans</u>		Lab PM: <u>Brown, Shali</u>		Carrier Tracking No(s):		COC No:			
Client Contact: <u>SCS Contacts</u>		Phone: <u>850 380 3458</u>		E-Mail: <u>shali.brown@eurofinset.com</u>				Page:			
Company: <u>SCS</u>		Due Date Requested:		<b>Analysis Requested</b> Field Filtered <u>3000</u> (Yes/No) <u>or No)</u> Boron and Calcium (App III) Chloride Fluoride Sulfate Total Dissolved Solids		Total Number of containers:		Job #:			
Address: <u>3535 Colonnade Pkwy BinS 530 EC</u>		TAT Requested (days):						Preservation Codes: A - HCL                      M - Hexane B - NaOH                    N - None C - Zn Acetate              O - AsNaO2 D - Nitric Acid              P - Na2O4S E - NaHSO4                  Q - Na2SO3 F - MeOH                     R - Na2S2O3 G - Amchlor                 S - H2SO4 H - Ascorbic Acid          T - TSP Dodecahydrate I - Ice                         U - Acetone J - DI Water                 V - MCAA K - EDTA                     W - pH 4-5 L - EDA                      Z - other (specify)		Other:	
City: <u>Birmingham</u>		PO #: <u>SCS10382606</u>									
State, Zip: <u>Alabama</u>		WO #:									
Phone: <u>205.992.6283</u>		Project #: <u>18020047</u>									
Email: <u>SCS Contacts</u>		SSOW#:		Project Name: <u>Plant Daniel NAMU CCR</u> Site:		Special Instructions/Note: <u>Lot# HW02</u> <u>0000252932</u>					
Project Name: <u>Plant Daniel NAMU CCR</u>											
Site:											
<b>Sample Identification</b>		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/sol, BT=Tissue, A=Air)			
						Preservation Code:					
<u>mw-11</u>		<u>3/15/22</u>		<u>1420</u>		<u>G</u>		<u>W</u>			
<u>mw-14</u>		<u>3/15/22</u>		<u>1205</u>							
<u>mw-15</u>		<u>3/15/22</u>		<u>1125</u>							
<u>mw-16</u>		<u>3/15/22</u>		<u>1126</u>							
<u>MW-17</u>		<u>3/16/22</u>		<u>0745</u>							
<u>mw-18</u>		<u>3/16/22</u>		<u>1250</u>							
<u>mw-19</u>		<u>3/15/22</u>		<u>1318</u>							
<u>Dup-01</u>		<u>3/15/22</u>		<u>1025</u>							
<u>EB-01</u>		<u>3/16/22</u>		<u>0700</u>							
<u>FB-01</u>		<u>3/15/22</u>		<u>1422</u>		<u>G</u>		<u>V</u>			
<u>DUP02</u>		<u>3/16/22</u>		<u>0645</u>		<u>G</u>		<u>W</u>			
<b>Possible Hazard Identification</b>					<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: <u>[Signature]</u>		Date/Time: <u>3/16/22 1300</u>		Company: <u>RDM</u>		Received by: <u>[Signature]</u>		Date/Time: <u>3/17/22 915</u>			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							



# Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-135320-1

**Login Number: 135320**

**List Source: Eurofins Pittsburgh**

**List Number: 1**

**Creator: Abernathy, Eric L**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Low-Flow Test Report:

Test Date / Time: 3/15/2022 1:25:24 PM

Project: Daniel NAMU

Operator Name: Philip Evans

<b>Location Name: Daniel NAMU MW-11</b> Well Diameter: 2 in Screen Length: 5 ft Top of Screen: 28 ft Total Depth: 33 ft Initial Depth to Water: 14.6 ft	<b>Pump Type: QED</b> Tubing Type: PE Pump Intake From TOC: 30.5 ft Estimated Total Volume Pumped: 10000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.64 ft	<b>Instrument Used: Aqua TROLL 400</b> Serial Number: 817728
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## Test Notes:

Sample time @ 1420. Pc 75. FB-01@ 1422.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.2	
3/15/2022 1:25 PM	00:00	5.02 pH	20.88 °C	63.92 µS/cm	5.58 mg/L	7.98 NTU	160.2 mV	14.60 ft	200.00 ml/min
3/15/2022 1:30 PM	05:00	4.95 pH	21.14 °C	70.27 µS/cm	2.33 mg/L	6.42 NTU	164.1 mV	15.45 ft	200.00 ml/min
3/15/2022 1:35 PM	10:00	4.86 pH	21.34 °C	69.03 µS/cm	1.12 mg/L	5.21 NTU	167.3 mV	16.22 ft	200.00 ml/min
3/15/2022 1:40 PM	15:00	4.79 pH	21.23 °C	67.70 µS/cm	0.82 mg/L	4.40 NTU	172.1 mV	16.64 ft	200.00 ml/min
3/15/2022 1:45 PM	20:00	4.74 pH	21.05 °C	67.07 µS/cm	0.54 mg/L	4.16 NTU	177.7 mV	16.90 ft	200.00 ml/min
3/15/2022 1:50 PM	25:00	4.74 pH	21.01 °C	66.91 µS/cm	0.47 mg/L	3.38 NTU	181.8 mV	17.02 ft	200.00 ml/min
3/15/2022 1:55 PM	30:00	4.74 pH	21.50 °C	66.82 µS/cm	0.40 mg/L	3.06 NTU	185.4 mV	17.08 ft	200.00 ml/min
3/15/2022 2:00 PM	35:00	4.73 pH	21.77 °C	66.76 µS/cm	0.43 mg/L	1.97 NTU	189.7 mV	17.14 ft	200.00 ml/min
3/15/2022 2:05 PM	40:00	4.73 pH	21.90 °C	66.42 µS/cm	0.36 mg/L	1.82 NTU	194.4 mV	17.19 ft	200.00 ml/min
3/15/2022 2:10 PM	45:00	4.73 pH	21.50 °C	66.11 µS/cm	0.32 mg/L	1.43 NTU	198.2 mV	17.22 ft	200.00 ml/min
3/15/2022 2:15 PM	50:00	4.73 pH	21.88 °C	66.30 µS/cm	0.31 mg/L	1.40 NTU	201.2 mV	17.24 ft	200.00 ml/min

## Samples

Sample ID:	Description:
MW-11	Sample time @ 1420. Pc 75. FB-01@ 1422.



# Low-Flow Test Report:

Test Date / Time: 3/15/2022 11:46:02 AM

Project: Daniel NAMU

Operator Name: Philip Evans

<b>Location Name: Daniel NAMU MW-14</b> Well Diameter: 2 in Screen Length: 5 ft Top of Screen: 35.7 ft Total Depth: 40.7 ft Initial Depth to Water: 14.08 ft	<b>Pump Type: QED</b> Tubing Type: Pe Pump Intake From TOC: 38.2 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.07 ft	<b>Instrument Used: Aqua TROLL 400</b> Serial Number: 817728
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## Test Notes:

Sample time @ 1205. Pc 75.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.2	
3/15/2022 11:46 AM	00:00	5.03 pH	20.38 °C	44.37 µS/cm	4.59 mg/L	1.84 NTU	237.4 mV	14.15 ft	400.00 ml/min
3/15/2022 11:51 AM	05:00	5.08 pH	20.70 °C	50.67 µS/cm	2.79 mg/L	1.78 NTU	236.2 mV	14.15 ft	400.00 ml/min
3/15/2022 11:56 AM	10:00	5.08 pH	20.77 °C	50.88 µS/cm	2.73 mg/L	1.51 NTU	235.9 mV	14.15 ft	400.00 ml/min
3/15/2022 12:01 PM	15:00	5.07 pH	20.81 °C	50.62 µS/cm	2.70 mg/L	1.43 NTU	235.9 mV	14.15 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-14	Sample time @ 1205. Pc 75.

# Low-Flow Test Report:

Test Date / Time: 3/15/2022 11:01:41 AM

Project: Daniel NAMU

Operator Name: Philip Evans

<b>Location Name: Daniel NAMU MW-15</b> Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 29.4 ft Total Depth: 39.4 ft Initial Depth to Water: 13.22 ft	<b>Pump Type: QED</b> Tubing Type: PE Pump Intake From TOC: 34.4 ft Estimated Total Volume Pumped: 8000 ml Flow Cell Volume: 90 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.03 ft	<b>Instrument Used: Aqua TROLL 400</b> Serial Number: 817728
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## Test Notes:

Sample time @ 1125. Cloudy 70. DUP-01 @ fake time 1025.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.2	
3/15/2022 11:01 AM	00:00	5.14 pH	18.74 °C	44.56 µS/cm	6.56 mg/L	0.89 NTU	219.1 mV	13.25 ft	400.00 ml/min
3/15/2022 11:06 AM	05:00	4.87 pH	20.79 °C	33.81 µS/cm	3.81 mg/L	0.64 NTU	223.0 mV	13.25 ft	400.00 ml/min
3/15/2022 11:11 AM	10:00	4.86 pH	20.98 °C	33.23 µS/cm	3.61 mg/L	0.58 NTU	224.5 mV	13.25 ft	400.00 ml/min
3/15/2022 11:16 AM	15:00	4.86 pH	21.06 °C	33.22 µS/cm	3.55 mg/L	0.51 NTU	225.9 mV	13.25 ft	400.00 ml/min
3/15/2022 11:21 AM	20:00	4.87 pH	21.07 °C	33.21 µS/cm	3.54 mg/L	0.47 NTU	227.1 mV	13.25 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-15	Sample time @ 1125. Cloudy 70. DUP-01 @ fake time 1025.



# Low-Flow Test Report:

Test Date / Time: 3/15/2022 11:03:51 AM

Project: Daniel NAMU

Operator Name: Brett Surles

<b>Location Name: Daniel MW-16</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PE</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 18.3 m</b> <b>Total Depth: 28.3 ft</b> <b>Initial Depth to Water: 10.57 ft</b>	<b>Pump Type: QED</b> <b>Tubing Type: PE</b> <b>Pump Intake From TOC: 23.3 ft</b> <b>Estimated Total Volume Pumped: 8 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 400 ml/min</b> <b>Final Draw Down: 0.01 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 800306</b>
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## Test Notes:

Sample@1126

## Weather Conditions:

Cloudy 72

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.2	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.2	
3/15/2022 11:03 AM	00:00	4.73 pH	21.39 °C	51.21 µS/cm	6.16 mg/L	1.25 NTU	171.5 mV	10.57 ft	400.00 ml/min
3/15/2022 11:08 AM	05:00	4.58 pH	21.30 °C	59.33 µS/cm	0.28 mg/L	0.66 NTU	125.4 mV	10.58 ft	400.00 ml/min
3/15/2022 11:13 AM	10:00	4.58 pH	21.17 °C	59.15 µS/cm	0.20 mg/L	0.52 NTU	163.4 mV	10.58 ft	400.00 ml/min
3/15/2022 11:18 AM	15:00	4.58 pH	21.24 °C	59.52 µS/cm	0.17 mg/L	0.43 NTU	107.7 mV	10.58 ft	400.00 ml/min
3/15/2022 11:23 AM	20:00	4.58 pH	21.26 °C	59.63 µS/cm	0.15 mg/L	0.44 NTU	102.1 mV	10.58 ft	400.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

Test Date / Time: 3/16/2022 7:33:21 AM

Project: Daniel NAMU

Operator Name: Philip Evans

<b>Location Name: Daniel NAMU MW-17</b> Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 18.45 ft Total Depth: 28.45 ft Initial Depth to Water: 8.1 ft	<b>Pump Type: QED</b> Tubing Type: Pe Pump Intake From TOC: 23.45 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.04 ft	<b>Instrument Used: Aqua TROLL 400</b> Serial Number: 817728
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## Test Notes:

Sample time @ 0745. Cloudy 65. DUP-02@ fake time 0645..

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.2	
3/16/2022 7:33 AM	00:00	4.85 pH	18.07 °C	41.65 µS/cm	3.17 mg/L	0.78 NTU	122.9 mV	8.14 ft	400.00 ml/min
3/16/2022 7:38 AM	05:00	4.92 pH	19.45 °C	40.95 µS/cm	0.42 mg/L	0.50 NTU	118.3 mV	8.14 ft	400.00 ml/min
3/16/2022 7:43 AM	10:00	4.87 pH	19.54 °C	40.79 µS/cm	0.27 mg/L	0.48 NTU	123.9 mV	8.14 ft	400.00 ml/min
3/16/2022 7:48 AM	15:00	4.91 pH	19.53 °C	40.64 µS/cm	0.23 mg/L	0.47 NTU	126.3 mV	8.14 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-17	Sample time @ 0745. Cloudy 65. DUP-02@ fake time 0645..

# Low-Flow Test Report:

Test Date / Time: 3/15/2022 12:26:22 PM

Project: Daniel NAMU

Operator Name: Philip Evans

<b>Location Name: Daniel NAMU MW-18</b> Well Diameter: 2 in Screen Length: 5 ft Top of Screen: 39.4 ft Total Depth: 44.4 ft Initial Depth to Water: 18.1 ft	<b>Pump Type: QED</b> Tubing Type: Pe Pump Intake From TOC: 41.9 ft Estimated Total Volume Pumped: 8000 ml Flow Cell Volume: 90 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.04 ft	<b>Instrument Used: Aqua TROLL 400</b> Serial Number: 817728
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## Test Notes:

Sample time @ 1250. Pc 75.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.2	
3/15/2022 12:26 PM	00:00	8.10 pH	20.83 °C	47.44 µS/cm	6.13 mg/L	0.57 NTU	103.0 mV	18.14 ft	400.00 ml/min
3/15/2022 12:31 PM	05:00	4.87 pH	20.92 °C	41.79 µS/cm	0.64 mg/L	0.49 NTU	107.6 mV	18.14 ft	400.00 ml/min
3/15/2022 12:36 PM	10:00	4.81 pH	21.00 °C	41.60 µS/cm	0.42 mg/L	0.42 NTU	116.5 mV	18.14 ft	400.00 ml/min
3/15/2022 12:41 PM	15:00	4.80 pH	20.92 °C	41.52 µS/cm	0.35 mg/L	0.34 NTU	125.0 mV	18.14 ft	400.00 ml/min
3/15/2022 12:46 PM	20:00	4.79 pH	20.87 °C	41.53 µS/cm	0.30 mg/L	0.33 NTU	131.7 mV	18.14 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-18	Sample time @ 1250. Pc 75.

# Low-Flow Test Report:

Test Date / Time: 3/15/2022 11:42:52 AM

Project: Daniel NAMU

Operator Name: Brett Surles

<b>Location Name: Daniel MW-19</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PE</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 22.4 ft</b> <b>Total Depth: 32.4 ft</b> <b>Initial Depth to Water: 19.4 ft</b>	<b>Pump Type: QED</b> <b>Tubing Type: PE</b> <b>Pump Intake From TOC: 27.4 m</b> <b>Estimated Total Volume Pumped: 38 liter</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 400 ml/min</b> <b>Final Draw Down: 0.02 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 800306</b>
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## Test Notes:

Sample@1318

## Weather Conditions:

Cloudy 72

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.2	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.2	
3/15/2022 11:42 AM	00:00	5.98 pH	21.44 °C	107.55 µS/cm	7.32 mg/L	1.74 NTU	130.8 mV	19.42 ft	400.00 ml/min
3/15/2022 11:47 AM	05:00	6.60 pH	21.67 °C	204.19 µS/cm	4.10 mg/L	2.56 NTU	67.9 mV	19.42 ft	400.00 ml/min
3/15/2022 11:52 AM	10:00	6.37 pH	21.92 °C	150.08 µS/cm	2.50 mg/L	3.36 NTU	0.8 mV	19.42 ft	400.00 ml/min
3/15/2022 11:57 AM	15:00	6.25 pH	21.80 °C	125.79 µS/cm	1.95 mg/L	3.13 NTU	-18.3 mV	19.42 ft	400.00 ml/min
3/15/2022 12:02 PM	20:00	6.21 pH	21.71 °C	120.09 µS/cm	1.68 mg/L	2.64 NTU	-8.0 mV	19.42 ft	400.00 ml/min
3/15/2022 12:07 PM	25:00	6.11 pH	21.90 °C	105.19 µS/cm	1.43 mg/L	2.19 NTU	-33.7 mV	19.42 ft	400.00 ml/min
3/15/2022 12:12 PM	30:00	6.02 pH	21.80 °C	93.30 µS/cm	1.17 mg/L	1.92 NTU	-36.6 mV	19.42 ft	400.00 ml/min
3/15/2022 12:17 PM	35:00	6.00 pH	21.86 °C	90.24 µS/cm	1.03 mg/L	1.77 NTU	-12.6 mV	19.42 ft	400.00 ml/min
3/15/2022 12:22 PM	40:00	5.96 pH	21.86 °C	86.82 µS/cm	0.90 mg/L	1.54 NTU	-14.1 mV	19.42 ft	400.00 ml/min
3/15/2022 12:27 PM	45:00	5.91 pH	21.77 °C	82.05 µS/cm	0.81 mg/L	1.28 NTU	-14.7 mV	19.42 ft	400.00 ml/min
3/15/2022 12:32 PM	50:00	5.92 pH	21.76 °C	83.07 µS/cm	0.77 mg/L	1.15 NTU	-16.0 mV	19.42 ft	400.00 ml/min
3/15/2022 12:37 PM	55:00	5.93 pH	21.80 °C	86.21 µS/cm	0.79 mg/L	1.07 NTU	-14.6 mV	19.42 ft	400.00 ml/min
3/15/2022 12:42 PM	01:00:00	5.92 pH	21.80 °C	84.56 µS/cm	0.78 mg/L	0.79 NTU	-46.8 mV	19.42 ft	400.00 ml/min

3/15/2022 12:47 PM	01:05:00	5.91 pH	21.84 °C	83.78 µS/cm	0.77 mg/L	0.66 NTU	-16.5 mV	19.42 ft	400.00 ml/min
3/15/2022 12:52 PM	01:10:00	5.88 pH	21.84 °C	80.88 µS/cm	0.73 mg/L	0.56 NTU	-16.6 mV	19.42 ft	400.00 ml/min
3/15/2022 12:57 PM	01:15:00	5.89 pH	21.84 °C	82.05 µS/cm	0.70 mg/L	0.60 NTU	-16.8 mV	19.42 ft	400.00 ml/min
3/15/2022 1:02 PM	01:20:00	5.87 pH	21.89 °C	80.30 µS/cm	0.70 mg/L	0.53 NTU	-14.8 mV	19.42 ft	400.00 ml/min
3/15/2022 1:07 PM	01:25:00	5.82 pH	21.89 °C	75.76 µS/cm	0.66 mg/L	0.55 NTU	-50.0 mV	19.42 ft	400.00 ml/min
3/15/2022 1:12 PM	01:30:00	5.81 pH	21.87 °C	76.31 µS/cm	0.63 mg/L	0.49 NTU	-16.8 mV	19.42 ft	400.00 ml/min
3/15/2022 1:17 PM	01:35:00	5.82 pH	21.89 °C	77.38 µS/cm	0.66 mg/L	0.41 NTU	-16.8 mV	19.42 ft	400.00 ml/min

## Samples

Sample ID:	Description:
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**2nd**  
**Semi-Annual**  
**Monitoring Event**

## ANALYTICAL REPORT

Eurofins Pittsburgh  
301 Alpha Drive  
RIDC Park  
Pittsburgh, PA 15238  
Tel: (412)963-7058

Laboratory Job ID: 180-145731-1

Client Project/Site: Plant Daniel NAMU CCR

For:

Southern Company  
3535 Colonnade Parkway  
Bin S 530 EC  
Birmingham, Alabama 35243

Attn: Robert (Trey) Singleton



Authorized for release by:

11/2/2022 8:16:35 PM

Shali Brown, Project Manager II  
(615)301-5031

[Shali.Brown@et.eurofinsus.com](mailto:Shali.Brown@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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# Case Narrative

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

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**Job ID: 180-145731-1**

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**Laboratory: Eurofins Pittsburgh**

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**Narrative**

**Job Narrative  
180-145731-1**

**Receipt**

The samples were received on 10/6/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.5°C

**HPLC/IC**

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

**Metals**

Method 6020B: The continuing calibration verification (CCV) associated with batch 180-416793 recovered above the upper control limit for beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 180-416793/123), (CCV 180-416793/130) and (MB 180-415559/1-A).

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

**General Chemistry**

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



# Definitions/Glossary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Accreditation/Certification Summary

Client: Southern Company  
 Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

## Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-22 *
California	State	2891	04-30-23
Connecticut	State	PH-0688	09-30-22 *
Florida	NELAP	E871008	06-30-23
Georgia	State	PA 02-00416	04-30-23
Illinois	NELAP	004375	06-30-23
Kansas	NELAP	E-10350	03-31-23
Kentucky (UST)	State	162013	04-30-23
Kentucky (WW)	State	KY98043	12-31-22
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-23
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	12-31-22
New Hampshire	NELAP	2030	04-04-23
New Jersey	NELAP	PA005	06-30-23
New York	NELAP	11182	04-01-23
North Carolina (WW/SW)	State	434	12-31-22
North Dakota	State	R-227	04-30-23
Oregon	NELAP	PA-2151	02-07-23
Pennsylvania	NELAP	02-00416	04-30-23
Rhode Island	State	LAO00362	12-31-22
South Carolina	State	89014	04-20-23
Texas	NELAP	T104704528	03-31-23
USDA	US Federal Programs	P330-16-00211	06-21-24
Utah	NELAP	PA001462019-8	05-31-23
Virginia	NELAP	10043	09-14-23
West Virginia DEP	State	142	01-31-23
Wisconsin	State	998027800	08-31-23

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# Sample Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-145731-1	MW-11	Water	10/04/22 14:48	10/06/22 10:30
180-145731-2	MW-14	Water	10/04/22 14:14	10/06/22 10:30
180-145731-3	MW-15	Water	10/04/22 11:01	10/06/22 10:30
180-145731-4	MW-16	Water	10/05/22 14:50	10/06/22 10:30
180-145731-5	MW-17	Water	10/05/22 13:56	10/06/22 10:30
180-145731-6	MW-18	Water	10/05/22 09:50	10/06/22 10:30
180-145731-7	MW-19	Water	10/05/22 08:53	10/06/22 10:30
180-145731-8	DUP-02	Water	10/04/22 13:48	10/06/22 10:30
180-145731-9	EB-02	Water	10/04/22 15:10	10/06/22 10:30
180-145731-10	FB-02	Water	10/04/22 14:16	10/06/22 10:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Method Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	EET PIT
EPA 6020B	Metals (ICP/MS)	SW846	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET PIT

#### Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058



# Lab Chronicle

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

**Client Sample ID: MW-11**  
**Date Collected: 10/04/22 14:48**  
**Date Received: 10/06/22 10:30**

**Lab Sample ID: 180-145731-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/07/22 22:46	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415559	10/19/22 12:05	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416793	10/29/22 01:11	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414641	10/10/22 18:22	LWM	EET PIT
Instrument ID: NOEQUIP										

**Client Sample ID: MW-14**  
**Date Collected: 10/04/22 14:14**  
**Date Received: 10/06/22 10:30**

**Lab Sample ID: 180-145731-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 00:00	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415559	10/19/22 12:05	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416793	10/29/22 01:15	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414641	10/10/22 18:22	LWM	EET PIT
Instrument ID: NOEQUIP										

**Client Sample ID: MW-15**  
**Date Collected: 10/04/22 11:01**  
**Date Received: 10/06/22 10:30**

**Lab Sample ID: 180-145731-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 00:15	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415559	10/19/22 12:05	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416793	10/29/22 01:19	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414641	10/10/22 18:22	LWM	EET PIT
Instrument ID: NOEQUIP										

**Client Sample ID: MW-16**  
**Date Collected: 10/05/22 14:50**  
**Date Received: 10/06/22 10:30**

**Lab Sample ID: 180-145731-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 00:30	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415559	10/19/22 12:05	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416793	10/29/22 01:22	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414747	10/11/22 15:42	LWM	EET PIT
Instrument ID: NOEQUIP										

Eurofins Pittsburgh

# Lab Chronicle

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

## Client Sample ID: MW-17

Date Collected: 10/05/22 13:56

Date Received: 10/06/22 10:30

## Lab Sample ID: 180-145731-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 00:44	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415670	10/20/22 11:45	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416345	10/26/22 17:24	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414747	10/11/22 15:42	LWM	EET PIT
Instrument ID: NOEQUIP										

## Client Sample ID: MW-18

Date Collected: 10/05/22 09:50

Date Received: 10/06/22 10:30

## Lab Sample ID: 180-145731-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 00:59	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415670	10/20/22 11:45	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416345	10/26/22 17:28	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414747	10/11/22 15:42	LWM	EET PIT
Instrument ID: NOEQUIP										

## Client Sample ID: MW-19

Date Collected: 10/05/22 08:53

Date Received: 10/06/22 10:30

## Lab Sample ID: 180-145731-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 01:14	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415670	10/20/22 11:45	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416345	10/26/22 17:32	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414747	10/11/22 15:42	LWM	EET PIT
Instrument ID: NOEQUIP										

## Client Sample ID: DUP-02

Date Collected: 10/04/22 13:48

Date Received: 10/06/22 10:30

## Lab Sample ID: 180-145731-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 01:29	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415670	10/20/22 11:45	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416345	10/26/22 17:35	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414641	10/10/22 18:22	LWM	EET PIT
Instrument ID: NOEQUIP										

Eurofins Pittsburgh

# Lab Chronicle

Client: Southern Company  
 Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

**Client Sample ID: EB-02**  
**Date Collected: 10/04/22 15:10**  
**Date Received: 10/06/22 10:30**

**Lab Sample ID: 180-145731-9**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 01:44	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415670	10/20/22 11:45	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416345	10/26/22 17:39	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414641	10/10/22 18:22	LWM	EET PIT
Instrument ID: NOEQUIP										

**Client Sample ID: FB-02**  
**Date Collected: 10/04/22 14:16**  
**Date Received: 10/06/22 10:30**

**Lab Sample ID: 180-145731-10**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			414415	10/08/22 01:59	SNL	EET PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			25 mL	25 mL	415670	10/20/22 11:45	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020B		1			416345	10/26/22 17:42	RSK	EET PIT
Instrument ID: A										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	414641	10/10/22 18:22	LWM	EET PIT
Instrument ID: NOEQUIP										

**Laboratory References:**

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**

- Lab: EET PIT
- Batch Type: Prep
  - HCY = Harrison Yaeger
- Batch Type: Analysis
  - LWM = Leslie McIntire
  - RSK = Robert Kurtz
  - SNL = Sean Lordo



# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

**Client Sample ID: MW-11**

Date Collected: 10/04/22 14:48

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-1**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.0		1.00	0.713	mg/L			10/07/22 22:46	1
Fluoride	0.0281	J	0.100	0.0260	mg/L			10/07/22 22:46	1
Sulfate	2.04		1.00	0.756	mg/L			10/07/22 22:46	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/19/22 12:05	10/29/22 01:11	1
Calcium	1.30		0.500	0.127	mg/L		10/19/22 12:05	10/29/22 01:11	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	53.0		10.0	10.0	mg/L			10/10/22 18:22	1

**Client Sample ID: MW-14**

Date Collected: 10/04/22 14:14

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-2**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.2		1.00	0.713	mg/L			10/08/22 00:00	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 00:00	1
Sulfate	<0.756		1.00	0.756	mg/L			10/08/22 00:00	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/19/22 12:05	10/29/22 01:15	1
Calcium	2.56		0.500	0.127	mg/L		10/19/22 12:05	10/29/22 01:15	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	52.0		10.0	10.0	mg/L			10/10/22 18:22	1

**Client Sample ID: MW-15**

Date Collected: 10/04/22 11:01

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-3**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.22		1.00	0.713	mg/L			10/08/22 00:15	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 00:15	1
Sulfate	<0.756		1.00	0.756	mg/L			10/08/22 00:15	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/19/22 12:05	10/29/22 01:19	1
Calcium	1.11		0.500	0.127	mg/L		10/19/22 12:05	10/29/22 01:19	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	42.0		10.0	10.0	mg/L			10/10/22 18:22	1

Eurofins Pittsburgh

# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

**Client Sample ID: MW-16**

Date Collected: 10/05/22 14:50

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-4**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.7		1.00	0.713	mg/L			10/08/22 00:30	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 00:30	1
Sulfate	1.40		1.00	0.756	mg/L			10/08/22 00:30	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/19/22 12:05	10/29/22 01:22	1
Calcium	1.19		0.500	0.127	mg/L		10/19/22 12:05	10/29/22 01:22	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	42.0		10.0	10.0	mg/L			10/11/22 15:42	1

**Client Sample ID: MW-17**

Date Collected: 10/05/22 13:56

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-5**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.51		1.00	0.713	mg/L			10/08/22 00:44	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 00:44	1
Sulfate	2.05		1.00	0.756	mg/L			10/08/22 00:44	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/20/22 11:45	10/26/22 17:24	1
Calcium	0.755		0.500	0.127	mg/L		10/20/22 11:45	10/26/22 17:24	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	35.0		10.0	10.0	mg/L			10/11/22 15:42	1

**Client Sample ID: MW-18**

Date Collected: 10/05/22 09:50

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-6**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.97		1.00	0.713	mg/L			10/08/22 00:59	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 00:59	1
Sulfate	6.04		1.00	0.756	mg/L			10/08/22 00:59	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/20/22 11:45	10/26/22 17:28	1
Calcium	0.285	J	0.500	0.127	mg/L		10/20/22 11:45	10/26/22 17:28	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	34.0		10.0	10.0	mg/L			10/11/22 15:42	1

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# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

**Client Sample ID: MW-19**

Date Collected: 10/05/22 08:53

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-7**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.94		1.00	0.713	mg/L			10/08/22 01:14	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 01:14	1
Sulfate	1.02		1.00	0.756	mg/L			10/08/22 01:14	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/20/22 11:45	10/26/22 17:32	1
Calcium	2.16		0.500	0.127	mg/L		10/20/22 11:45	10/26/22 17:32	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	31.0		10.0	10.0	mg/L			10/11/22 15:42	1

**Client Sample ID: DUP-02**

Date Collected: 10/04/22 13:48

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-8**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.1		1.00	0.713	mg/L			10/08/22 01:29	1
Fluoride	0.0270	J	0.100	0.0260	mg/L			10/08/22 01:29	1
Sulfate	2.25		1.00	0.756	mg/L			10/08/22 01:29	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/20/22 11:45	10/26/22 17:35	1
Calcium	1.51		0.500	0.127	mg/L		10/20/22 11:45	10/26/22 17:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	40.0		10.0	10.0	mg/L			10/10/22 18:22	1

**Client Sample ID: EB-02**

Date Collected: 10/04/22 15:10

Date Received: 10/06/22 10:30

**Lab Sample ID: 180-145731-9**

Matrix: Water

**Method: SW846 EPA 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.713		1.00	0.713	mg/L			10/08/22 01:44	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 01:44	1
Sulfate	<0.756		1.00	0.756	mg/L			10/08/22 01:44	1

**Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/20/22 11:45	10/26/22 17:39	1
Calcium	<0.127		0.500	0.127	mg/L		10/20/22 11:45	10/26/22 17:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<10.0		10.0	10.0	mg/L			10/10/22 18:22	1

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# Client Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

**Client Sample ID: FB-02**

**Lab Sample ID: 180-145731-10**

**Date Collected: 10/04/22 14:16**

**Matrix: Water**

**Date Received: 10/06/22 10:30**

## Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.713		1.00	0.713	mg/L			10/08/22 01:59	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/08/22 01:59	1
Sulfate	<0.756		1.00	0.756	mg/L			10/08/22 01:59	1

## Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.0601		0.0800	0.0601	mg/L		10/20/22 11:45	10/26/22 17:42	1
Calcium	<0.127		0.500	0.127	mg/L		10/20/22 11:45	10/26/22 17:42	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<10.0		10.0	10.0	mg/L			10/10/22 18:22	1

# QC Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

## Method: EPA 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 180-414415/52**  
**Matrix: Water**  
**Analysis Batch: 414415**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.713		1.00	0.713	mg/L			10/07/22 22:16	1
Fluoride	<0.0260		0.100	0.0260	mg/L			10/07/22 22:16	1
Sulfate	<0.756		1.00	0.756	mg/L			10/07/22 22:16	1

**Lab Sample ID: LCS 180-414415/53**  
**Matrix: Water**  
**Analysis Batch: 414415**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.738		mg/L		110	80 - 120
Sulfate	50.0	51.14		mg/L		102	80 - 120

**Lab Sample ID: 180-145731-1 MS**  
**Matrix: Water**  
**Analysis Batch: 414415**

**Client Sample ID: MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.0281	J	2.50	2.547		mg/L		101	80 - 120
Sulfate	2.04		50.0	51.53		mg/L		99	80 - 120

**Lab Sample ID: 180-145731-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 414415**

**Client Sample ID: MW-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.0281	J	2.50	2.547		mg/L		101	80 - 120	0	15
Sulfate	2.04		50.0	51.16		mg/L		98	80 - 120	1	15

## Method: EPA 6020B - Metals (ICP/MS)

**Lab Sample ID: MB 180-415559/1-A**  
**Matrix: Water**  
**Analysis Batch: 416793**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 415559**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<0.0601		0.0800	0.0601	mg/L		10/19/22 12:05	10/28/22 22:54	1
Calcium	<0.127		0.500	0.127	mg/L		10/19/22 12:05	10/28/22 22:54	1

**Lab Sample ID: LCS 180-415559/2-A**  
**Matrix: Water**  
**Analysis Batch: 416793**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 415559**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25.0	27.98		mg/L		112	80 - 120

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# QC Sample Results

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

## Method: EPA 6020B - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 180-415670/1-A**  
**Matrix: Water**  
**Analysis Batch: 416345**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 415670**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<0.0601		0.0800	0.0601	mg/L		10/20/22 11:45	10/26/22 17:17	1
Calcium	<0.127		0.500	0.127	mg/L		10/20/22 11:45	10/26/22 17:17	1

**Lab Sample ID: LCS 180-415670/2-A**  
**Matrix: Water**  
**Analysis Batch: 416345**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 415670**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25.0	29.01		mg/L		116	80 - 120

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 180-414641/1**  
**Matrix: Water**  
**Analysis Batch: 414641**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			10/10/22 18:22	1

**Lab Sample ID: LCS 180-414641/2**  
**Matrix: Water**  
**Analysis Batch: 414641**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

**Lab Sample ID: MB 180-414747/1**  
**Matrix: Water**  
**Analysis Batch: 414747**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			10/11/22 15:42	1

**Lab Sample ID: LCS 180-414747/2**  
**Matrix: Water**  
**Analysis Batch: 414747**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

**Lab Sample ID: 180-145731-4 DU**  
**Matrix: Water**  
**Analysis Batch: 414747**

**Client Sample ID: MW-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit

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# QC Association Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

## HPLC/IC

### Analysis Batch: 414415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-1	MW-11	Total/NA	Water	EPA 9056A	
180-145731-2	MW-14	Total/NA	Water	EPA 9056A	
180-145731-3	MW-15	Total/NA	Water	EPA 9056A	
180-145731-4	MW-16	Total/NA	Water	EPA 9056A	
180-145731-5	MW-17	Total/NA	Water	EPA 9056A	
180-145731-6	MW-18	Total/NA	Water	EPA 9056A	
180-145731-7	MW-19	Total/NA	Water	EPA 9056A	
180-145731-8	DUP-02	Total/NA	Water	EPA 9056A	
180-145731-9	EB-02	Total/NA	Water	EPA 9056A	
180-145731-10	FB-02	Total/NA	Water	EPA 9056A	
MB 180-414415/52	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-414415/53	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-145731-1 MS	MW-11	Total/NA	Water	EPA 9056A	
180-145731-1 MSD	MW-11	Total/NA	Water	EPA 9056A	

## Metals

### Prep Batch: 415559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-1	MW-11	Total Recoverable	Water	3005A	
180-145731-2	MW-14	Total Recoverable	Water	3005A	
180-145731-3	MW-15	Total Recoverable	Water	3005A	
180-145731-4	MW-16	Total Recoverable	Water	3005A	
MB 180-415559/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-415559/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Prep Batch: 415670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-5	MW-17	Total Recoverable	Water	3005A	
180-145731-6	MW-18	Total Recoverable	Water	3005A	
180-145731-7	MW-19	Total Recoverable	Water	3005A	
180-145731-8	DUP-02	Total Recoverable	Water	3005A	
180-145731-9	EB-02	Total Recoverable	Water	3005A	
180-145731-10	FB-02	Total Recoverable	Water	3005A	
MB 180-415670/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-415670/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Analysis Batch: 416345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-5	MW-17	Total Recoverable	Water	EPA 6020B	415670
180-145731-6	MW-18	Total Recoverable	Water	EPA 6020B	415670
180-145731-7	MW-19	Total Recoverable	Water	EPA 6020B	415670
180-145731-8	DUP-02	Total Recoverable	Water	EPA 6020B	415670
180-145731-9	EB-02	Total Recoverable	Water	EPA 6020B	415670
180-145731-10	FB-02	Total Recoverable	Water	EPA 6020B	415670
MB 180-415670/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	415670
LCS 180-415670/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	415670

### Analysis Batch: 416793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-1	MW-11	Total Recoverable	Water	EPA 6020B	415559

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# QC Association Summary

Client: Southern Company  
Project/Site: Plant Daniel NAMU CCR

Job ID: 180-145731-1

## Metals (Continued)

### Analysis Batch: 416793 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-2	MW-14	Total Recoverable	Water	EPA 6020B	415559
180-145731-3	MW-15	Total Recoverable	Water	EPA 6020B	415559
180-145731-4	MW-16	Total Recoverable	Water	EPA 6020B	415559
MB 180-415559/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	415559
LCS 180-415559/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	415559

## General Chemistry

### Analysis Batch: 414641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-1	MW-11	Total/NA	Water	SM 2540C	
180-145731-2	MW-14	Total/NA	Water	SM 2540C	
180-145731-3	MW-15	Total/NA	Water	SM 2540C	
180-145731-8	DUP-02	Total/NA	Water	SM 2540C	
180-145731-9	EB-02	Total/NA	Water	SM 2540C	
180-145731-10	FB-02	Total/NA	Water	SM 2540C	
MB 180-414641/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-414641/2	Lab Control Sample	Total/NA	Water	SM 2540C	

### Analysis Batch: 414747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-145731-4	MW-16	Total/NA	Water	SM 2540C	
180-145731-5	MW-17	Total/NA	Water	SM 2540C	
180-145731-6	MW-18	Total/NA	Water	SM 2540C	
180-145731-7	MW-19	Total/NA	Water	SM 2540C	
MB 180-414747/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-414747/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-145731-4 DU	MW-16	Total/NA	Water	SM 2540C	



# Chain of Custody Record

<b>Client Information</b>		Sampler: <u>Rick Meyer / Trowel / Bradshaw</u>		Lab PM: <u>Brown, Shali</u>		Carrier Tracking No(s)		COC No	
Client Contact:		Phone: <u>850-336-0192</u>		E-Mail: <u>shali.brown@eurofinset.com</u>				Page: <u>1 of 1</u>	
SCS Contacts		Company: <u>SCS</u>						Job #:	
Address		Due Date Requested:						Preservation Codes:	
3535 Colonnade Pkwy BlnS 530 EC		TAT Requested (days):						M - Hexane N - None O - AsNaO2 P - Na2O4S Q - NaHSO4 R - Na2SO3 S - HZSO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)	
City: Birmingham		PO #:		SCS 10382606				Other:	
State, Zip: Alabama		W/O #:							
Phone: 205.992.6283		Project #:		18020047					
Email:		SSOW#:							
SCS Contacts		Plant Name:		Daniel NAMU CCR					
Site:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wasteoil, E=ETAS, A=Air)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wasteoil, E=ETAS, A=Air)	
MW-11		10-4-22		1448		G		W	
MW-14		10-4-22		1414		G		W	
MW-15		10-4-22		1101		G		W	
MW-16		10-5-22		1450		G		W	
MW-17		10-5-22		1356		G		W	
MW-18		10-5-22		0950		G		W	
MW-19		10-5-22		0853		G		W	
Dup-02		10-4-22		1348		G		W	
EB-02		10-4-22		1510		G		W	
ET-02		10-4-22		1416		G		W	
ET-02		10-5-22		FB-02		G		W	
Possible Hazard Identification		Poison B		Unknown		Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Non-Hazard		Flammable		Skin Irritant		Other (specify)		Return To Client	
Deliverable Requested I, II, III, IV, Other (specify)		Empty Kit Relinquished by		Date:		Time:		Disposal By Lab	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>10-5-22 1610</u>		Company: <u>ASHT ENV</u>		Method of Shipment:		Archive For: _____ Months	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>10-6-22 1850</u>		Company: <u>EBTA</u>					
Relinquished by:		Date/Time:		Company:					
Custody Seals Intact: <u>Yes</u>		Custody Seal No.:							
Cooler Temperature(s) °C and Other Remarks									



# Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-145731-1

**Login Number: 145731**

**List Number: 1**

**Creator: Abernathy, Eric L**

**List Source: Eurofins Pittsburgh**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Low-Flow Test Report:

Test Date / Time: 10/4/2022 1:49:39 PM

Project: Daniel NAMU CCR MW-11

Operator Name: Rick Hagendorfer

<b>Location Name: Daniel NAMU CCR MW-11</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 5 ft</b> <b>Top of Screen: 28 ft</b> <b>Total Depth: 33 ft</b> <b>Initial Depth to Water: 14.42 ft</b>	<b>Pump Type: PP</b> <b>Tubing Type: PE</b> <b>Pump Intake From TOC: 30.5 ft</b> <b>Estimated Total Volume Pumped: 22000 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 400 ml/min</b> <b>Final Draw Down: 2.68 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 852546</b>
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## Test Notes:

Permanent bladder pump is broken. Had to use Peristaltic pump.

## Weather Conditions:

P/C 81

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
10/4/2022 1:49 PM	00:00	4.57 pH	26.82 °C	76.44 µS/cm	5.96 mg/L		116.3 mV	14.42 ft	400.00 ml/min
10/4/2022 1:54 PM	05:00	4.62 pH	21.99 °C	65.46 µS/cm	1.51 mg/L	13.40 NTU	105.7 mV	16.41 ft	400.00 ml/min
10/4/2022 1:59 PM	10:00	4.60 pH	21.70 °C	64.06 µS/cm	0.62 mg/L	17.90 NTU	105.0 mV	16.65 ft	400.00 ml/min
10/4/2022 2:04 PM	15:00	4.59 pH	21.59 °C	63.35 µS/cm	0.38 mg/L	13.50 NTU	106.9 mV	16.82 ft	400.00 ml/min
10/4/2022 2:09 PM	20:00	4.59 pH	21.55 °C	63.63 µS/cm	0.28 mg/L	10.10 NTU	108.0 mV	16.88 ft	400.00 ml/min
10/4/2022 2:14 PM	25:00	4.59 pH	21.57 °C	63.39 µS/cm	0.24 mg/L	6.91 NTU	109.0 mV	16.94 ft	400.00 ml/min
10/4/2022 2:19 PM	30:00	4.60 pH	21.50 °C	63.49 µS/cm	0.21 mg/L	5.10 NTU	109.7 mV	16.96 ft	400.00 ml/min
10/4/2022 2:24 PM	35:00	4.61 pH	21.45 °C	63.85 µS/cm	0.20 mg/L	3.20 NTU	108.7 mV	16.98 ft	400.00 ml/min
10/4/2022 2:29 PM	40:00	4.61 pH	21.43 °C	63.89 µS/cm	0.18 mg/L	2.79 NTU	110.8 mV	17.01 ft	400.00 ml/min
10/4/2022 2:34 PM	45:00	4.62 pH	21.41 °C	64.18 µS/cm	0.20 mg/L	1.99 NTU	109.6 mV	17.04 ft	400.00 ml/min
10/4/2022 2:39 PM	50:00	4.62 pH	21.46 °C	64.22 µS/cm	0.18 mg/L	1.80 NTU	112.2 mV	17.08 ft	400.00 ml/min
10/4/2022 2:44 PM	55:00	4.62 pH	21.46 °C	64.22 µS/cm	0.17 mg/L	1.65 NTU	112.5 mV	17.10 ft	400.00 ml/min

**Samples**

Sample ID:	Description:
MW-11	Sample time 1448. Dup-02 fake sample time 1348. FB-02 sample time 1416. EB sample time 1510.

# Low-Flow Test Report:

Test Date / Time: 10/4/2022 11:34:58 AM

Project: Daniel NAMU CCR MW-14

Operator Name: Trevor Braddock

<b>Location Name: Daniel NAMU CCR MW-14</b> <b>Well Diameter: 2 in</b> <b>Screen Length: 5 ft</b> <b>Top of Screen: 35.7 ft</b> <b>Total Depth: 40.7 ft</b> <b>Initial Depth to Water: 14.14 ft</b>	<b>Pump Type: QED</b> <b>Tubing Type: Pe</b> <b>Pump Intake From TOC: 38.2 ft</b> <b>Estimated Total Volume Pumped: 62000 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 400 ml/min</b> <b>Final Draw Down: 0.07 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 736137</b>
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## Test Notes:

## Weather Conditions:

Sunny 75

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.3	
10/4/2022 11:34 AM	00:00	5.18 pH	16.77 °C	45.27 µS/cm	4.33 mg/L	82.00 NTU	126.6 mV	14.14 ft	400.00 ml/min
10/4/2022 11:39 AM	05:00	4.98 pH	15.00 °C	57.37 µS/cm	3.35 mg/L	73.40 NTU	124.8 mV	14.21 ft	400.00 ml/min
10/4/2022 11:44 AM	10:00	5.02 pH	14.82 °C	58.52 µS/cm	3.18 mg/L	67.28 NTU	123.5 mV	14.21 ft	400.00 ml/min
10/4/2022 11:49 AM	15:00	5.06 pH	14.78 °C	60.00 µS/cm	3.06 mg/L	53.70 NTU	122.8 mV	14.21 ft	400.00 ml/min
10/4/2022 11:54 AM	20:00	5.11 pH	14.83 °C	60.07 µS/cm	3.05 mg/L	50.30 NTU	123.7 mV	14.21 ft	400.00 ml/min
10/4/2022 11:59 AM	25:00	5.10 pH	14.81 °C	59.51 µS/cm	3.07 mg/L	42.80 NTU	122.1 mV	14.21 ft	400.00 ml/min
10/4/2022 12:04 PM	30:00	5.06 pH	14.78 °C	59.44 µS/cm	3.11 mg/L	32.90 NTU	122.9 mV	14.21 ft	400.00 ml/min
10/4/2022 12:09 PM	35:00	5.06 pH	14.85 °C	59.01 µS/cm	3.12 mg/L	29.80 NTU	122.6 mV	14.21 ft	400.00 ml/min
10/4/2022 12:14 PM	40:00	5.03 pH	14.79 °C	58.80 µS/cm	3.14 mg/L	24.50 NTU	124.5 mV	14.21 ft	400.00 ml/min
10/4/2022 12:19 PM	45:00	5.02 pH	15.02 °C	58.52 µS/cm	3.16 mg/L	22.00 NTU	122.2 mV	14.21 ft	400.00 ml/min
10/4/2022 12:24 PM	50:00	5.01 pH	14.99 °C	58.20 µS/cm	3.16 mg/L	17.50 NTU	122.8 mV	14.21 ft	400.00 ml/min
10/4/2022 12:29 PM	55:00	5.00 pH	15.06 °C	58.45 µS/cm	3.20 mg/L	16.00 NTU	121.9 mV	14.21 ft	400.00 ml/min
10/4/2022 12:34 PM	01:00:00	4.99 pH	15.08 °C	57.93 µS/cm	3.20 mg/L	15.30 NTU	124.2 mV	14.21 ft	400.00 ml/min

10/4/2022 12:39 PM	01:05:00	4.98 pH	15.09 °C	58.11 µS/cm	3.22 mg/L	14.60 NTU	123.0 mV	14.21 ft	400.00 ml/min
10/4/2022 12:44 PM	01:10:00	4.98 pH	15.30 °C	57.46 µS/cm	3.18 mg/L	12.10 NTU	121.7 mV	14.21 ft	400.00 ml/min
10/4/2022 12:49 PM	01:15:00	4.96 pH	14.97 °C	57.40 µS/cm	3.21 mg/L	11.50 NTU	123.8 mV	14.21 ft	400.00 ml/min
10/4/2022 12:54 PM	01:20:00	4.95 pH	15.02 °C	57.64 µS/cm	3.24 mg/L	10.10 NTU	123.4 mV	14.21 ft	400.00 ml/min
10/4/2022 12:59 PM	01:25:00	4.95 pH	15.32 °C	57.68 µS/cm	3.25 mg/L	9.63 NTU	124.4 mV	14.21 ft	400.00 ml/min
10/4/2022 1:04 PM	01:30:00	4.96 pH	15.84 °C	57.39 µS/cm	3.23 mg/L	9.41 NTU	121.4 mV	14.21 ft	400.00 ml/min
10/4/2022 1:09 PM	01:35:00	4.94 pH	16.16 °C	57.28 µS/cm	3.22 mg/L	8.39 NTU	121.4 mV	14.21 ft	400.00 ml/min
10/4/2022 1:14 PM	01:40:00	4.94 pH	15.67 °C	56.83 µS/cm	3.20 mg/L	7.81 NTU	122.1 mV	14.21 ft	400.00 ml/min
10/4/2022 1:19 PM	01:45:00	4.94 pH	15.41 °C	57.00 µS/cm	3.23 mg/L	7.37 NTU	122.2 mV	14.21 ft	400.00 ml/min
10/4/2022 1:24 PM	01:50:00	4.92 pH	15.71 °C	56.82 µS/cm	3.22 mg/L	7.06 NTU	122.5 mV	14.21 ft	400.00 ml/min
10/4/2022 1:29 PM	01:55:00	4.92 pH	15.60 °C	57.01 µS/cm	3.25 mg/L	6.87 NTU	122.6 mV	14.21 ft	400.00 ml/min
10/4/2022 1:34 PM	02:00:00	4.92 pH	15.89 °C	56.71 µS/cm	3.24 mg/L	6.58 NTU	121.8 mV	14.21 ft	400.00 ml/min
10/4/2022 1:39 PM	02:05:00	4.92 pH	15.83 °C	56.76 µS/cm	3.25 mg/L	5.88 NTU	122.0 mV	14.21 ft	400.00 ml/min
10/4/2022 1:44 PM	02:10:00	4.92 pH	15.83 °C	56.70 µS/cm	3.26 mg/L	5.84 NTU	122.0 mV	14.21 ft	400.00 ml/min
10/4/2022 1:49 PM	02:15:00	4.92 pH	16.30 °C	56.80 µS/cm	3.24 mg/L	5.83 NTU	121.8 mV	14.21 ft	400.00 ml/min
10/4/2022 1:54 PM	02:20:00	4.91 pH	16.02 °C	56.37 µS/cm	3.25 mg/L	5.12 NTU	123.1 mV	14.21 ft	400.00 ml/min
10/4/2022 1:59 PM	02:25:00	4.91 pH	15.77 °C	56.65 µS/cm	3.25 mg/L	5.03 NTU	123.1 mV	14.21 ft	400.00 ml/min
10/4/2022 2:04 PM	02:30:00	4.92 pH	15.76 °C	56.23 µS/cm	3.23 mg/L	4.97 NTU	122.3 mV	14.21 ft	400.00 ml/min
10/4/2022 2:09 PM	02:35:00	4.90 pH	15.78 °C	56.82 µS/cm	3.29 mg/L	4.92 NTU	122.8 mV	14.21 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-14	Sample time 1414

# Low-Flow Test Report:

Test Date / Time: 10/4/2022 10:00:11 AM

Project: Daniel NAMU CCR

Operator Name: Trevor Braddock

<b>Location Name: Daniel NAMU CCR MW-15</b> Well Diameter: 2 in Screen Length: 5 ft Top of Screen: 34.5 ft Total Depth: 39.5 ft Initial Depth to Water: 13.46 ft	<b>Pump Type: QED</b> Tubing Type: Pe Pump Intake From TOC: 37 ft Estimated Total Volume Pumped: 24000 ml Flow Cell Volume: 90 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.09 ft	<b>Instrument Used: Aqua TROLL 400</b> Serial Number: 736137
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## Test Notes:

## Weather Conditions:

Sunny 75

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.3	
10/4/2022 10:00 AM	00:00	4.90 pH	15.95 °C	41.56 µS/cm	3.97 mg/L	1.28 NTU	110.1 mV	13.46 ft	400.00 ml/min
10/4/2022 10:05 AM	05:00	4.72 pH	14.40 °C	46.00 µS/cm	3.37 mg/L	8.98 NTU	109.6 mV	13.55 ft	400.00 ml/min
10/4/2022 10:10 AM	10:00	4.69 pH	14.59 °C	45.94 µS/cm	3.29 mg/L	9.03 NTU	105.7 mV	13.55 ft	400.00 ml/min
10/4/2022 10:15 AM	15:00	4.68 pH	14.56 °C	45.91 µS/cm	3.30 mg/L	7.31 NTU	105.3 mV	13.55 ft	400.00 ml/min
10/4/2022 10:20 AM	20:00	4.69 pH	14.53 °C	45.83 µS/cm	3.31 mg/L	6.48 NTU	106.6 mV	13.55 ft	400.00 ml/min
10/4/2022 10:25 AM	25:00	4.68 pH	14.55 °C	45.74 µS/cm	3.32 mg/L	5.90 NTU	108.1 mV	13.55 ft	400.00 ml/min
10/4/2022 10:30 AM	30:00	4.69 pH	14.51 °C	45.71 µS/cm	3.33 mg/L	4.86 NTU	108.3 mV	13.55 ft	400.00 ml/min
10/4/2022 10:35 AM	35:00	4.69 pH	14.55 °C	45.59 µS/cm	3.34 mg/L	4.08 NTU	108.5 mV	13.55 ft	400.00 ml/min
10/4/2022 10:40 AM	40:00	4.70 pH	14.62 °C	45.66 µS/cm	3.35 mg/L	3.83 NTU	109.0 mV	13.55 ft	400.00 ml/min
10/4/2022 10:45 AM	45:00	4.70 pH	14.59 °C	45.64 µS/cm	3.37 mg/L	2.74 NTU	109.0 mV	13.55 ft	400.00 ml/min
10/4/2022 10:50 AM	50:00	4.71 pH	14.64 °C	45.57 µS/cm	3.37 mg/L	2.35 NTU	109.1 mV	13.55 ft	400.00 ml/min
10/4/2022 10:55 AM	55:00	4.71 pH	14.61 °C	45.57 µS/cm	3.38 mg/L	2.10 NTU	109.8 mV	13.55 ft	400.00 ml/min
10/4/2022 11:00 AM	01:00:00	4.71 pH	14.60 °C	45.58 µS/cm	3.37 mg/L	1.84 NTU	111.2 mV	13.55 ft	400.00 ml/min

**Samples**

Sample ID:	Description:
MW-15	Sample time 1101.



# Low-Flow Test Report:

Test Date / Time: 10/5/2022 2:24:14 PM

Project: Daniel NAMU CCR MW-16

Operator Name: Trevor Braddock

<b>Location Name: Daniel NAMU ccr MW-16</b> <b>Well Diameter: 2 in</b> <b>Screen Length: 5 ft</b> <b>Top of Screen: 23.3 ft</b> <b>Total Depth: 28.3 ft</b> <b>Initial Depth to Water: 11.22 ft</b>	<b>Pump Type: QED</b> <b>Tubing Type: Pe</b> <b>Pump Intake From TOC: 25.8 ft</b> <b>Estimated Total Volume Pumped: 10000 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 400 ml/min</b> <b>Final Draw Down: 0.05 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 736137</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.3	
10/5/2022 2:24 PM	00:00	4.61 pH	17.86 °C	52.46 µS/cm	1.90 mg/L	1.73 NTU	75.0 mV	11.22 ft	400.00 ml/min
10/5/2022 2:29 PM	05:00	4.52 pH	15.66 °C	54.84 µS/cm	0.27 mg/L	1.34 NTU	71.8 mV	11.27 ft	400.00 ml/min
10/5/2022 2:34 PM	10:00	4.52 pH	15.71 °C	54.31 µS/cm	0.26 mg/L	1.06 NTU	71.2 mV	11.27 ft	400.00 ml/min
10/5/2022 2:39 PM	15:00	4.52 pH	15.45 °C	54.38 µS/cm	0.25 mg/L	0.80 NTU	71.7 mV	11.27 ft	400.00 ml/min
10/5/2022 2:44 PM	20:00	4.52 pH	15.35 °C	54.41 µS/cm	0.25 mg/L	0.76 NTU	72.7 mV	11.27 ft	400.00 ml/min
10/5/2022 2:49 PM	25:00	4.52 pH	15.28 °C	54.48 µS/cm	0.24 mg/L	0.65 NTU	72.1 mV	11.27 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-16	Sample time 1450

# Low-Flow Test Report:

Test Date / Time: 10/5/2022 12:31:02 PM

Project: Daniel NAMU CCR MW-17

Operator Name: Trevor Braddock

<b>Location Name: Danie NAMU ccr mw - 17</b> <b>Well Diameter: 2 in</b> <b>Screen Length: 5 ft</b> <b>Top of Screen: 23.5 ft</b> <b>Total Depth: 28.5 ft</b> <b>Initial Depth to Water: 7.94 ft</b>	<b>Pump Type: QED</b> <b>Tubing Type: Pe</b> <b>Pump Intake From TOC: 26 ft</b> <b>Estimated Total Volume Pumped: 34000 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 400 ml/min</b> <b>Final Draw Down: 0.09 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 736137</b>
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## Test Notes:

## Weather Conditions:

Sunny 81

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 20	+/- 0.3	
10/5/2022 12:31 PM	00:00	7.03 pH	21.54 °C	98.57 µS/cm	3.52 mg/L	1.22 NTU	116.1 mV	7.94 ft	400.00 ml/min
10/5/2022 12:36 PM	05:00	4.95 pH	16.54 °C	36.85 µS/cm	0.62 mg/L	3.18 NTU	89.6 mV	8.03 ft	400.00 ml/min
10/5/2022 12:41 PM	10:00	4.94 pH	15.66 °C	37.71 µS/cm	0.32 mg/L	1.81 NTU	84.8 mV	8.03 ft	400.00 ml/min
10/5/2022 12:46 PM	15:00	4.94 pH	15.86 °C	37.24 µS/cm	0.28 mg/L	1.29 NTU	82.0 mV	8.03 ft	400.00 ml/min
10/5/2022 12:51 PM	20:00	4.94 pH	15.39 °C	37.04 µS/cm	0.27 mg/L	1.17 NTU	80.7 mV	8.03 ft	400.00 ml/min
10/5/2022 12:56 PM	25:00	4.96 pH	15.16 °C	37.06 µS/cm	0.27 mg/L	1.10 NTU	77.5 mV	8.03 ft	400.00 ml/min
10/5/2022 1:01 PM	30:00	4.95 pH	15.35 °C	37.36 µS/cm	0.27 mg/L	1.33 NTU	78.1 mV	8.03 ft	400.00 ml/min
10/5/2022 1:06 PM	35:00	4.98 pH	16.06 °C	37.09 µS/cm	0.27 mg/L	1.04 NTU	74.3 mV	8.03 ft	400.00 ml/min
10/5/2022 1:11 PM	40:00	4.99 pH	16.27 °C	37.14 µS/cm	0.27 mg/L	1.31 NTU	72.8 mV	8.03 ft	400.00 ml/min
10/5/2022 1:16 PM	45:00	4.98 pH	16.43 °C	37.25 µS/cm	0.27 mg/L	0.83 NTU	71.8 mV	8.03 ft	400.00 ml/min
10/5/2022 1:21 PM	50:00	4.99 pH	16.71 °C	37.03 µS/cm	0.26 mg/L	0.96 NTU	70.6 mV	8.03 ft	400.00 ml/min
10/5/2022 1:26 PM	55:00	4.98 pH	16.46 °C	37.21 µS/cm	0.27 mg/L	1.02 NTU	71.1 mV	8.03 ft	400.00 ml/min
10/5/2022 1:31 PM	01:00:00	4.98 pH	16.04 °C	37.10 µS/cm	0.26 mg/L	0.76 NTU	71.5 mV	8.03 ft	400.00 ml/min

10/5/2022 1:36 PM	01:05:00	4.99 pH	16.35 °C	37.11 µS/cm	0.26 mg/L	0.81 NTU	68.7 mV	8.03 ft	400.00 ml/min
10/5/2022 1:41 PM	01:10:00	4.99 pH	16.26 °C	37.16 µS/cm	0.26 mg/L	0.79 NTU	69.7 mV	8.03 ft	400.00 ml/min
10/5/2022 1:46 PM	01:15:00	4.99 pH	16.48 °C	37.15 µS/cm	0.26 mg/L	0.84 NTU	68.6 mV	8.03 ft	400.00 ml/min
10/5/2022 1:51 PM	01:20:00	5.00 pH	16.55 °C	37.14 µS/cm	0.26 mg/L	0.72 NTU	68.0 mV	8.03 ft	400.00 ml/min
10/5/2022 1:56 PM	01:25:00	5.00 pH	16.62 °C	37.23 µS/cm	0.27 mg/L	0.76 NTU	66.9 mV	8.03 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-17	Sample time 1356

# Low-Flow Test Report:

Test Date / Time: 10/5/2022 9:26:00 AM

Project: Daniel NAMU CCR MW-18

Operator Name: Rick Hagendorfer

<b>Location Name: Daniel NAMU CCR MW-18</b> Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 39.4 ft Total Depth: 44.4 ft Initial Depth to Water: 17.83 ft	<b>Pump Type: BP</b> Tubing Type: PE Pump Intake From TOC: 41.9 ft Estimated Total Volume Pumped: 8000 ml Flow Cell Volume: 90 ml Final Flow Rate: 400 ml/min Final Draw Down: 0.06 ft	<b>Instrument Used: Aqua TROLL 400</b> Serial Number: 852546
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## Test Notes:

## Weather Conditions:

Cloudy 71.

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
10/5/2022 9:26 AM	00:00	4.58 pH	22.53 °C	50.56 µS/cm	8.42 mg/L		80.6 mV	17.83 ft	400.00 ml/min
10/5/2022 9:31 AM	05:00	4.67 pH	21.24 °C	43.44 µS/cm	0.69 mg/L	0.85 NTU	81.2 mV	17.89 ft	400.00 ml/min
10/5/2022 9:36 AM	10:00	4.71 pH	21.15 °C	43.47 µS/cm	0.26 mg/L	0.44 NTU	81.6 mV	17.89 ft	400.00 ml/min
10/5/2022 9:41 AM	15:00	4.70 pH	21.15 °C	43.46 µS/cm	0.22 mg/L	0.44 NTU	81.8 mV	17.89 ft	400.00 ml/min
10/5/2022 9:46 AM	20:00	4.70 pH	21.15 °C	43.44 µS/cm	0.22 mg/L	0.40 NTU	81.9 mV	17.89 ft	400.00 ml/min

## Samples

Sample ID:	Description:
MW-18	Sample time 0950

# Low-Flow Test Report:

Test Date / Time: 10/5/2022 7:55:21 AM

Project: Daniel NAMU CCR MW-19

Operator Name: Rick Hagendorfer

<b>Location Name: Daniel NAMU CCR MW-19</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 22.4 ft</b> <b>Total Depth: 32.4 ft</b> <b>Initial Depth to Water: 19.88 ft</b>	<b>Pump Type: BP</b> <b>Tubing Type: PE</b> <b>Pump Intake From TOC: 27.4 ft</b> <b>Estimated Total Volume Pumped: 22000 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 400 ml/min</b> <b>Final Draw Down: 0.07 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 852546</b>
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## Test Notes:

## Weather Conditions:

Sunny 61

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.2	+/- 0.2	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
10/5/2022 7:55 AM	00:00	6.11 pH	21.48 °C	141.67 µS/cm	1.63 mg/L		77.4 mV	19.88 ft	400.00 ml/min
10/5/2022 8:00 AM	05:00	6.04 pH	21.55 °C	110.42 µS/cm	0.34 mg/L	17.40 NTU	70.2 mV	19.95 ft	400.00 ml/min
10/5/2022 8:05 AM	10:00	5.90 pH	21.56 °C	85.77 µS/cm	0.24 mg/L	8.26 NTU	68.7 mV	19.95 ft	400.00 ml/min
10/5/2022 8:10 AM	15:00	5.77 pH	21.57 °C	71.29 µS/cm	0.21 mg/L	6.67 NTU	68.1 mV	19.95 ft	400.00 ml/min
10/5/2022 8:15 AM	20:00	5.65 pH	21.64 °C	61.38 µS/cm	0.20 mg/L	4.88 NTU	67.6 mV	19.95 ft	400.00 ml/min
10/5/2022 8:20 AM	25:00	5.56 pH	21.67 °C	55.39 µS/cm	0.19 mg/L	3.34 NTU	66.8 mV	19.95 ft	400.00 ml/min
10/5/2022 8:25 AM	30:00	5.48 pH	21.68 °C	51.57 µS/cm	0.18 mg/L	2.86 NTU	66.9 mV	19.95 ft	400.00 ml/min
10/5/2022 8:30 AM	35:00	5.43 pH	21.71 °C	48.95 µS/cm	0.18 mg/L	2.10 NTU	65.8 mV	19.95 ft	400.00 ml/min
10/5/2022 8:35 AM	40:00	5.39 pH	21.71 °C	46.96 µS/cm	0.18 mg/L	1.64 NTU	64.6 mV	19.95 ft	400.00 ml/min
10/5/2022 8:40 AM	45:00	5.36 pH	21.68 °C	45.77 µS/cm	0.18 mg/L	1.55 NTU	63.7 mV	19.95 ft	400.00 ml/min
10/5/2022 8:45 AM	50:00	5.33 pH	21.68 °C	44.51 µS/cm	0.18 mg/L	1.43 NTU	62.7 mV	19.95 ft	400.00 ml/min
10/5/2022 8:50 AM	55:00	5.30 pH	21.71 °C	43.68 µS/cm	0.18 mg/L	1.16 NTU	62.1 mV	19.95 ft	400.00 ml/min

**Samples**

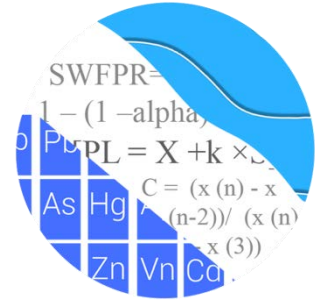
Sample ID:	Description:
MW-19	Sample time 0853.

# Appendix B

**1st**  
**Semi-Annual**  
**Monitoring Event**



# GROUNDWATER STATS CONSULTING



May 9, 2022

Southern Company Services  
Attn: Mr. Trey Singleton  
3535 Colonnade Parkway  
Birmingham, AL 35243

Re: Plant Daniel North Ash Management Unit (NAMU)  
Background Update & Annual Statistical Analysis – March 2022 Sample Event

Dear Mr. Singleton,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the background update and statistical analysis of groundwater data for the 2022 Groundwater Monitoring Annual report for Mississippi Power Company's Plant Daniel NAMU. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at Daniel NAMU for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** MW-11, MW-14, and MW-18
- **Downgradient wells:** MW-15, MW-16, MW-17, and MW-19

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician to Groundwater Stats Consulting.

The CCR program monitors the constituents listed below. The terms “parameters” and “constituents” are used interchangeably throughout this report.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A list of well/constituent pairs containing 100% non-detects follow this letter.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. For calculating intrawell prediction limits, the substitution is performed for individual wells and may differ across wells. This generally gives the most conservative limit in each case. For the time series plots, a single reporting limit substitution is used across all wells for a given parameter since the wells are plotted as a group.

Time series plots for Appendix III parameters are provided for all wells and are used to evaluate concentrations over time as well as for the purpose of updating statistical limits (Figure A). Additionally, box plots are included for all constituents at upgradient and downgradient wells (Figure B). Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graph; however, no values were flagged as outliers (Figure C). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

During the previous screening, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods were recommended. Power curves were provided with the screening to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance recommendations as discussed below.

### **Summary of Statistical Methods**

Based on the evaluation for federal regulatory requirements, the following methods were selected for Appendix III constituents:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. Parametric prediction limits (or tolerance limits or confidence intervals as applicable) are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The following approaches are used for handling non-detects (USEPA, 2009):

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit will be shown as the original reporting limit.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents are re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater quality. While this was not required for this report, in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

## Two-Step Statistical Analysis

Intrawell statistical methods, combined with a 1-of-2 resample plan, may be used as a conservative first step for identifying potential facility impacts in downgradient wells. Intrawell methods use background data for individual wells and may be overly sensitive to natural variation. In particular for nonparametric limits with small background sample sizes, the probability of a false positive is much higher than the desired annual sitewide rate of 10%. Therefore, a large number of exceedances may occur as a result of natural variation rather than facility impacts. A second step can be used to further evaluate those exceedances and reduce the overall number of SSIs that result from natural variation. In instances where intrawell statistical methods identify an apparent SSI, a second step of interwell statistical evaluation may be used to determine whether the measurement exceeds the sitewide background limit based on pooled upgradient well data. This is similar in concept to the procedure used in compliance monitoring programs where an interwell statistical limit is used to determine "background" (USEPA Unified Guidance (2009), Chapter 7, Section 7.5). For the detection monitoring program, if the result does not exceed sitewide (interwell) background, an SSI is not declared.

When the result exceeds the sitewide (interwell) background, the 1-of-2 resample plan allows for collection of an independent resample to confirm or disconfirm the initial finding. A statistically significant increase is not declared unless the resample also exceeds the intrawell prediction limit (United States Environmental Protection Agency (USEPA) Unified Guidance, March 2009, Chapter 19). When the resample confirms the initial exceedance, further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). When any resample falls within the statistical limit, the initial exceedance is considered to be a false positive result, and no further action is necessary. In cases where intrawell and interwell exceedances are noted and no resamples are collected, the initial exceedance will be considered a confirmed statistically significant increase (SSI).

Trend tests, in addition to interwell prediction limits, are recommended for well/constituent pairs found to have an initial intrawell SSI. Trend analysis will provide for detection of long-term changes and potential facility impacts at a given well in cases where the concentrations at that well remain below the sitewide upgradient limits. Thus, the two-step approach has additional capability to detect long-term changes at downgradient wells compared to interwell methods alone. While a trend may be identified by visual inspection, a quantification of the trend and its significance is needed to identify whether concentrations are statistically significantly increasing, decreasing, or remaining stable over time. The absence of a statistically significant increasing trend indicates that an initial intrawell exceedance is short-term and may be the result of natural

variation rather than facility impact to groundwater. If a facility impact has occurred, it will likely result in additional exceedances in future sampling events. When a statistically significant increasing trend is noted, additional data may be needed to demonstrate that there is reasonable evidence that the initial intrawell statistical exceedance is a result of natural variation rather than a result of impact to groundwater quality downgradient of the facility.

## **Summary of Background Screening – Conducted in October 2017**

### Outlier Analysis

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective, in proposed background data. Suspected outliers at all wells for Appendix III parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

No suspected outliers were observed in any of the data sets for Appendix III parameters. When any values are identified as outliers, they are plotted in a lighter font on the time series graph.

### Seasonality

No seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

### Trend Test Evaluation

While trends may be visual, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, earlier data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When the historical records of data are truncated for

the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses showed a few statistically significant decreasing and increasing trends. All trends noted were relatively low in magnitude when compared to average concentrations; therefore, no adjustments were made to any of the data sets.

### Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified variation among upgradient well data at Plant Daniel NAMU for the majority of the Appendix III parameters. This facility is a lined unit with pre-waste data; therefore, due to variation noted among upgradient wells, intrawell prediction limits were recommended for this facility to accommodate the groundwater quality. A summary table of the ANOVA results was included with the screening.

### **Summary of Background Update – Appendix III Parameters – November 2019**

Prior to updating background data, samples were re-evaluated for Appendix III constituents at all wells using Tukey's outlier test and visual screening on all historical data through the April 2019 sample event. Only one value was noted by Tukey's as a potential outlier; however, when Tukey's outlier test detects an outlier for the most recent sample, it often will not be flagged in the event that the data precede a trend that is more representative of current concentrations. Therefore, no values for Appendix III constituents were flagged as outliers at the time of the screening. An updated summary of Tukey's test results was included with the screening.

The Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through June 2017 to the new compliance samples at each well through April 2019 to evaluate whether the groups are statistically different at the 99% confidence

level for each of the Appendix III parameters. When no differences exist, background data sets may be updated to include newer data for construction of prediction limits. This results in statistical limits that are representative of present-day conditions. No statistically significant differences were found between the two groups except for the following: calcium and sulfate in well MW-15. Note that the Mann-Whitney test could not be produced due to insufficient variation in the data for boron in wells MW-14, MW-15, MW-16, MW-17, and MW-19.

Typically, when the test concludes that the medians of the two groups are significantly different, particularly in the downgradient wells, the background are not updated to include the newer data but will be reconsidered in the future. For all well/constituent pairs except for sulfate in well MW-15, due to the limited data available and the variability in data shows some of the more recent data has similar concentrations to those reported in background, these data sets were updated. In the case of calcium at well MW-15, while there is a statistically significant difference between the two medians, the magnitude of the difference is minimal, and newer data more accurately represent concentrations present in nearby wells. Therefore, the background for this well/constituent pair was updated with new data. A summary of these results was included in the 2019 Background Update report.

## **Summary of Background Update – Appendix III Parameters – March 2022**

### Outlier Analysis

Prior to updating background data, samples were re-evaluated for Appendix III constituents at all wells using Tukey's outlier test and visual screening on all historical data through the March 2022 sample event (Figure C). A few values were noted by Tukey's as potential outliers; however, these values were not drastically different than concentrations within the respective wells and were not flagged as outliers. Additionally, when Tukey's outlier test detects an outlier for the most recent sample, it often will not be flagged in the event that the reported concentration precedes a trend that is more representative of current concentrations. No values for Appendix III constituents were flagged as outliers at this time. The Tukey's test results may be found following this letter.

### Mann-Whitney Test of Medians

The Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through April 2019 to the new compliance samples at each well through October 2021 to evaluate whether the groups are statistically different at the 99% confidence level for each of the Appendix III parameters (Figure D). When no differences

exist, background data sets may be updated to include newer data for construction of prediction limits. This results in statistical limits that are representative of present-day conditions. Statistically significant differences were found between the two groups except for the following:

Increase:

- Calcium: MW-19

Decrease:

- Calcium: MW-14 (upgradient)
- Chloride: MW-14 and MW-18 (both upgradient)
- Fluoride: MW-19
- Sulfate: MW-11 (upgradient) and MW-15

Typically, when the test concludes that the medians of the two groups are significantly different, particularly in the downgradient wells, the background are not updated to include the newer data but will be reconsidered in the future. For all well/constituent pairs with decreasing medians, these records were updated with more recent compliance measurements since reported concentrations are similar to those reported historically. In the case of fluoride in downgradient well MW-19, the significant difference resulted from reported trace values compared to reported nondetects in the record.

For the statistically significant increasing median identified in well MW-19, while a portion of the more recent concentrations remain below historical upgradient concentrations, the most recent compliance samples indicate an increase that would result in an elevated intrawell prediction limits. Therefore, this record was not updated at this time. This step results in construction of a statistical limit that is conservative (i.e., lower) from a regulatory perspective. A summary of the date range used for this well/constituent pair follows this report.

## **Statistical Analysis of Appendix III Parameters – March 2022**

### Intrawell Prediction Limits

Intrawell prediction limits, combined with a 1-of-2 resample strategy, were established for each of the Appendix III parameters at each well using historical data through October 2021 for comparison of the March 2022 samples (Figure E). Intrawell prediction limits use screened historical data within a given well to establish limits for parameters at the same well. The March 2022 samples from each well were compared to the prediction limits to determine whether initial exceedances are present.



In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. Complete graphical results of the prediction limits may be found following this letter. Exceedances were identified for the following well/constituent pairs:

- Boron: MW-18
- Calcium: MW-16 and MW-19
- Chloride: MW-16 and MW-19
- pH: MW-19
- Sulfate: MW-18
- TDS: MW-17

### Two-Step Analysis

Following the two-step analysis procedure, interwell prediction limits were then constructed using pooled upgradient well data to evaluate the apparent intrawell prediction limit exceedances among downgradient wells (Figure F). The following well/constituent pair exceeded its respective interwell prediction limit:

- Calcium: MW-19
- pH: MW-19

The reported measurements of 5.84 mg/L for calcium and 5.82 s.u. for pH in well GWC-19 exceeded their respective interwell upper prediction limits of 4.625 mg/L for calcium and 5.65 s.u. for pH. Therefore, further research would be required to identify the cause of the exceedance (i.e., natural variation, an off-site source, or impact from the site).

### Trend Test Evaluation

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure G). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. The existence of similar trends in both upgradient and downgradient wells is an

indication of natural variability in groundwater that is unrelated to practices at the site. No statistically significant increasing or decreasing trends were noted among downgradient wells. Statistically significant trends were identified for the following upgradient well/constituent pairs which is an indication of naturally changing groundwater quality:

Increasing:

- Chloride: MW-11 (upgradient)

Decreasing:

- Calcium: MW-14 and MW-18 (both upgradient)
- Chloride: MW-18 (upgradient)

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Daniel North Ash Management Unit. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew Collins  
Project Manager



Kristina L. Rayner  
Senior Statistician

# 100% Non-Detects

Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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Boron (mg/L)  
MW-16, MW-17, MW-19

# Date Ranges

Date: 5/4/2022 12:00 PM

Plant Daniel Client: Southern Company Data: NAMU CCR

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Calcium (mg/L)

MW-19 background:9/12/2016-4/22/2019

# Welch's t-test/Mann-Whitney - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 11:57 AM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Calcium (mg/L)	MW-14 (bg)	-3.217	Yes	Mann-W
Calcium (mg/L)	MW-19	2.902	Yes	Mann-W
Chloride (mg/L)	MW-14 (bg)	-2.696	Yes	Mann-W
Chloride (mg/L)	MW-18 (bg)	-2.69	Yes	Mann-W
Fluoride (mg/L)	MW-19	-2.932	Yes	Mann-W
Sulfate (mg/L)	MW-11 (bg)	-2.864	Yes	Mann-W
Sulfate (mg/L)	MW-15	-3.141	Yes	Mann-W

# Welch's t-test/Mann-Whitney - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 11:57 AM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Boron (mg/L)	MW-11 (bg)	-0.0941	No	Mann-W
Boron (mg/L)	MW-14 (bg)	-1.678	No	Mann-W
Boron (mg/L)	MW-15	-1.678	No	Mann-W
Boron (mg/L)	MW-18 (bg)	-0.2616	No	Mann-W
Calcium (mg/L)	MW-11 (bg)	0.9129	No	Mann-W
<b>Calcium (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-3.217</b>	<b>Yes</b>	<b>Mann-W</b>
Calcium (mg/L)	MW-15	-0.0532	No	Mann-W
Calcium (mg/L)	MW-16	-0.1975	No	Mann-W
Calcium (mg/L)	MW-17	0.583	No	Mann-W
Calcium (mg/L)	MW-18 (bg)	-2.268	No	Mann-W
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>2.902</b>	<b>Yes</b>	<b>Mann-W</b>
Chloride (mg/L)	MW-11 (bg)	2.029	No	Mann-W
<b>Chloride (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-2.696</b>	<b>Yes</b>	<b>Mann-W</b>
Chloride (mg/L)	MW-15	1.372	No	Mann-W
Chloride (mg/L)	MW-16	-0.7458	No	Mann-W
Chloride (mg/L)	MW-17	-1.003	No	Mann-W
<b>Chloride (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-2.69</b>	<b>Yes</b>	<b>Mann-W</b>
Chloride (mg/L)	MW-19	-0.1059	No	Mann-W
Fluoride (mg/L)	MW-11 (bg)	-0.4948	No	Mann-W
Fluoride (mg/L)	MW-14 (bg)	-2.337	No	Mann-W
Fluoride (mg/L)	MW-15	-0.6587	No	Mann-W
Fluoride (mg/L)	MW-16	-2.195	No	Mann-W
Fluoride (mg/L)	MW-17	-2.352	No	Mann-W
Fluoride (mg/L)	MW-18 (bg)	-1.296	No	Mann-W
<b>Fluoride (mg/L)</b>	<b>MW-19</b>	<b>-2.932</b>	<b>Yes</b>	<b>Mann-W</b>
pH (SU)	MW-11 (bg)	-1.088	No	Mann-W
pH (SU)	MW-14 (bg)	-0.7906	No	Mann-W
pH (SU)	MW-15	1.478	No	Mann-W
pH (SU)	MW-16	-0.6873	No	Mann-W
pH (SU)	MW-17	-0.1057	No	Mann-W
pH (SU)	MW-18 (bg)	2.191	No	Mann-W
pH (SU)	MW-19	1.381	No	Mann-W
<b>Sulfate (mg/L)</b>	<b>MW-11 (bg)</b>	<b>-2.864</b>	<b>Yes</b>	<b>Mann-W</b>
Sulfate (mg/L)	MW-14 (bg)	-1.229	No	Mann-W
<b>Sulfate (mg/L)</b>	<b>MW-15</b>	<b>-3.141</b>	<b>Yes</b>	<b>Mann-W</b>
Sulfate (mg/L)	MW-16	-1.949	No	Mann-W
Sulfate (mg/L)	MW-17	1.797	No	Mann-W
Sulfate (mg/L)	MW-18 (bg)	-0.4749	No	Mann-W
Sulfate (mg/L)	MW-19	-1.478	No	Mann-W
Total Dissolved Solids (mg/L)	MW-11 (bg)	0.5283	No	Mann-W
Total Dissolved Solids (mg/L)	MW-14 (bg)	-0.8987	No	Mann-W
Total Dissolved Solids (mg/L)	MW-15	1.389	No	Mann-W
Total Dissolved Solids (mg/L)	MW-16	1.004	No	Mann-W
Total Dissolved Solids (mg/L)	MW-17	1.535	No	Mann-W
Total Dissolved Solids (mg/L)	MW-18 (bg)	0.1593	No	Mann-W
Total Dissolved Solids (mg/L)	MW-19	0.8987	No	Mann-W

# Appendix III Intrawell Prediction Limits - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 4:28 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig. Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-18	0.08	n/a	3/16/2022	0.0927	Yes	17	n/a	n/a	70.59	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Calcium (mg/L)	MW-16	1.146	n/a	3/15/2022	1.18	Yes	18	0.8117	0.1645	0	None	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-19	0.8608	n/a	3/15/2022	5.84	Yes	12	0.7847	0.06412	0	None	sqrt(x)	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-16	10.07	n/a	3/15/2022	10.8	Yes	19	7.533	1.263	0	None	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-19	5.802	n/a	3/15/2022	6.91	Yes	17	706.2	208.1	5.882	None	x^4	0.00188	Param Intra 1 of 2
pH (SU)	MW-19	5.525	4.715	3/15/2022	5.82	Yes	18	5.12	0.1992	0	None	No	0.0009398	Param Intra 1 of 2
Sulfate (mg/L)	MW-18	5.034	n/a	3/16/2022	7.04	Yes	17	3.843	0.5798	5.882	None	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-17	43.75	n/a	3/16/2022	55	Yes	17	25.75	8.766	5.882	None	No	0.00188	Param Intra 1 of 2

# Appendix III Intrawell Prediction Limits - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 4:28 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-11	0.103	n/a	3/15/2022	0.08ND	No	17	n/a	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-14	0.08	n/a	3/15/2022	0.08ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-15	0.08	n/a	3/15/2022	0.08ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>MW-18</b>	<b>0.08</b>	<b>n/a</b>	<b>3/16/2022</b>	<b>0.0927</b>	<b>Yes</b>	<b>17</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>70.59</b>	<b>n/a</b>	<b>n/a</b>	<b>0.005914</b>	<b>NP Intra (NDs) 1 of 2</b>
Calcium (mg/L)	MW-11	2.125	n/a	3/15/2022	1.87	No	17	24.35	9.256	5.882	None	n/a	x^5	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-14	5.702	n/a	3/15/2022	2.59	No	17	3.406	1.117	5.882	None	No	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-15	1.597	n/a	3/15/2022	0.703	No	17	1.187	0.2	0	None	No	No	0.00188	Param Intra 1 of 2
<b>Calcium (mg/L)</b>	<b>MW-16</b>	<b>1.146</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>1.18</b>	<b>Yes</b>	<b>18</b>	<b>0.8117</b>	<b>0.1645</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Calcium (mg/L)	MW-17	1.27	n/a	3/16/2022	1.04	No	17	0.01917	0.1071	0	None	In(x)	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-18	0.9976	n/a	3/16/2022	0.406J	No	17	0.6866	0.1514	0	None	No	No	0.00188	Param Intra 1 of 2
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>0.8608</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>5.84</b>	<b>Yes</b>	<b>12</b>	<b>0.7847</b>	<b>0.06412</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Chloride (mg/L)	MW-11	16.08	n/a	3/15/2022	13.6	No	32	12.44	1.948	0	None	No	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-14	12.3	n/a	3/15/2022	8.36	No	17	8.927	1.643	0	None	No	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-15	10.02	n/a	3/15/2022	5.55	No	17	7.922	1.023	0	None	No	No	0.00188	Param Intra 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-16</b>	<b>10.07</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>10.8</b>	<b>Yes</b>	<b>19</b>	<b>7.533</b>	<b>1.263</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Chloride (mg/L)	MW-17	8.234	n/a	3/16/2022	7	No	17	6.738	0.7281	0	None	No	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-18	11.16	n/a	3/16/2022	6.05	No	17	8	1.54	0	None	No	No	0.00188	Param Intra 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-19</b>	<b>5.802</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>6.91</b>	<b>Yes</b>	<b>17</b>	<b>706.2</b>	<b>208.1</b>	<b>5.882</b>	<b>None</b>	<b>x^4</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	MW-11	0.1	n/a	3/15/2022	0.1ND	No	17	n/a	n/a	41.18	n/a	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Fluoride (mg/L)	MW-14	0.1	n/a	3/15/2022	0.0364J	No	17	n/a	n/a	76.47	n/a	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-15	0.1	n/a	3/15/2022	0.0302J	No	17	n/a	n/a	88.24	n/a	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-16	0.1	n/a	3/15/2022	0.0438J	No	17	n/a	n/a	76.47	n/a	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-17	0.1	n/a	3/16/2022	0.0399J	No	17	n/a	n/a	88.24	n/a	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-18	0.1	n/a	3/16/2022	0.1ND	No	17	n/a	n/a	64.71	n/a	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-19	0.1	n/a	3/15/2022	0.0423J	No	17	n/a	n/a	82.35	n/a	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
pH (SU)	MW-11	4.927	4.479	3/15/2022	4.73	No	18	4.703	0.1101	0	None	No	No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-14	5.519	4.651	3/15/2022	5.07	No	17	5.085	0.2112	0	None	No	No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-15	5.006	4.405	3/15/2022	4.87	No	17	4.705	0.1462	0	None	No	No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-16	4.808	4.41	3/15/2022	4.58	No	17	4.609	0.09695	0	None	No	No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-17	5.314	4.695	3/16/2022	4.91	No	17	1.71	0.0172	0	None	x^(1/3)	No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-18	4.833	4.445	3/16/2022	4.79	No	16	4.639	0.09337	0	None	No	No	0.0009398	Param Intra 1 of 2
<b>pH (SU)</b>	<b>MW-19</b>	<b>5.525</b>	<b>4.715</b>	<b>3/15/2022</b>	<b>5.82</b>	<b>Yes</b>	<b>18</b>	<b>5.12</b>	<b>0.1992</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>No</b>	<b>0.0009398</b>	<b>Param Intra 1 of 2</b>
Sulfate (mg/L)	MW-11	9.282	n/a	3/15/2022	2.88	No	32	4.514	2.549	15.63	Kaplan-Meier	No	No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-14	5	n/a	3/15/2022	2.1	No	17	n/a	n/a	29.41	n/a	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Sulfate (mg/L)	MW-15	5	n/a	3/15/2022	1.33	No	17	n/a	n/a	52.94	n/a	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Sulfate (mg/L)	MW-16	5	n/a	3/15/2022	2.29	No	17	n/a	n/a	47.06	n/a	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Sulfate (mg/L)	MW-17	4.97	n/a	3/16/2022	3.38	No	17	1.583	0.3149	11.76	None	sqrt(x)	No	0.00188	Param Intra 1 of 2
<b>Sulfate (mg/L)</b>	<b>MW-18</b>	<b>5.034</b>	<b>n/a</b>	<b>3/16/2022</b>	<b>7.04</b>	<b>Yes</b>	<b>17</b>	<b>3.843</b>	<b>0.5798</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Sulfate (mg/L)	MW-19	5	n/a	3/15/2022	4.86	No	17	n/a	n/a	41.18	n/a	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-11	76.12	n/a	3/15/2022	53	No	17	44	15.64	0	None	No	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-14	67.34	n/a	3/15/2022	56	No	17	36.35	15.09	0	None	No	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-15	54.62	n/a	3/15/2022	51	No	18	27.33	13.43	0	None	No	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-16	59.48	n/a	3/15/2022	34	No	17	24.46	17.05	17.65	Kaplan-Meier	No	No	0.00188	Param Intra 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>MW-17</b>	<b>43.75</b>	<b>n/a</b>	<b>3/16/2022</b>	<b>55</b>	<b>Yes</b>	<b>17</b>	<b>25.75</b>	<b>8.766</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Total Dissolved Solids (mg/L)	MW-18	46.41	n/a	3/16/2022	25	No	17	26.88	9.506	0	None	No	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-19	43.34	n/a	3/15/2022	36	No	17	22.09	10.35	5.882	None	No	No	0.00188	Param Intra 1 of 2



# Appendix III Interwell Prediction Limits - Two-Step - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:38 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-19	4.625	n/a	3/15/2022	5.84	Yes	54		1.341	0.4515	3.704	None	sqrt(x)	0.00188	Param Inter 1 of 2
pH (SU)	MW-19	5.65	4.45	3/15/2022	5.82	Yes	54	n/a		n/a	0	n/a	n/a	0.001314	NP Inter (normality) 1 of 2

# Appendix III Interwell Prediction Limits - Two-Step - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:38 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-16	4.625	n/a	3/15/2022	1.18	No	54	1.341	0.4515	3.704	None	sqrt(x)	0.00188	Param Inter 1 of 2	
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>4.625</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>5.84</b>	<b>Yes</b>	<b>54</b>	<b>1.341</b>	<b>0.4515</b>	<b>3.704</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.00188</b>	<b>Param Inter 1 of 2</b>	
Chloride (mg/L)	MW-16	15.15	n/a	3/15/2022	10.8	No	69	10.34	2.711	0	None	No	0.00188	Param Inter 1 of 2	
Chloride (mg/L)	MW-19	15.15	n/a	3/15/2022	6.91	No	69	10.34	2.711	0	None	No	0.00188	Param Inter 1 of 2	
<b>pH (SU)</b>	<b>MW-19</b>	<b>5.65</b>	<b>4.45</b>	<b>3/15/2022</b>	<b>5.82</b>	<b>Yes</b>	<b>54</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.001314</b>	<b>NP Inter (normality) 1 of 2</b>	
Total Dissolved Solids (mg/L)	MW-17	63.58	n/a	3/16/2022	55	No	54	36.24	15.24	0	None	No	0.00188	Param Inter 1 of 2	

# Appendix III Trend Tests - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:45 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-14 (bg)	-0.4386	-116	-68	Yes	18	5.556	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-18 (bg)	-0.06549	-94	-68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-11 (bg)	0.2758	264	167	Yes	33	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-18 (bg)	-0.5483	-74	-68	Yes	18	0	n/a	n/a	0.01	NP

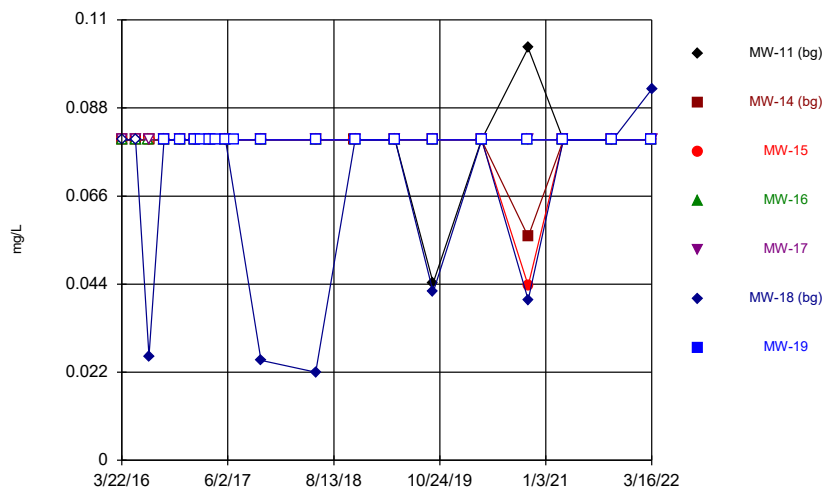
# Appendix III Trend Tests - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:45 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-11 (bg)	0.005091	20	68	No	18	5.556	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-0.4386</b>	<b>-116</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>5.556</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-16	0.02429	32	74	No	19	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.06549</b>	<b>-94</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-19	0.07499	59	68	No	18	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-11 (bg)</b>	<b>0.2758</b>	<b>264</b>	<b>167</b>	<b>Yes</b>	<b>33</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-14 (bg)	-0.462	-49	-68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-16	0.2284	45	81	No	20	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.5483</b>	<b>-74</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-19	0.05302	23	68	No	18	5.556	n/a	n/a	0.01	NP
pH (SU)	MW-11 (bg)	-0.01384	-35	-74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	MW-14 (bg)	-0.04636	-59	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	MW-18 (bg)	0.0269	58	63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	MW-19	0.01905	13	74	No	19	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-11 (bg)	1.035	19	68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-14 (bg)	0	-3	-68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-17	1.855	47	68	No	18	5.556	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-18 (bg)	0.1804	11	68	No	18	0	n/a	n/a	0.01	NP

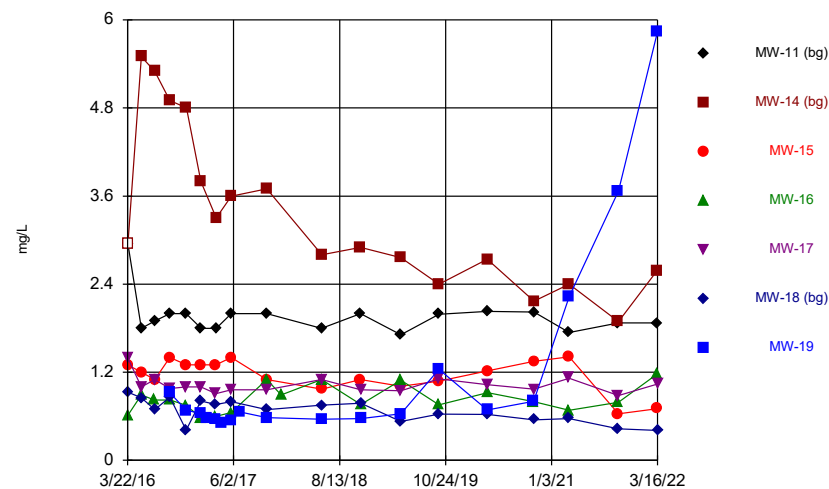
FIGURE A.

Time Series



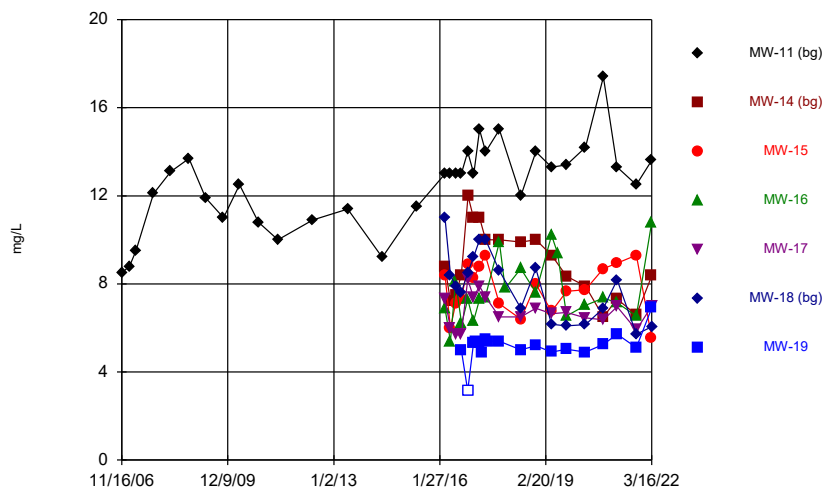
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Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



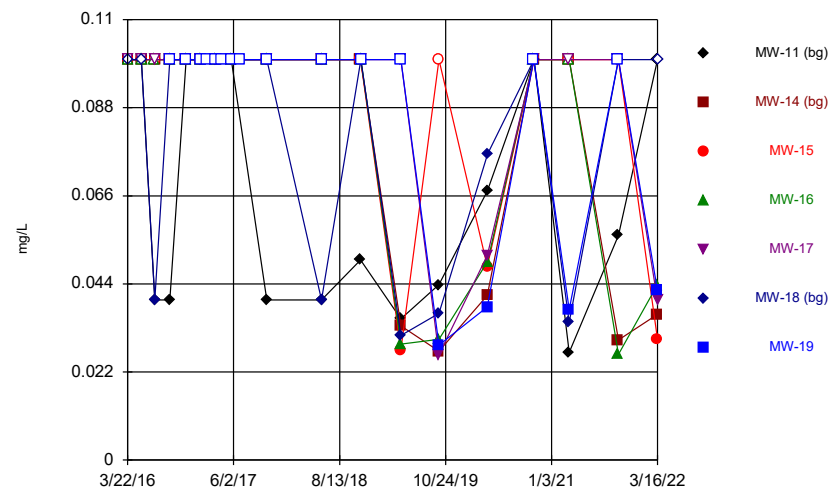
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Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



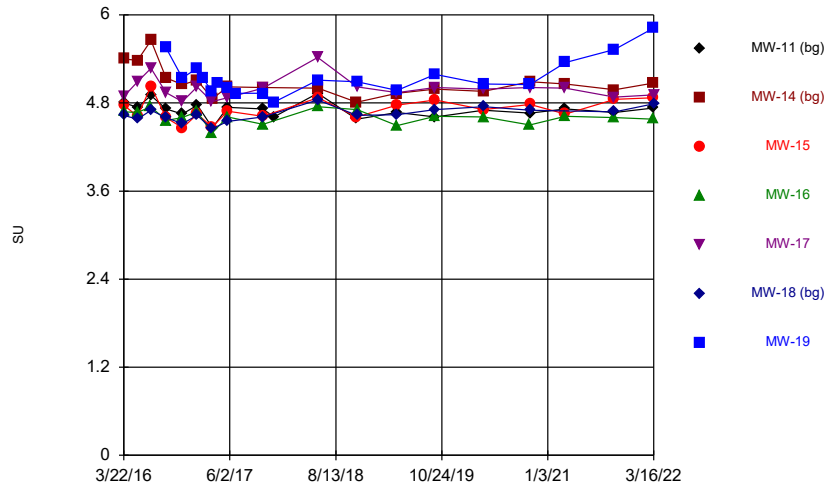
Constituent: Chloride Analysis Run 5/4/2022 11:52 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



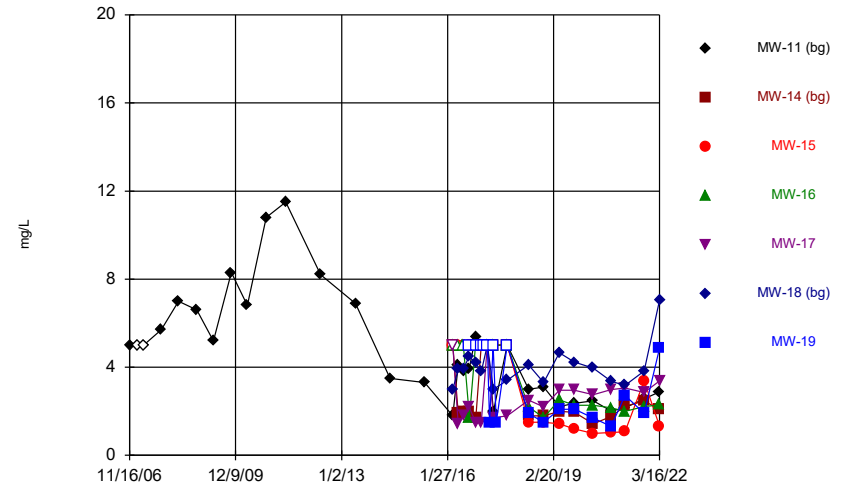
Constituent: Fluoride Analysis Run 5/4/2022 11:52 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



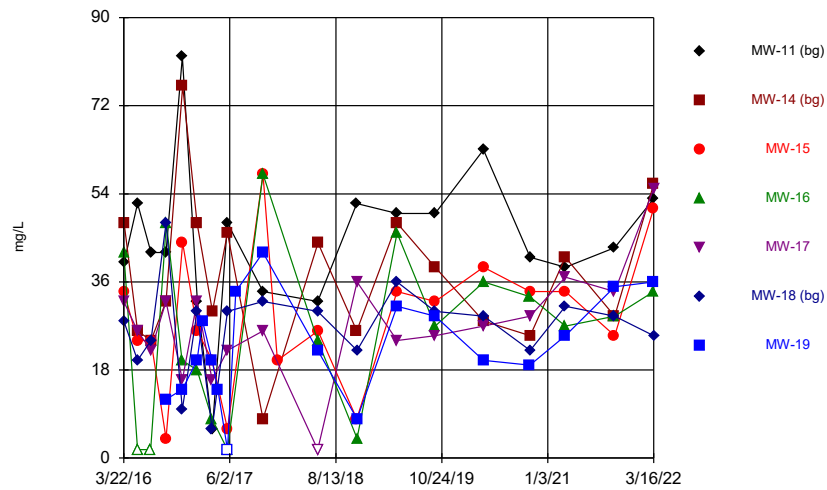
Constituent: pH Analysis Run 5/4/2022 11:52 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



Constituent: Sulfate Analysis Run 5/4/2022 11:52 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:52 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

# Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2022 11:52 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			<0.08 (B1)	<0.08 (B1)	<0.08 (B1)	<0.08 (B1)	
3/23/2016	<0.08 (B1)	<0.08 (B1)					
5/18/2016	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	
7/11/2016				<0.08			
7/12/2016	<0.08	<0.08	<0.08		<0.08	0.026 (J)	
9/12/2016	<0.08	<0.08	<0.08		<0.08	<0.08	<0.08
9/13/2016				<0.08			
11/17/2016				<0.08			
11/18/2016	<0.08				<0.08	<0.08	<0.08
11/19/2016		<0.08	<0.08				
1/18/2017		<0.08		<0.08	<0.08	<0.08	<0.08
1/19/2017	<0.08		<0.08				
2/10/2017							<0.08
3/21/2017			<0.08	<0.08	<0.08	<0.08	<0.08
3/22/2017	<0.08	<0.08					
4/14/2017							<0.08
5/23/2017			<0.08	<0.08			<0.08
5/24/2017	<0.08	<0.08			<0.08	<0.08	
6/26/2017							<0.08
10/17/2017	<0.08	<0.08	<0.08	<0.08	<0.08	0.025 (J)	<0.08
5/31/2018	<0.08			<0.08	<0.08	0.022 (J)	<0.08
6/1/2018		<0.08	<0.08				
11/7/2018	<0.08	<0.08	<0.08				
11/8/2018				<0.08	<0.08	<0.08	<0.08
4/22/2019	<0.08			<0.08	<0.08	<0.08	<0.08
4/23/2019		<0.08	<0.08				
9/26/2019		<0.08	<0.08	<0.08	<0.08	0.042 (J)	<0.08
9/27/2019	0.0443 (J)						
4/13/2020	<0.08	<0.08	<0.08		<0.08		<0.08
4/14/2020				<0.08		<0.08	
10/21/2020				<0.08			<0.08
10/22/2020	0.103	0.0559 (J)	0.0437 (J)		<0.08	0.0401 (J)	
3/16/2021	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
10/5/2021	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
3/15/2022	<0.08	<0.08	<0.08	<0.08			<0.08
3/16/2022					<0.08	0.0927	



# Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:52 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			1.3 (B1)	0.61 (B1)	1.4 (B1)	0.93 (B1)	
3/23/2016	<5.9 (*)	<5.9 (*)					
5/18/2016	1.8	5.5	1.2	0.89	1	0.85	
7/11/2016				0.82			
7/12/2016	1.9	5.3	1.1		1.1	0.69	
9/12/2016	2	4.9	1.4		0.98	0.86	0.92
9/13/2016				0.82			
11/17/2016				0.75			
11/18/2016	2				1	0.41	0.68
11/19/2016		4.8	1.3				
1/18/2017		3.8		0.58	1	0.81	0.64
1/19/2017	1.8		1.3				
2/10/2017							0.58
3/21/2017			1.3	0.6	0.91	0.76	0.56
3/22/2017	1.8	3.3					
4/14/2017							0.51
5/23/2017			1.4	0.65			0.54
5/24/2017	2	3.6			0.96	0.8	
6/26/2017							0.66
10/17/2017	2	3.7	1.1	1.1	0.96	0.69	0.58
12/15/2017				0.89 (RS)			
5/31/2018	1.8			1.1	1.1	0.75	0.56
6/1/2018		2.8	0.97				
11/7/2018	2	2.9	1.1				
11/8/2018				0.76	0.96	0.78	0.57
4/22/2019	1.71			1.09	0.946	0.531	0.634
4/23/2019		2.76	1.01				
9/26/2019		2.4	1.08	0.758	1.11	0.631	1.24
9/27/2019	1.99						
4/13/2020	2.03	2.74	1.22		1.03		0.687
4/14/2020				0.92		0.627	
10/21/2020				0.798			0.806
10/22/2020	2.02	2.17	1.35		0.969	0.553	
3/16/2021	1.74	2.4	1.41	0.681	1.12	0.57	2.23
10/5/2021	1.87	1.89	0.632	0.793	0.883	0.43 (J)	3.67
3/15/2022	1.87	2.59	0.703	1.18			5.84
3/16/2022					1.04	0.406 (J)	

# Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:52 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
11/16/2006	8.5						
2/5/2007	8.8						
4/12/2007	9.5						
10/17/2007	12.1						
4/17/2008	13.1						
10/24/2008	13.7						
4/21/2009	11.9						
10/26/2009	11						
4/12/2010	12.5						
10/30/2010	10.8						
5/25/2011	10						
5/25/2012	10.9						
5/28/2013	11.4						
5/31/2014	9.2						
5/29/2015	11.5						
3/22/2016			8.4 (B1)	6.9 (B1)	7.3 (B1)	11 (B1)	
3/23/2016	13	8.8 (B1)					
5/18/2016	13	7.2	6	5.4	6	8.4	
7/11/2016				8.1			
7/12/2016	13	7.5	7.1		5.7	7.9	
9/12/2016	13	8.4	7.3		5.7	7.6	5
9/13/2016				6.2			
11/17/2016				7.3			
11/18/2016	14				8.2	8.5	<6.3 (*)
11/19/2016		12	8.9				
1/18/2017		11		6.3	7.4	9.2	5.3
1/19/2017	13		8.3				
2/10/2017							5.4
3/21/2017			8.8	7.3	7.9	10	5.3
3/22/2017	15	11					
4/14/2017							4.9 (B)
5/23/2017			9.3	7.4			5.5
5/24/2017	14	10			7.4	10	
6/26/2017							5.4
10/17/2017	15	10	7.1	9.9	6.5	8.6	5.4
12/19/2017				7.8 (RS)			
5/31/2018	12			8.7	6.5	6.9	5
6/1/2018		9.9	6.4				
11/7/2018	14	10	8				
11/8/2018				7.6	6.9	8.7	5.2
4/22/2019	13.3			10.2	6.64	6.17	4.91
4/23/2019		9.3	6.75				
6/25/2019				9.4			
9/26/2019		8.35	7.66	6.54	6.7	6.09	5.03
9/27/2019	13.4						
4/13/2020	14.2	7.9	7.74		6.46		4.9
4/14/2020				7.03		6.15	
10/21/2020				7.36			5.25
10/22/2020	17.4	6.5	8.69		6.37	6.89	
3/16/2021	13.3	7.32	8.94	7.14	6.97	8.18	5.72
10/5/2021	12.5	6.59	9.3	6.55	5.91	5.72	5.1
3/15/2022	13.6	8.36	5.55	10.8			6.91

# Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:52 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/16/2022					7	6.05	

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:52 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			<0.1 (B1)	<0.1 (B1)	<0.1 (B1)	<0.1 (B1)	
3/23/2016	<0.1	<0.1 (B1)					
5/18/2016	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
7/11/2016				<0.1			
7/12/2016	0.04 (J)	<0.1	<0.1		<0.1	0.04 (J)	
9/12/2016	0.04 (J)	<0.1	<0.1		<0.1	<0.1	<0.1
9/13/2016				<0.1			
11/17/2016				<0.1			
11/18/2016	<0.1				<0.1	<0.1	<0.1
11/19/2016		<0.1	<0.1				
1/18/2017		<0.1		<0.1	<0.1	<0.1	<0.1
1/19/2017	<0.1		<0.1				
2/10/2017							<0.1
3/21/2017			<0.1	<0.1	<0.1	<0.1	<0.1
3/22/2017	<0.1	<0.1					
4/14/2017							<0.1
5/23/2017			<0.1	<0.1			<0.1
5/24/2017	<0.1	<0.1			<0.1	<0.1	
6/26/2017							<0.1
10/17/2017	0.04 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
5/31/2018	0.04 (J)			<0.1	<0.1	0.04 (J)	<0.1
6/1/2018		<0.1	<0.1				
11/7/2018	0.05 (J)	<0.1	<0.1				
11/8/2018				<0.1	<0.1	<0.1	<0.1
4/22/2019	0.0353 (J)			0.029 (J)	<0.1	0.0311 (J)	<0.1
4/23/2019		0.0335 (J)	0.0275 (J)				
9/26/2019		0.0272 (J)	<0.1	0.0302 (J)	0.0263 (J)	0.0366 (J)	0.0287 (J)
9/27/2019	0.0438 (J)						
4/13/2020	0.0672 (J)	0.0411 (J)	0.0484 (J)		0.0511 (J)		0.0382 (J)
4/14/2020				0.0496 (J)		0.0764 (J)	
10/21/2020				<0.1			<0.1
10/22/2020	<0.1	<0.1	<0.1		<0.1	<0.1	
3/16/2021	0.0269 (J)	<0.1	<0.1	<0.1	<0.1	0.0344 (J)	0.0376 (J)
10/5/2021	0.0561 (J)	0.03 (J)	<0.1	0.0264 (J)	<0.1	<0.1	<0.1
3/15/2022	<0.1	0.0364 (J)	0.0302 (J)	0.0438 (J)			0.0423 (J)
3/16/2022					0.0399 (J)	<0.1	

# Time Series

Constituent: pH (SU) Analysis Run 5/4/2022 11:52 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			4.77	4.68	4.89	4.63	
3/23/2016	4.8	5.4					
5/18/2016	4.74	5.38	4.62	4.67	5.09	4.58	
7/11/2016				4.75			
7/12/2016	4.9	5.65	5.03		5.27	4.7	
9/12/2016	4.72	5.14	4.6		4.94	4.6	5.55
9/13/2016				4.56			
11/17/2016				4.6			
11/18/2016	4.65				4.82	4.52	5.14
11/19/2016		5.05	4.46				
1/18/2017		5.11		4.68	5.02	4.63	5.27
1/19/2017	4.77		4.65				
2/10/2017							5.14
3/21/2017			4.47	4.39	4.82	4.45	4.96
3/22/2017	4.46	4.86					
4/14/2017							5.07
5/23/2017			4.69	4.61			5.01
5/24/2017	4.74	5.02			4.87	4.55	
6/26/2017							4.93
10/17/2017	4.72	5.01	4.62	4.51	5	4.61	4.93
11/30/2017	4.61						4.81
5/31/2018	4.93			4.75	5.42	4.84	5.11
6/1/2018		5	4.87				
11/7/2018	4.58	4.81	4.61				
11/8/2018				4.71	5.02	4.63	5.09
4/22/2019	4.67			4.49	4.94	4.64	4.97
4/23/2019		4.93	4.77				
9/26/2019		4.99	4.84	4.62	5.01	4.71	5.19
9/27/2019	4.61						
4/13/2020	4.7	4.96	4.71		4.99		5.06
4/14/2020				4.61		4.75	
10/21/2020				4.5			5.05
10/22/2020	4.66	5.09	4.78		5.01	4.7	
3/16/2021	4.72	5.06	4.65	4.62	5		5.35
10/5/2021	4.67	4.98	4.85	4.6	4.88	4.68	5.53
3/15/2022	4.73	5.07	4.87	4.58			5.82
3/16/2022					4.91	4.79	

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:52 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
11/16/2006	5						
2/5/2007	<5						
4/12/2007	<5						
10/17/2007	5.7						
4/17/2008	7						
10/24/2008	6.6						
4/21/2009	5.2						
10/26/2009	8.3						
4/12/2010	6.8						
10/30/2010	10.8						
5/25/2011	11.5						
5/25/2012	8.2						
5/28/2013	6.9						
5/31/2014	3.5						
5/29/2015	3.3						
3/22/2016			<5	<5	<5	3 (J)	
3/23/2016	1.8 (J)	<5					
5/18/2016	4.1	1.9	<5	<5	1.4	3.9 (J)	
7/11/2016				<5			
7/12/2016	3.8 (J)	2 (J)	<5		1.8 (J)	3.9 (J)	
9/12/2016	3.9 (J)	2 (J)	<5		2.2 (J)	4.5 (J)	<5
9/13/2016				1.7 (J)			
11/17/2016				<5			
11/18/2016	5.4				1.5 (J)	4.2 (J)	<5
11/19/2016		1.7 (J)	<5				
1/18/2017		<5		<5	1.5 (J)	3.8 (J)	<5
1/19/2017	<5		<5				
2/10/2017							<5
3/21/2017			<5	<5	<5	<5 (*)	<5
3/22/2017	<5	<5					
4/14/2017							1.5 (J)
5/23/2017			<5	<5			<5
5/24/2017	2 (J)	<5			1.7 (J)	3 (J)	
6/26/2017							1.5 (J)
10/17/2017	<5	<5	<5	<5	1.8 (J)	3.4 (J)	<5
5/31/2018	3 (J)			2.2 (J)	2.5 (J)	4.1 (J)	1.9 (J)
6/1/2018		1.8 (J)	1.5 (J)				
11/7/2018	3.1 (J)	1.8 (J)	1.5 (J)				
11/8/2018				1.7 (J)	2.2 (J)	3.3 (J)	1.5 (J)
4/22/2019	2.22			2.52	2.96	4.66	2.09
4/23/2019		1.99	1.43				
9/26/2019		1.95	1.2	2.28	2.96	4.23	2.1
9/27/2019	2.36						
4/13/2020	2.47	1.43	0.992 (J)		2.75		1.69
4/14/2020				2.27		3.96	
10/21/2020				2.15			1.31
10/22/2020	2.01	1.76	1.04		2.98	3.37	
3/16/2021	2.15	2.23	1.07	2	3.06	3.18	2.72
10/5/2021	2.57	2.46	3.38	2.22	2.85	3.83	1.91
3/15/2022	2.88	2.1	1.33	2.29			4.86
3/16/2022					3.38	7.04	

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:52 AM

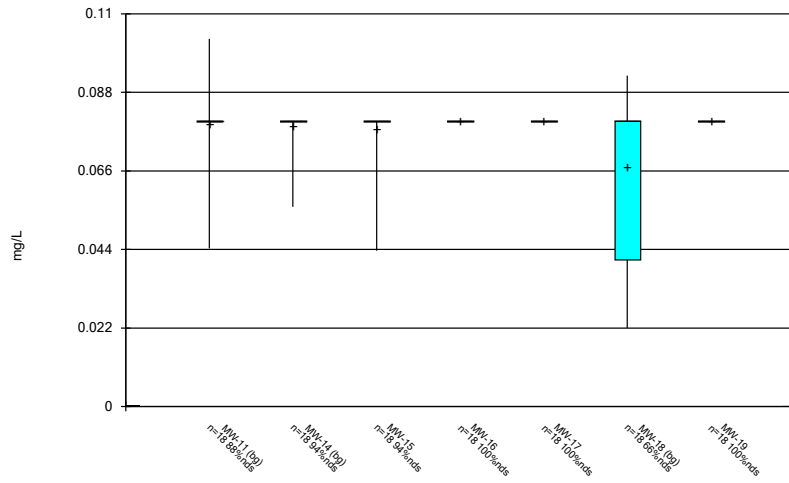
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			34 (B1)	42 (B1)	32 (B1)	28 (B1)	
3/23/2016	40	48 (B1)					
5/18/2016	52	26	24	<3.4	26	20	
7/11/2016				<3.4			
7/12/2016	42	24	24		22	24	
9/12/2016	42	32	4 (J)		32	48	12
9/13/2016				48			
11/17/2016				20			
11/18/2016	82				16	10	14
11/19/2016		76	44				
1/18/2017		48		18	32	30	20
1/19/2017	32		26				
2/10/2017							28
3/21/2017			20	8	16	6	20
3/22/2017	6	30					
4/14/2017							14
5/23/2017			6	<3.4			<3.4
5/24/2017	48	46			22	30	
6/26/2017							34
10/17/2017	34	8	58	58	26	32	42
12/15/2017			20 (RS)				
5/31/2018	32			24	<3.4	30	22
6/1/2018		44	26				
11/7/2018	52	26	8				
11/8/2018				4 (J)	36	22	8
4/22/2019	50			46	24	36	31
4/23/2019		48	34				
9/26/2019		39	32	27	25	30	29
9/27/2019	50						
4/13/2020	63	28	39		27		20
4/14/2020				36		29	
10/21/2020				33			19
10/22/2020	41	25	34		29	22	
3/16/2021	39	41	34	27	37	31	25
10/5/2021	43	29	25	29	34	29	35
3/15/2022	53	56	51	34			36
3/16/2022					55	25	

FIGURE B.

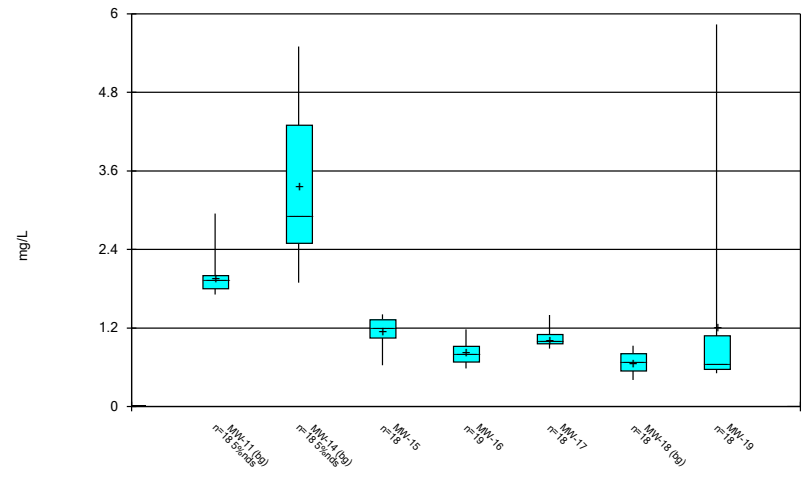


### Box & Whiskers Plot



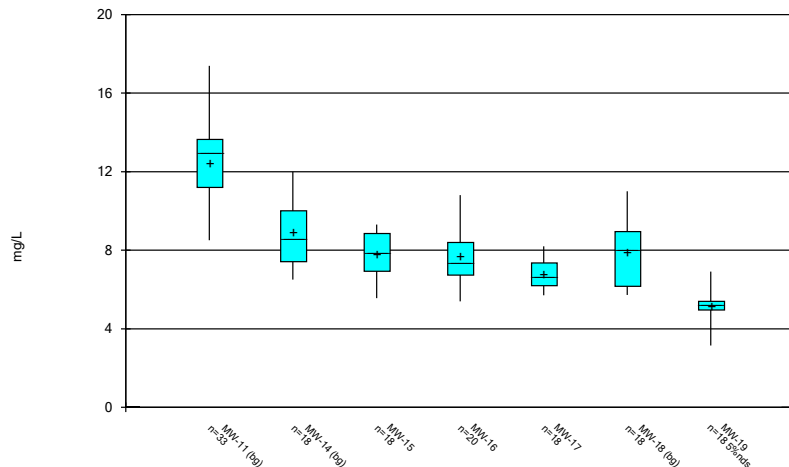
Constituent: Boron Analysis Run 5/4/2022 11:53 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Box & Whiskers Plot



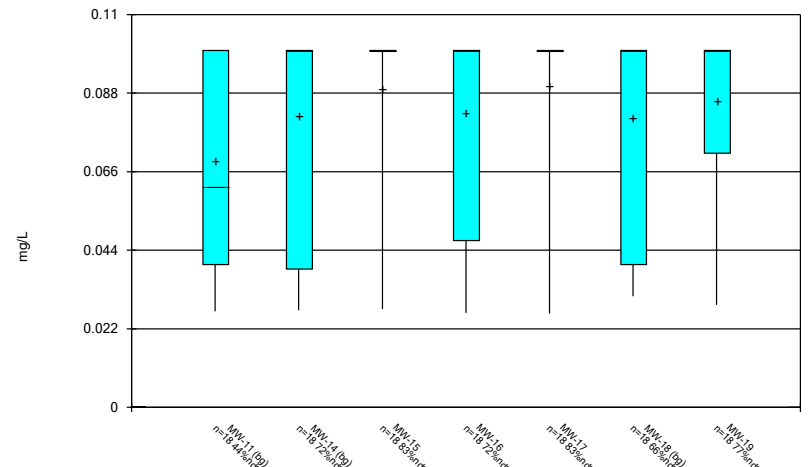
Constituent: Calcium Analysis Run 5/4/2022 11:53 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Box & Whiskers Plot



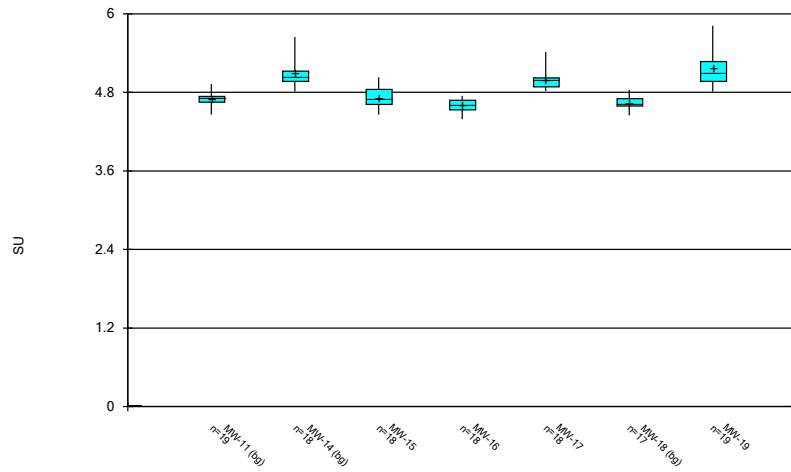
Constituent: Chloride Analysis Run 5/4/2022 11:53 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Box & Whiskers Plot



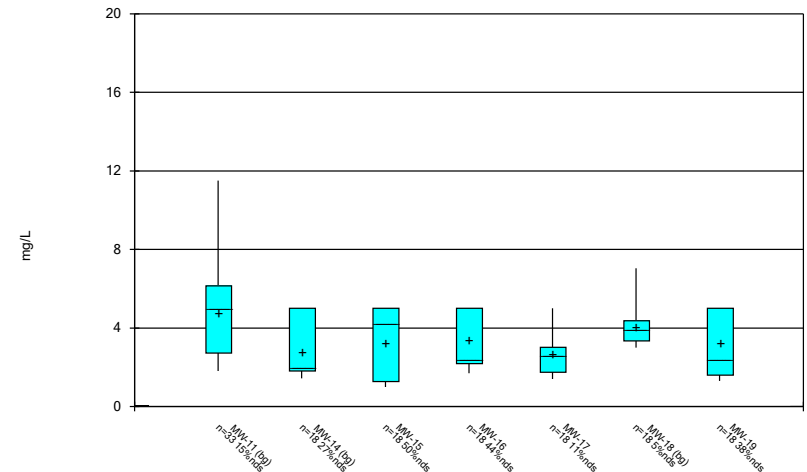
Constituent: Fluoride Analysis Run 5/4/2022 11:53 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Box & Whiskers Plot



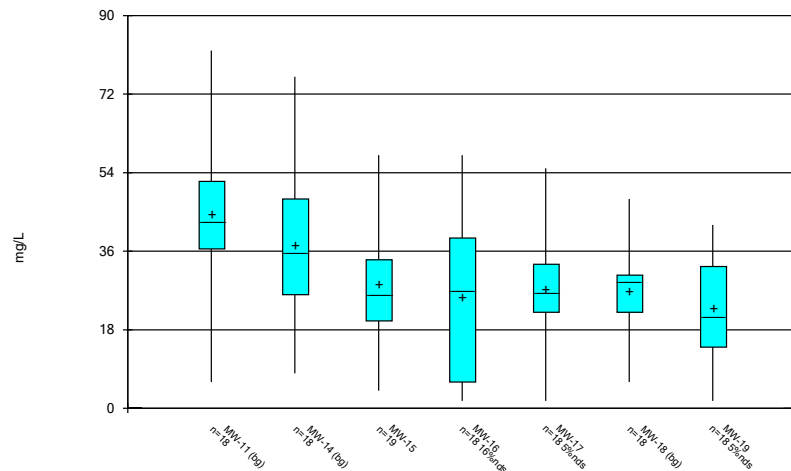
Constituent: pH Analysis Run 5/4/2022 11:53 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Box & Whiskers Plot



Constituent: Sulfate Analysis Run 5/4/2022 11:53 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:53 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

FIGURE C.

# Outlier Summary

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:49 PM

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No outliers were flagged.

# Tukey's Outlier Test - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 11:52 AM

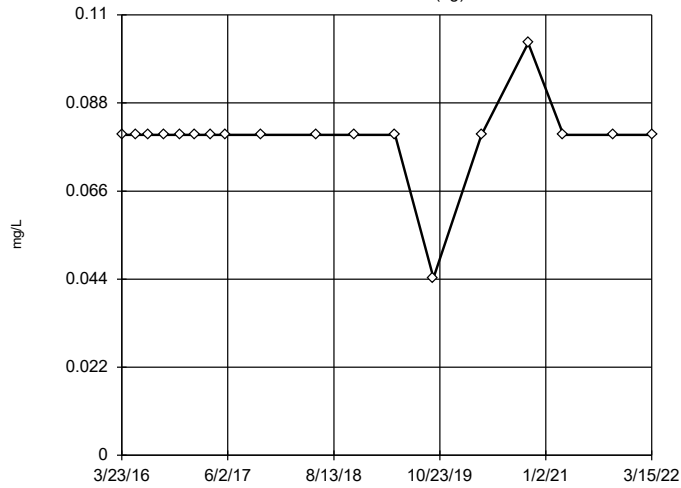
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Chloride (mg/L)	MW-19	Yes	3.15,6.91	11/18/2016,3/15/2022	NP	NaN	18	5.187	0.6864	x^2	ShapiroWilk
pH (SU)	MW-14 (bg)	Yes	5.65	7/12/2016	NP	NaN	18	5.084	0.205	In(x)	ShapiroWilk

# Tukey's Outlier Test - All Results

Plant Daniel    Client: Southern Company    Data: NAMU CCR    Printed 5/4/2022, 11:52 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Boron (mg/L)	MW-11 (bg)	n/a	n/a	n/a	NP	NaN	18	0.07929	0.01027	unknown	ShapiroWilk
Boron (mg/L)	MW-14 (bg)	n/a	n/a	n/a	NP	NaN	18	0.07866	0.00568	unknown	ShapiroWilk
Boron (mg/L)	MW-15	n/a	n/a	n/a	NP	NaN	18	0.07798	0.008556	unknown	ShapiroWilk
Boron (mg/L)	MW-16	n/a	n/a	n/a	NP	NaN	18	0.08	0	unknown	ShapiroWilk
Boron (mg/L)	MW-17	n/a	n/a	n/a	NP	NaN	18	0.08	0	unknown	ShapiroWilk
Boron (mg/L)	MW-18 (bg)	No	n/a	n/a	NP	NaN	18	0.0671	0.02365	x^5	ShapiroWilk
Boron (mg/L)	MW-19	n/a	n/a	n/a	NP	NaN	18	0.08	0	unknown	ShapiroWilk
Calcium (mg/L)	MW-11 (bg)	No	n/a	n/a	NP	NaN	18	1.849	0.2483	x^6	ShapiroWilk
Calcium (mg/L)	MW-14 (bg)	No	n/a	n/a	NP	NaN	18	3.361	1.101	ln(x)	ShapiroWilk
Calcium (mg/L)	MW-15	No	n/a	n/a	NP	NaN	18	1.16	0.225	x^4	ShapiroWilk
Calcium (mg/L)	MW-16	No	n/a	n/a	NP	NaN	19	0.8311	0.1808	ln(x)	ShapiroWilk
Calcium (mg/L)	MW-17	No	n/a	n/a	NP	NaN	18	1.026	0.1157	ln(x)	ShapiroWilk
Calcium (mg/L)	MW-18 (bg)	No	n/a	n/a	NP	NaN	18	0.671	0.1611	x^2	ShapiroWilk
Calcium (mg/L)	MW-19	No	n/a	n/a	NP	NaN	18	1.217	1.399	ln(x)	ShapiroWilk
Chloride (mg/L)	MW-11 (bg)	No	n/a	n/a	NP	NaN	33	12.47	1.928	normal	ShapiroWilk
Chloride (mg/L)	MW-14 (bg)	No	n/a	n/a	NP	NaN	18	8.896	1.6	x^(1/3)	ShapiroWilk
Chloride (mg/L)	MW-15	No	n/a	n/a	NP	NaN	18	7.791	1.139	x^2	ShapiroWilk
Chloride (mg/L)	MW-16	No	n/a	n/a	NP	NaN	20	7.696	1.43	ln(x)	ShapiroWilk
Chloride (mg/L)	MW-17	No	n/a	n/a	NP	NaN	18	6.753	0.7091	ln(x)	ShapiroWilk
Chloride (mg/L)	MW-18 (bg)	No	n/a	n/a	NP	NaN	18	7.892	1.563	sqrt(x)	ShapiroWilk
<b>Chloride (mg/L)</b>	<b>MW-19</b>	<b>Yes</b>	<b>3.15,6.91</b>	<b>11/18/2016,3/15/2022</b>	<b>NP</b>	<b>NaN</b>	<b>18</b>	<b>5.187</b>	<b>0.6864</b>	<b>x^2</b>	<b>ShapiroWilk</b>
Fluoride (mg/L)	MW-11 (bg)	No	n/a	n/a	NP	NaN	18	0.06885	0.02983	ln(x)	ShapiroWilk
Fluoride (mg/L)	MW-14 (bg)	No	n/a	n/a	NP	NaN	18	0.08157	0.0307	ln(x)	ShapiroWilk
Fluoride (mg/L)	MW-15	n/a	n/a	n/a	NP	NaN	18	0.08923	0.02509	unknown	ShapiroWilk
Fluoride (mg/L)	MW-16	No	n/a	n/a	NP	NaN	18	0.08217	0.03	ln(x)	ShapiroWilk
Fluoride (mg/L)	MW-17	n/a	n/a	n/a	NP	NaN	18	0.08985	0.02374	unknown	ShapiroWilk
Fluoride (mg/L)	MW-18 (bg)	No	n/a	n/a	NP	NaN	18	0.08103	0.02905	ln(x)	ShapiroWilk
Fluoride (mg/L)	MW-19	No	n/a	n/a	NP	NaN	18	0.08593	0.02719	ln(x)	ShapiroWilk
pH (SU)	MW-11 (bg)	No	n/a	n/a	NP	NaN	19	4.704	0.1072	ln(x)	ShapiroWilk
<b>pH (SU)</b>	<b>MW-14 (bg)</b>	<b>Yes</b>	<b>5.65</b>	<b>7/12/2016</b>	<b>NP</b>	<b>NaN</b>	<b>18</b>	<b>5.084</b>	<b>0.205</b>	<b>ln(x)</b>	<b>ShapiroWilk</b>
pH (SU)	MW-15	No	n/a	n/a	NP	NaN	18	4.714	0.1471	ln(x)	ShapiroWilk
pH (SU)	MW-16	No	n/a	n/a	NP	NaN	18	4.607	0.0943	x^6	ShapiroWilk
pH (SU)	MW-17	No	n/a	n/a	NP	NaN	18	4.994	0.1498	ln(x)	ShapiroWilk
pH (SU)	MW-18 (bg)	No	n/a	n/a	NP	NaN	17	4.648	0.09757	x^(1/3)	ShapiroWilk
pH (SU)	MW-19	No	n/a	n/a	NP	NaN	19	5.157	0.2515	ln(x)	ShapiroWilk
Sulfate (mg/L)	MW-11 (bg)	No	n/a	n/a	NP	NaN	33	4.775	2.459	ln(x)	ShapiroWilk
Sulfate (mg/L)	MW-14 (bg)	No	n/a	n/a	NP	NaN	18	2.784	1.43	ln(x)	ShapiroWilk
Sulfate (mg/L)	MW-15	No	n/a	n/a	NP	NaN	18	3.247	1.873	ln(x)	ShapiroWilk
Sulfate (mg/L)	MW-16	No	n/a	n/a	NP	NaN	18	3.407	1.478	ln(x)	ShapiroWilk
Sulfate (mg/L)	MW-17	No	n/a	n/a	NP	NaN	18	2.641	1.059	ln(x)	ShapiroWilk
Sulfate (mg/L)	MW-18 (bg)	No	n/a	n/a	NP	NaN	18	4.021	0.9403	ln(x)	ShapiroWilk
Sulfate (mg/L)	MW-19	No	n/a	n/a	NP	NaN	18	3.227	1.644	ln(x)	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-11 (bg)	No	n/a	n/a	NP	NaN	18	44.5	15.32	normal	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-14 (bg)	No	n/a	n/a	NP	NaN	18	37.44	15.35	sqrt(x)	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-15	No	n/a	n/a	NP	NaN	19	28.58	14.14	normal	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-16	No	n/a	n/a	NP	NaN	18	25.64	17.07	normal	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-17	No	n/a	n/a	NP	NaN	18	27.37	10.95	normal	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-18 (bg)	No	n/a	n/a	NP	NaN	18	26.78	9.233	normal	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-19	No	n/a	n/a	NP	NaN	18	22.86	10.56	normal	ShapiroWilk

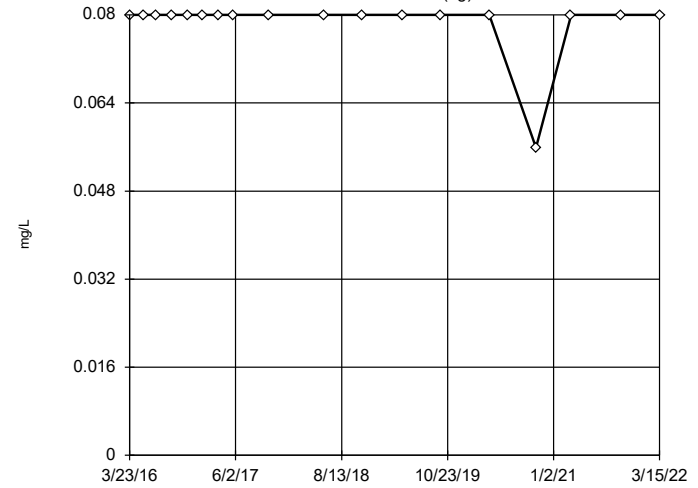
Tukey's Outlier Screening  
MW-11 (bg)



n = 18  
No outliers found. Tukey's method selected by user.  
Data were square transformed to achieve best W statistic (graph shown in original units).  
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Boron Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

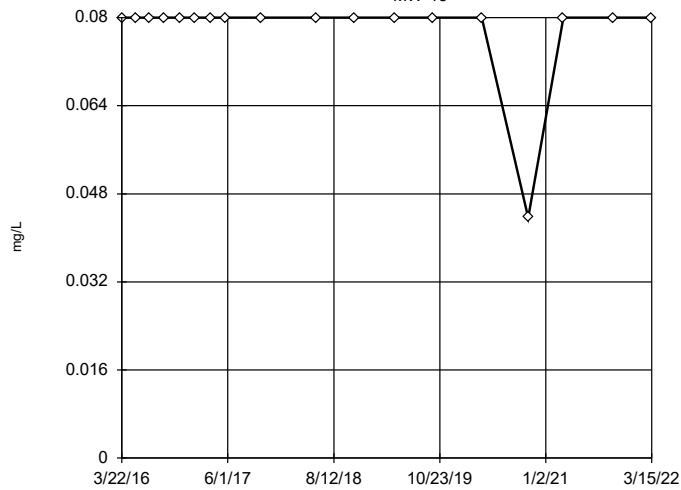
Tukey's Outlier Screening  
MW-14 (bg)



n = 18  
No outliers found. Tukey's method selected by user.  
Data were x<sup>6</sup> transformed to achieve best W statistic (graph shown in original units).  
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Boron Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

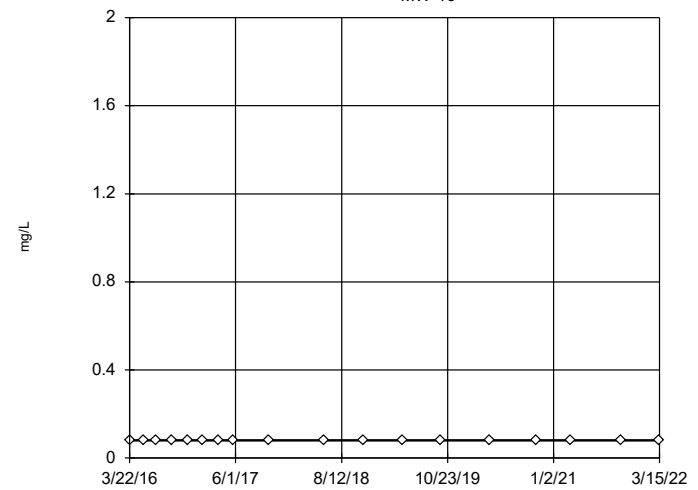
Tukey's Outlier Screening  
MW-15



n = 18  
No outliers found. Tukey's method selected by user.  
Data were cube transformed to achieve best W statistic (graph shown in original units).  
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Boron Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

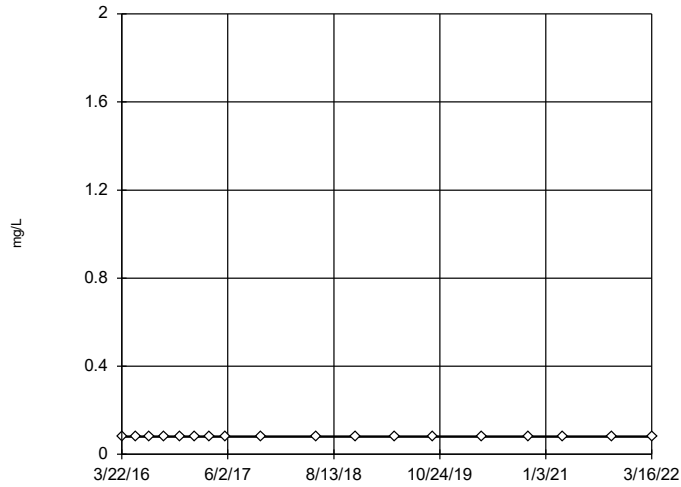
Tukey's Outlier Screening  
MW-16



n = 18  
No outliers found. Tukey's method selected by user.  
Data were cube root transformed to achieve best W statistic (graph shown in original units).  
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Boron Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

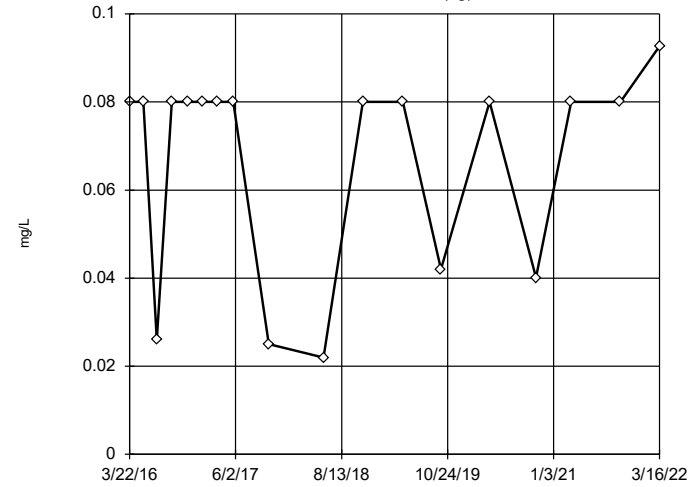
### Tukey's Outlier Screening MW-17



n = 18  
No outliers found. Tukey's method selected by user.  
Data were cube root transformed to achieve best W statistic (graph shown in original units).  
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Boron Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

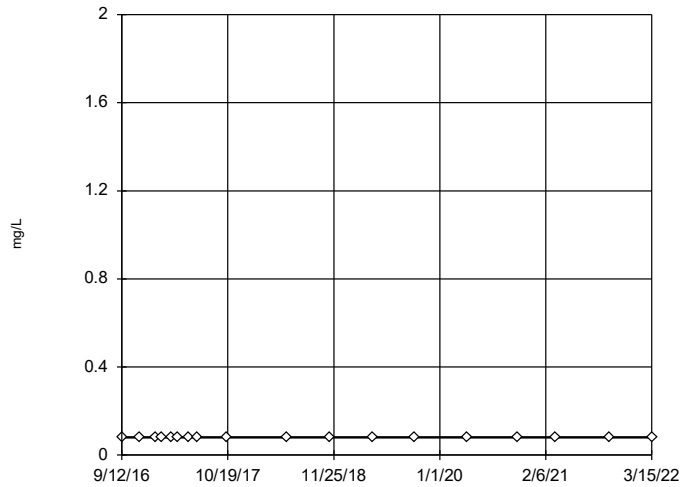
### Tukey's Outlier Screening MW-18 (bg)



n = 18  
No outliers found. Tukey's method selected by user.  
Data were x^5 transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 0.105, low cutoff = -0.09869, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

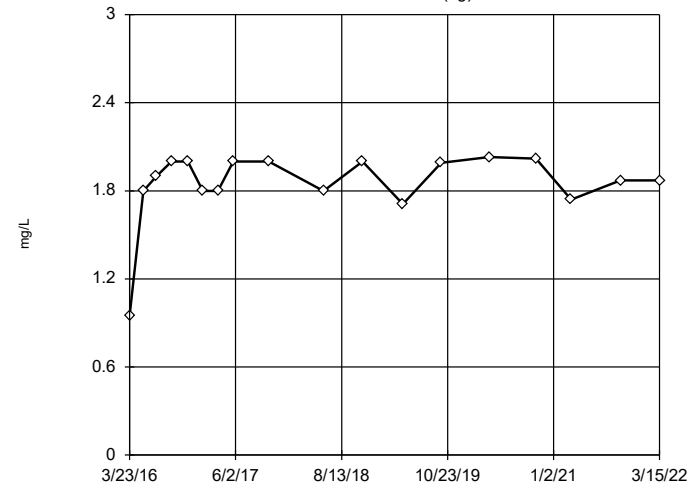
### Tukey's Outlier Screening MW-19



n = 18  
No outliers found. Tukey's method selected by user.  
Data were cube root transformed to achieve best W statistic (graph shown in original units).  
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Boron Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening MW-11 (bg)

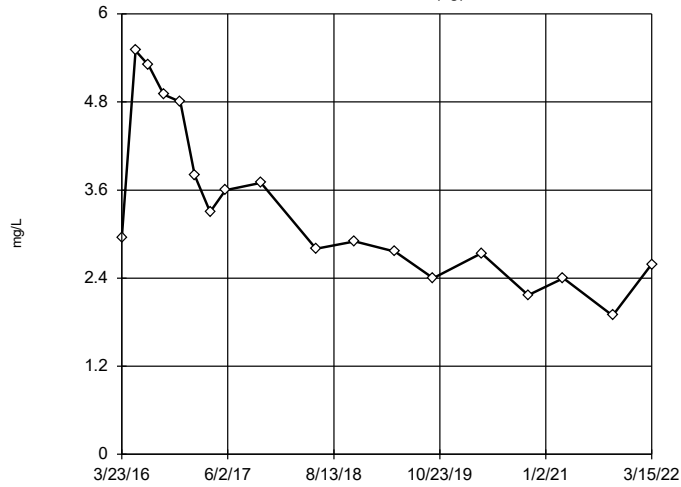


n = 18  
No outliers found. Tukey's method selected by user.  
Data were x^6 transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 2.315, low cutoff = -1.956, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR



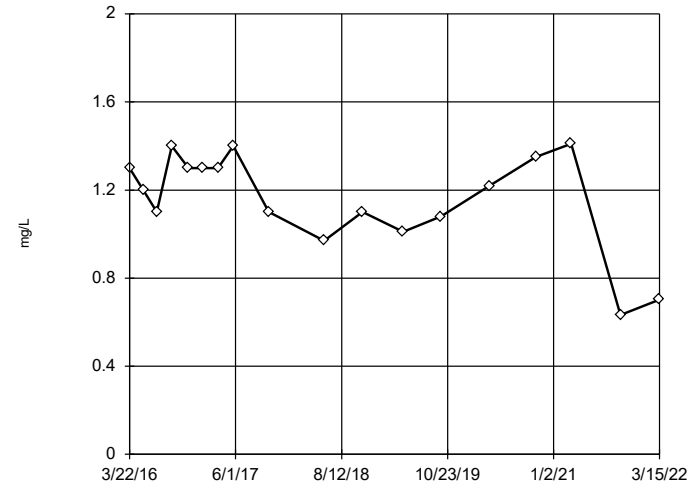
Tukey's Outlier Screening  
MW-14 (bg)



n = 18  
No outliers found. Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 21.47, low cutoff = 0.496, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

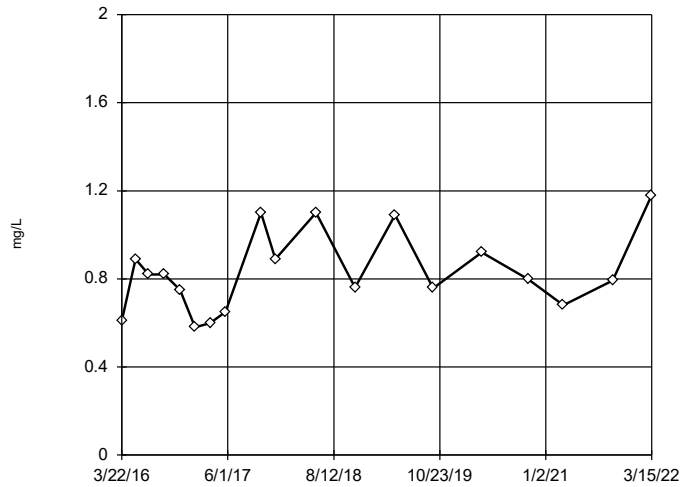
Tukey's Outlier Screening  
MW-15



n = 18  
No outliers found. Tukey's method selected by user.  
Data were x<sup>4</sup> transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 1.72, low cutoff = -1.454, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

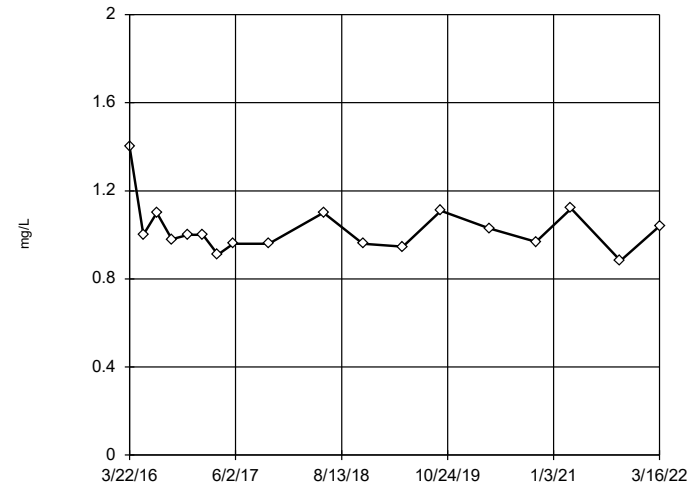
Tukey's Outlier Screening  
MW-16



n = 19  
No outliers found. Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 2.268, low cutoff = 0.2762, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

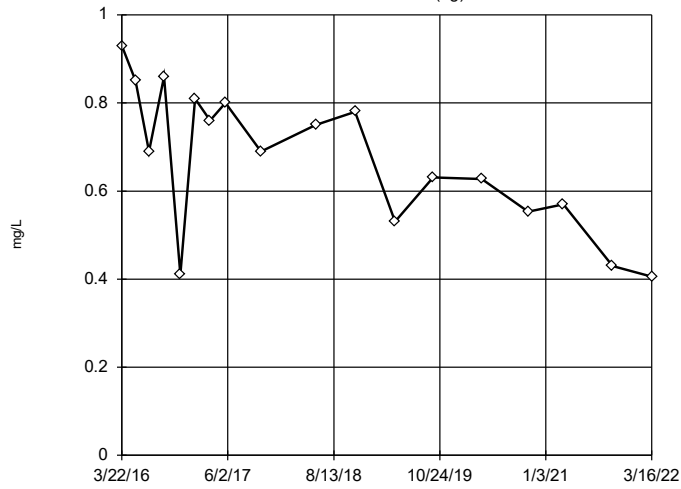
Tukey's Outlier Screening  
MW-17



n = 18  
No outliers found. Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 1.655, low cutoff = 0.6381, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

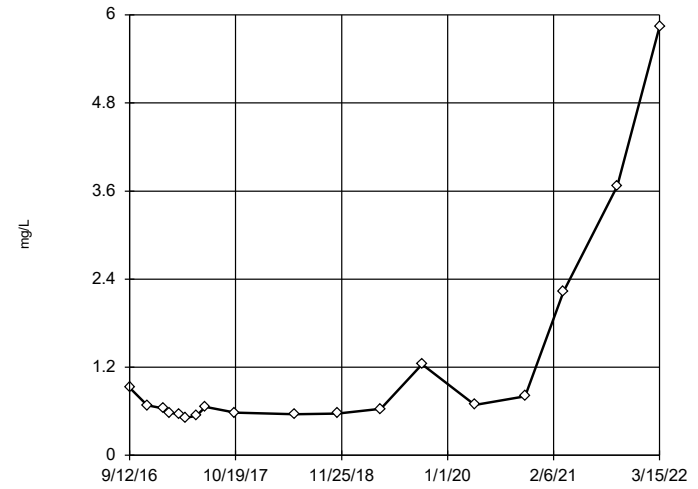
### Tukey's Outlier Screening MW-18 (bg)



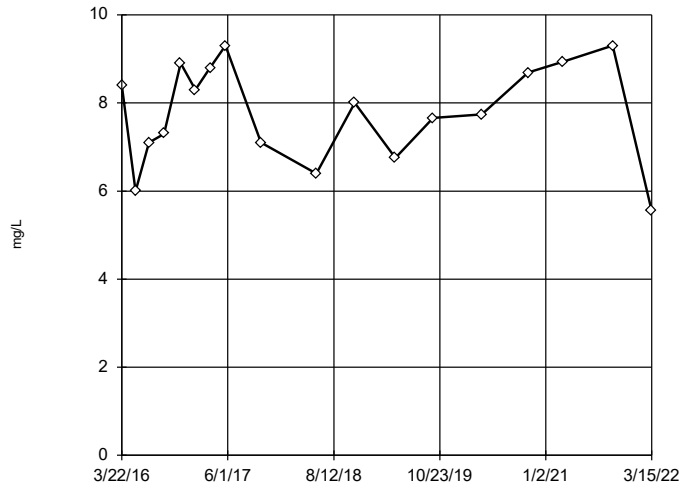
n = 18  
 No outliers found.  
 Tukey's method selected by user.  
 Data were square transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 1.308, low cutoff = -0.8767, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening MW-19



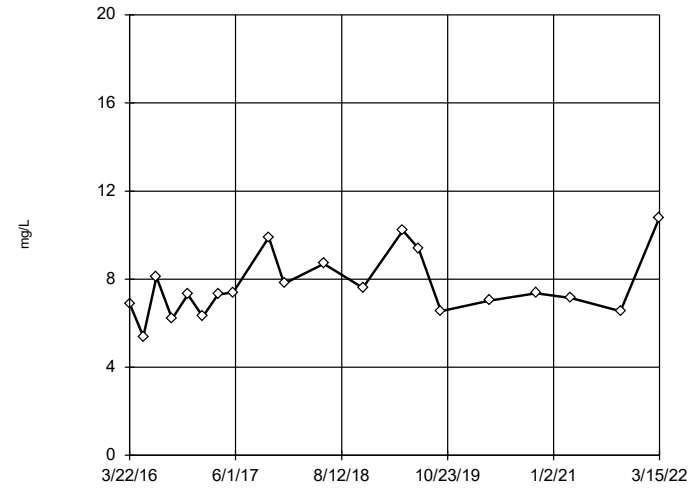
Tukey's Outlier Screening  
MW-15



n = 18  
No outliers found. Tukey's method selected by user.  
Data were square transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 13.01, low cutoff = -6.56, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

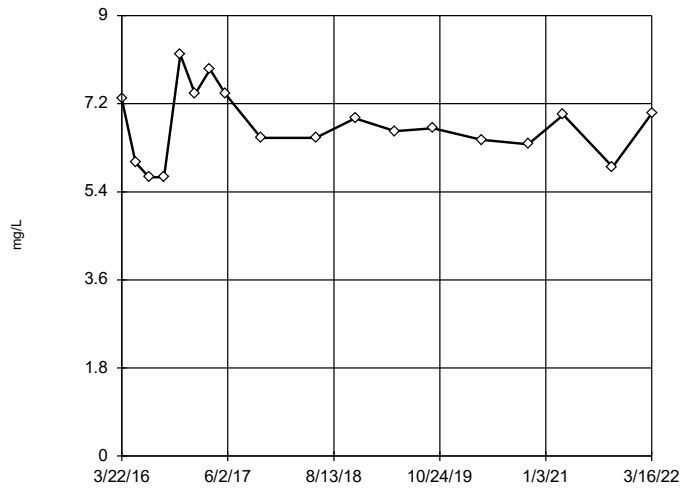
Tukey's Outlier Screening  
MW-16



n = 20  
No outliers found. Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 16.34, low cutoff = 3.453, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

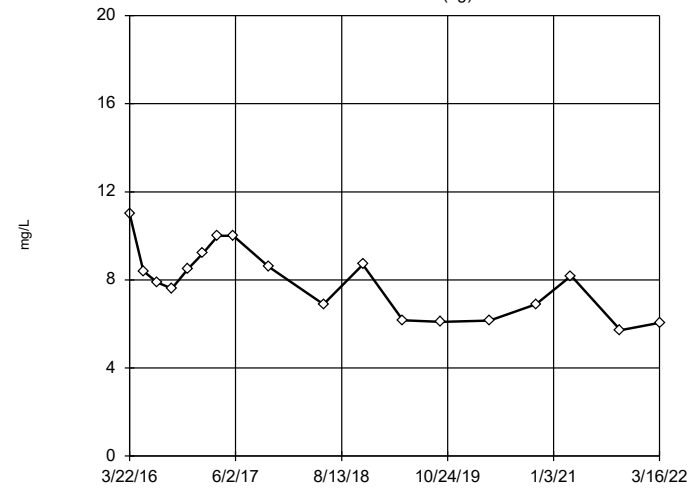
Tukey's Outlier Screening  
MW-17



n = 18  
No outliers found. Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 12.35, low cutoff = 3.679, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

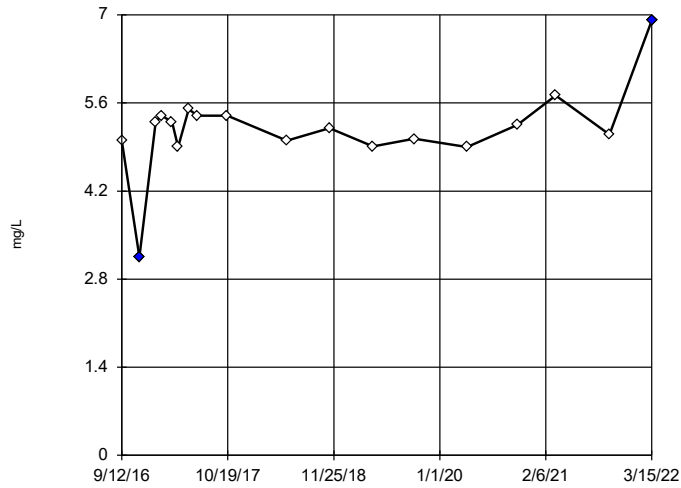
Tukey's Outlier Screening  
MW-18 (bg)



n = 18  
No outliers found. Tukey's method selected by user.  
Data were square root transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 20.43, low cutoff = 0.9094, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

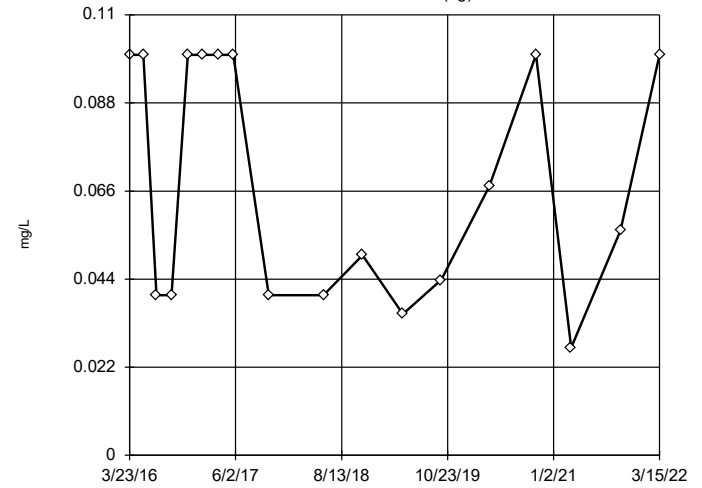
### Tukey's Outlier Screening MW-19



n = 18  
 Outliers are drawn as solid.  
 Tukey's method selected by user.  
 Data were square transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 6.556, low cutoff = 3.277, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

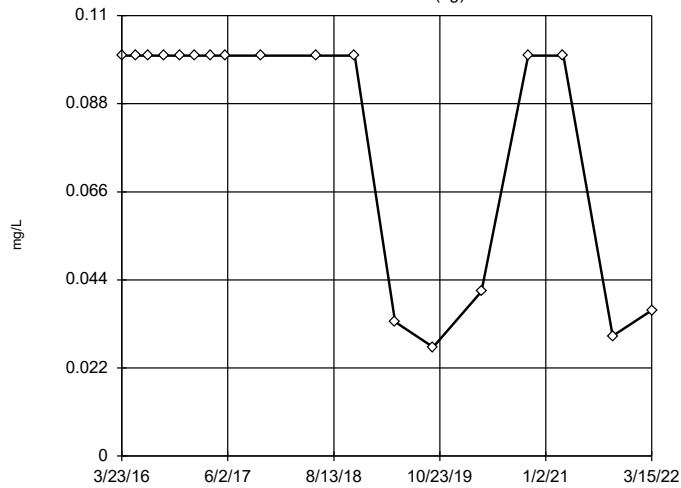
### Tukey's Outlier Screening MW-11 (bg)



n = 18  
 No outliers found.  
 Tukey's method selected by user.  
 Data were natural log transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 1.563, low cutoff = 0.00256, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

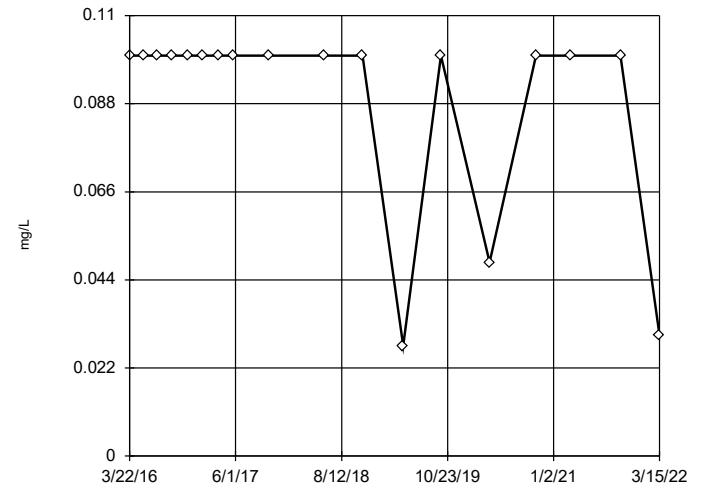
### Tukey's Outlier Screening MW-14 (bg)



n = 18  
 No outliers found.  
 Tukey's method selected by user.  
 Data were natural log transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 1.728, low cutoff = 0.002238, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening MW-15

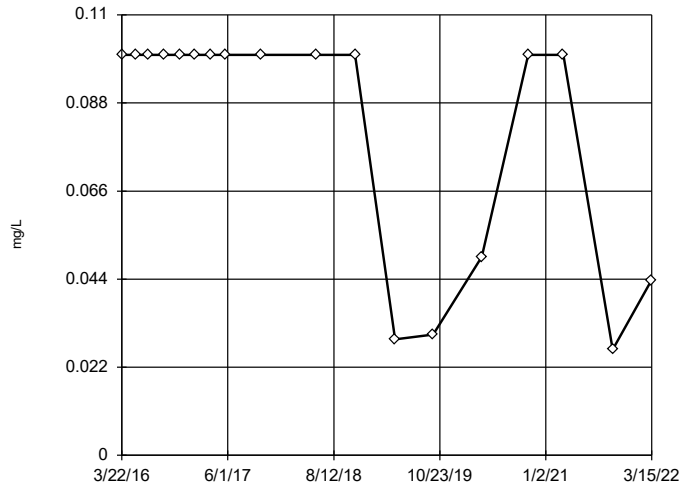


n = 18  
 No outliers found.  
 Tukey's method selected by user.  
 Data were cube root transformed to achieve best W statistic (graph shown in original units).  
 The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Fluoride Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening

MW-16



n = 18

No outliers found. Tukey's method selected by user.

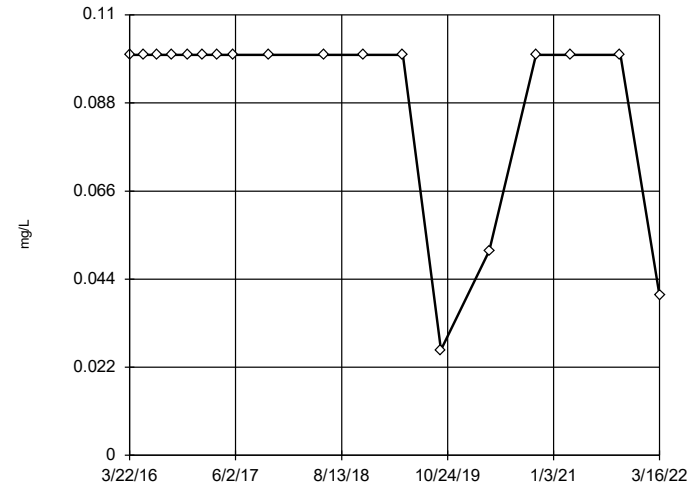
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.9876, low cutoff = 0.00472, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening

MW-17



n = 18

No outliers found. Tukey's method selected by user.

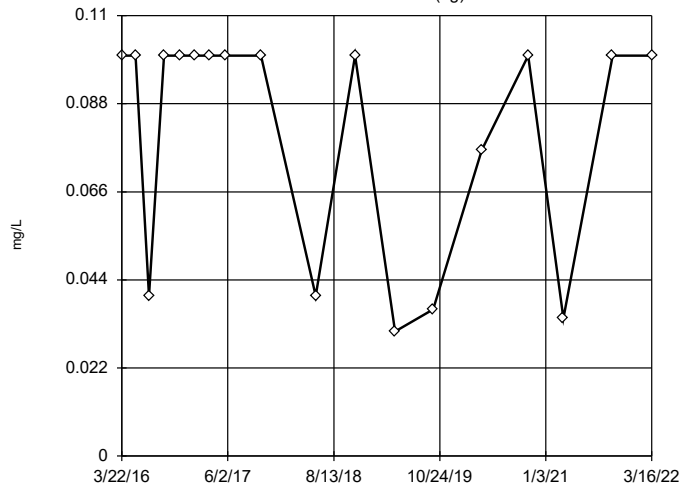
Data were cube root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Fluoride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening

MW-18 (bg)



n = 18

No outliers found. Tukey's method selected by user.

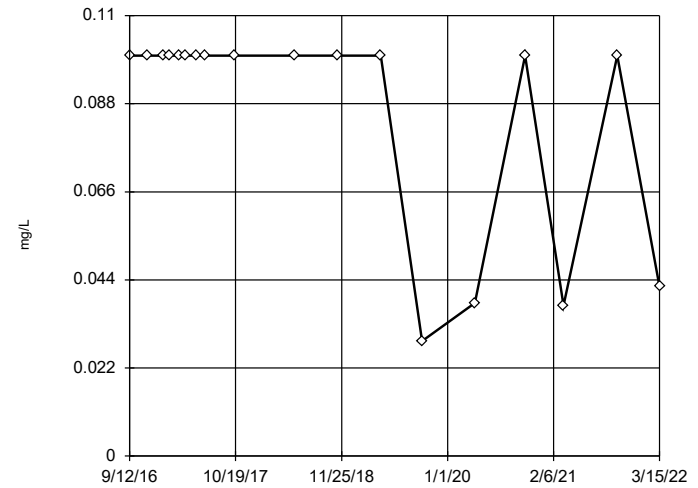
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.563, low cutoff = 0.00256, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening

MW-19



n = 18

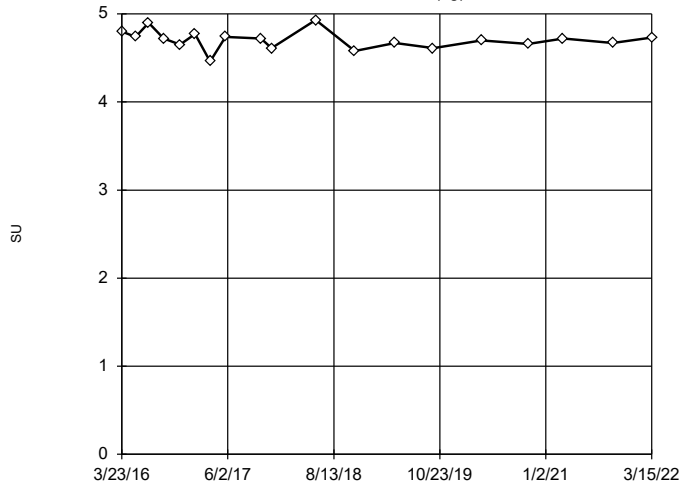
No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.3635, low cutoff = 0.01789, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

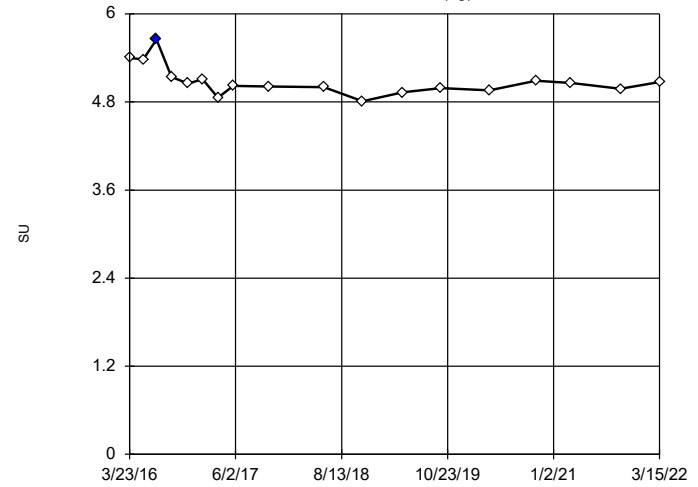
Tukey's Outlier Screening  
MW-11 (bg)



n = 19  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 5.021, low cutoff = 4.39, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

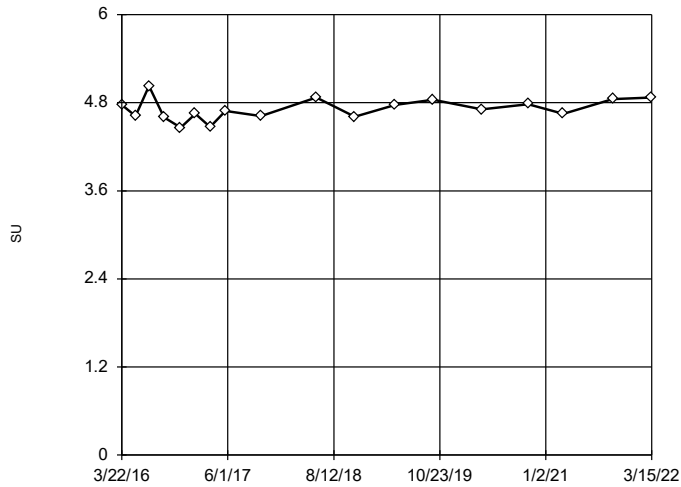
Tukey's Outlier Screening  
MW-14 (bg)



n = 18  
Outlier is drawn as solid. Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 5.62, low cutoff = 4.533, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

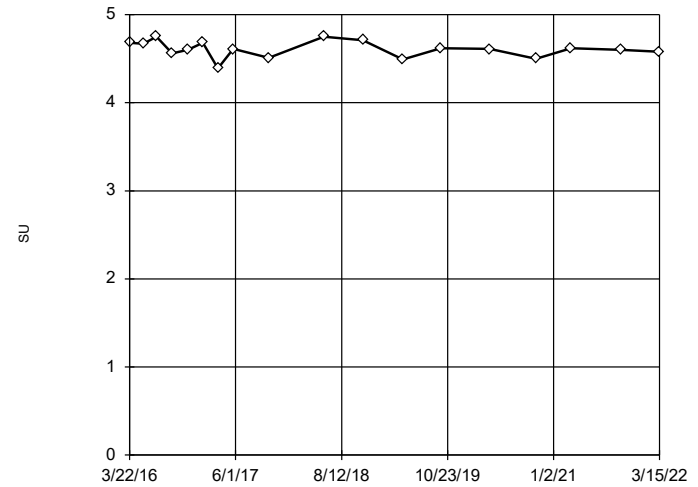
Tukey's Outlier Screening  
MW-15



n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 5.606, low cutoff = 3.988, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Tukey's Outlier Screening  
MW-16

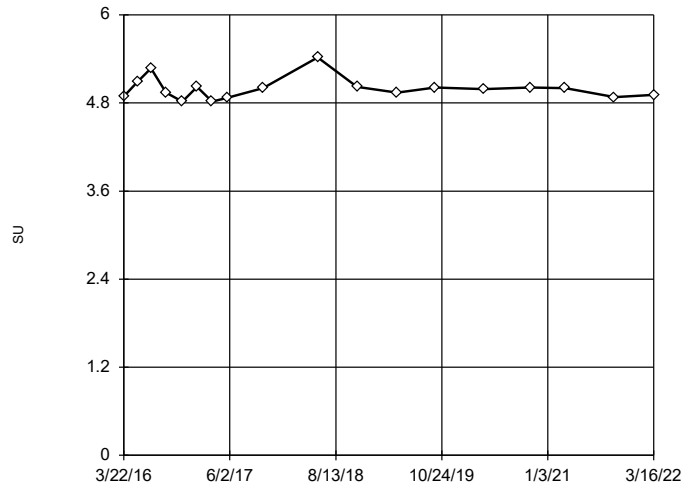


n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were x^6 transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 5.016, low cutoff = 3.857, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Tukey's Outlier Screening

MW-17

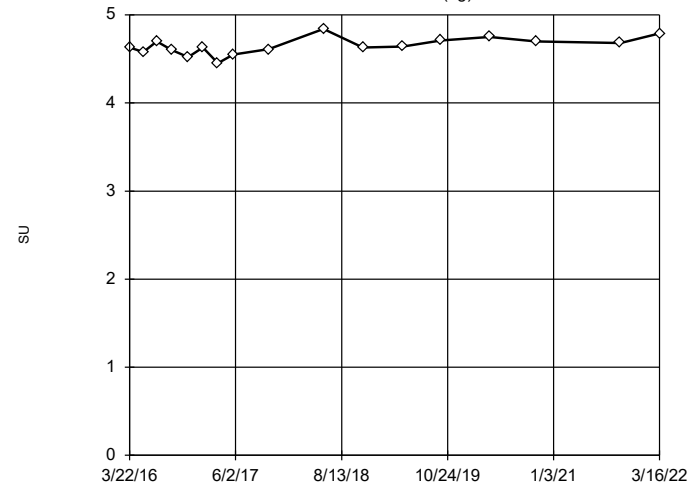


n = 18  
 No outliers found. Tukey's method selected by user.  
 Data were natural log transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 5.448, low cutoff = 4.501, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Tukey's Outlier Screening

MW-18 (bg)

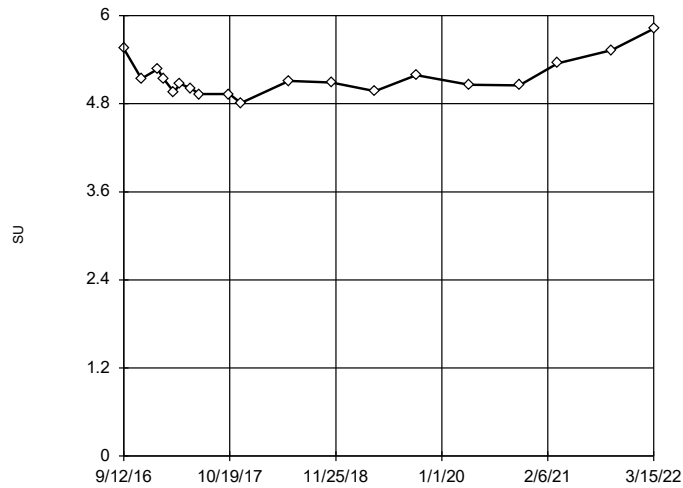


n = 17  
 No outliers found. Tukey's method selected by user.  
 Data were cube root transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 5.062, low cutoff = 4.256, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Tukey's Outlier Screening

MW-19

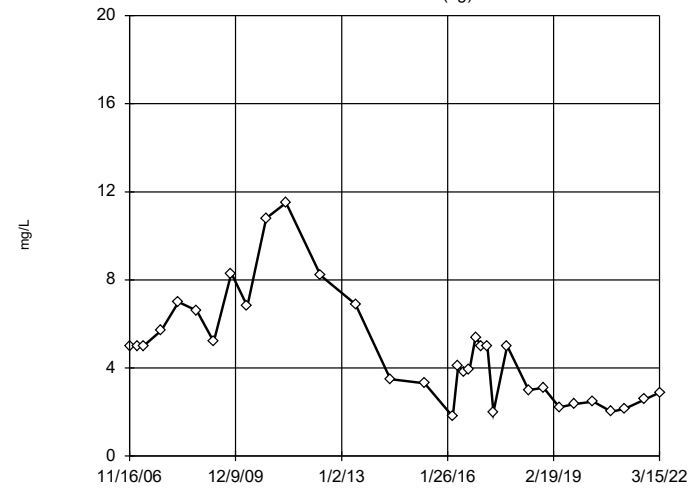


n = 19  
 No outliers found. Tukey's method selected by user.  
 Data were natural log transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 6.283, low cutoff = 4.169, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Tukey's Outlier Screening

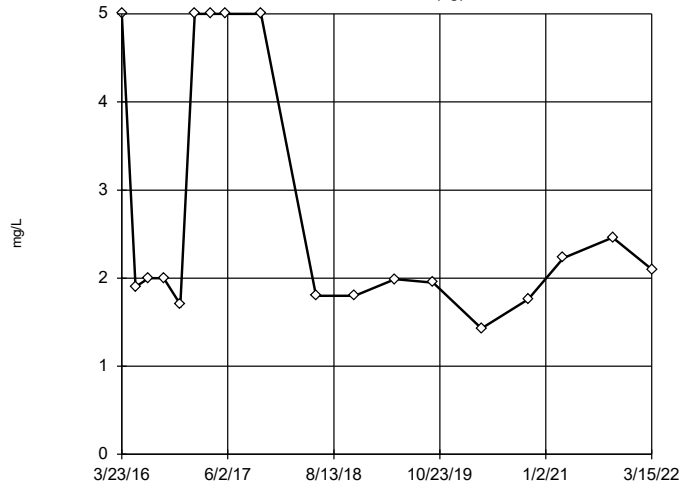
MW-11 (bg)



n = 33  
 No outliers found. Tukey's method selected by user.  
 Data were natural log transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 70.28, low cutoff = 0.2374, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/4/2022 11:50 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

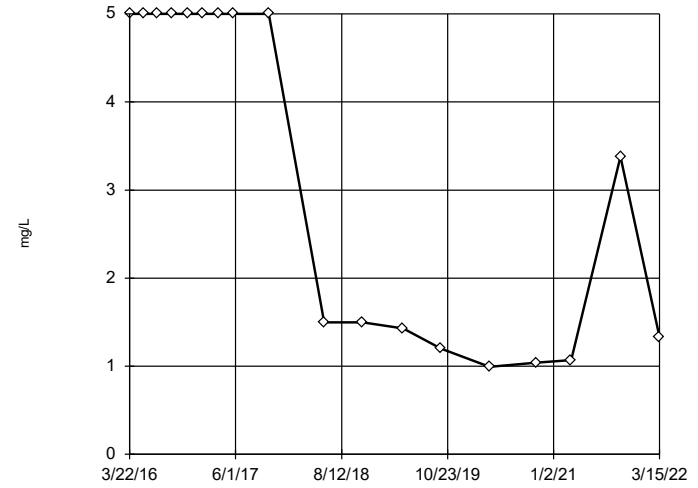
Tukey's Outlier Screening  
MW-14 (bg)



n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 107.2, low cutoff = 0.08398, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

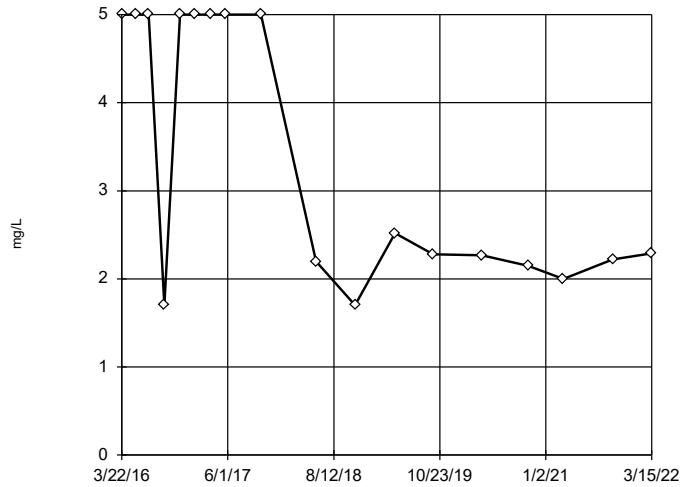
Tukey's Outlier Screening  
MW-15



n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 310, low cutoff = 0.02038, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

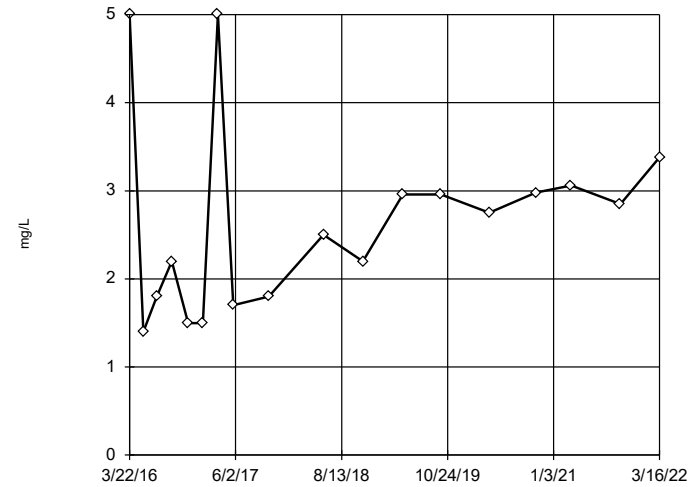
Tukey's Outlier Screening  
MW-16



n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 60.76, low cutoff = 0.179, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Tukey's Outlier Screening  
MW-17

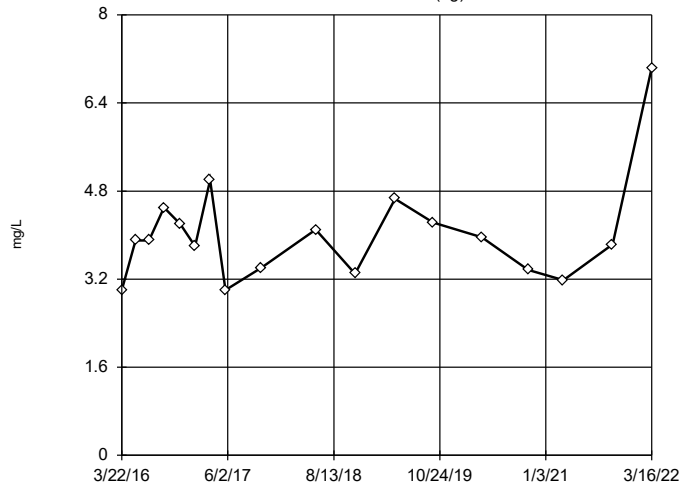


n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 15.53, low cutoff = 0.34, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/4/2022 11:50 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR



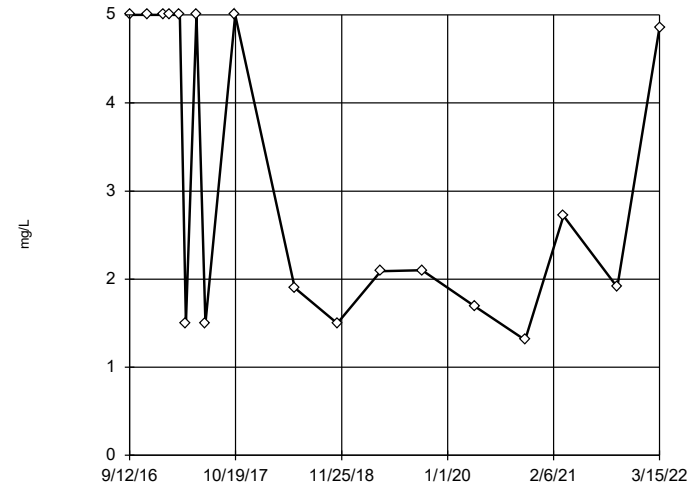
Tukey's Outlier Screening  
MW-18 (bg)



n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 9.77, low cutoff = 1.489, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

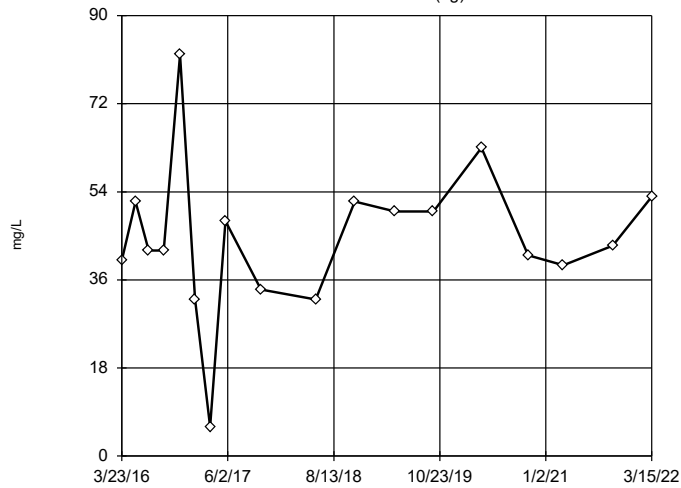
Tukey's Outlier Screening  
MW-19



n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 154.9, low cutoff = 0.05141, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

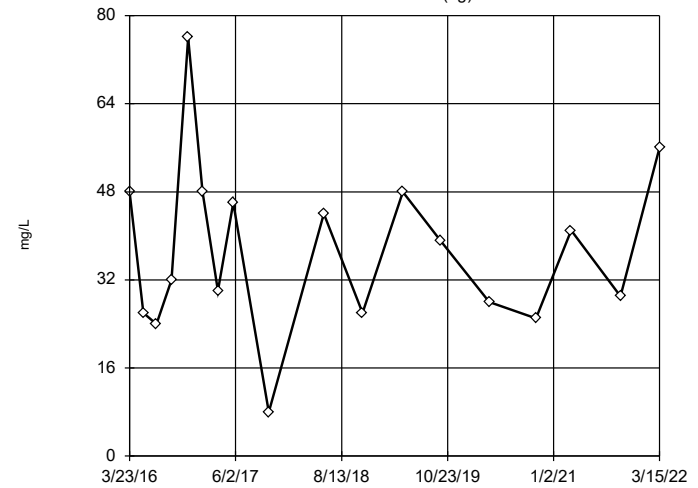
Tukey's Outlier Screening  
MW-11 (bg)



n = 18  
No outliers found.  
Tukey's method selected by user.  
Ladder of Powers transformations did not improve normality; analysis run on raw data.  
High cutoff = 98.5, low cutoff = -10, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

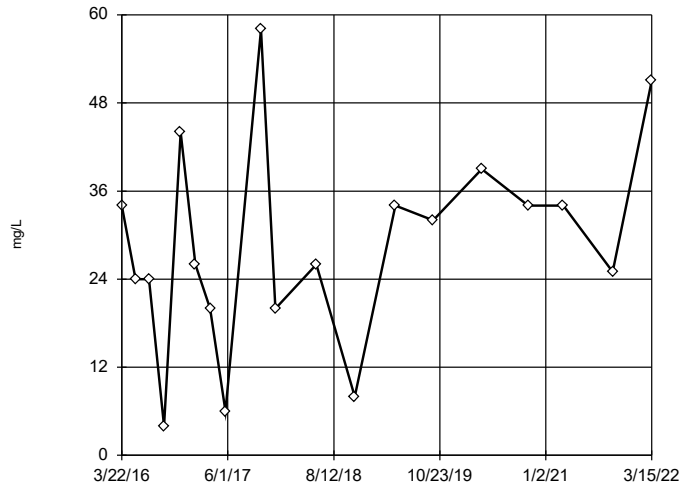
Tukey's Outlier Screening  
MW-14 (bg)



n = 18  
No outliers found.  
Tukey's method selected by user.  
Data were square root transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 154.2, low cutoff = -0.151, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

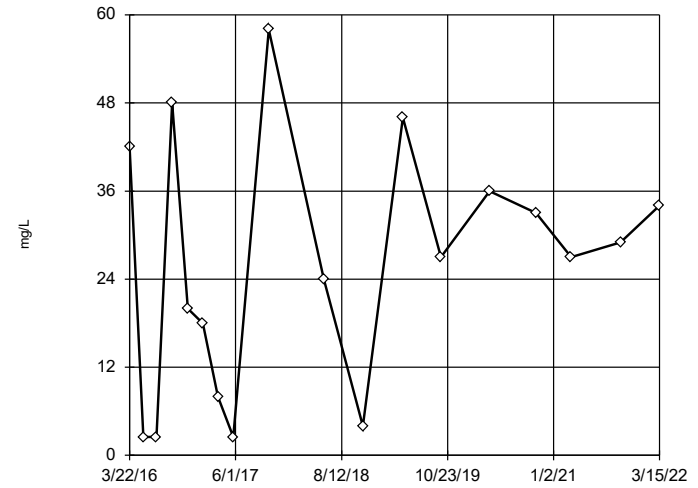
Tukey's Outlier Screening  
MW-15



n = 19  
No outliers found. Tukey's method selected by user.  
Ladder of Powers transformations did not improve normality; analysis run on raw data.  
High cutoff = 76, low cutoff = -22, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

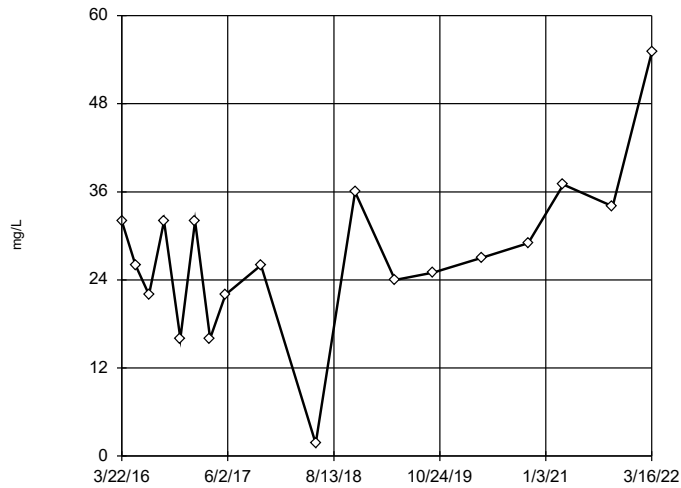
Tukey's Outlier Screening  
MW-16



n = 18  
No outliers found. Tukey's method selected by user.  
Ladder of Powers transformations did not improve normality; analysis run on raw data.  
High cutoff = 138, low cutoff = -93, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

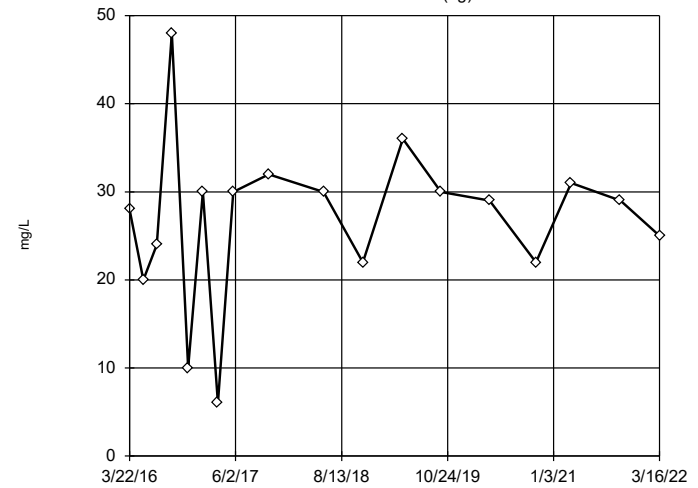
Tukey's Outlier Screening  
MW-17



n = 18  
No outliers found. Tukey's method selected by user.  
Ladder of Powers transformations did not improve normality; analysis run on raw data.  
High cutoff = 66, low cutoff = -11, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

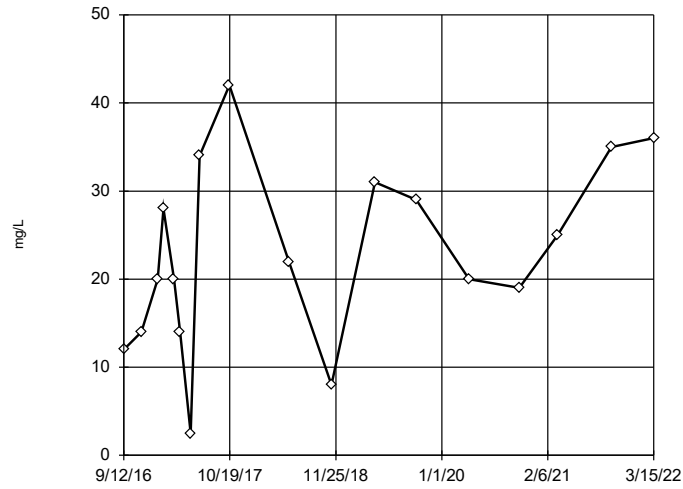
Tukey's Outlier Screening  
MW-18 (bg)



n = 18  
No outliers found. Tukey's method selected by user.  
Ladder of Powers transformations did not improve normality; analysis run on raw data.  
High cutoff = 56, low cutoff = -3.5, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:51 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Tukey's Outlier Screening MW-19



n = 18

No outliers found.  
Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 88, low cutoff = -41.5, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:51 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

FIGURE D.

# Welch's t-test/Mann-Whitney - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 11:57 AM

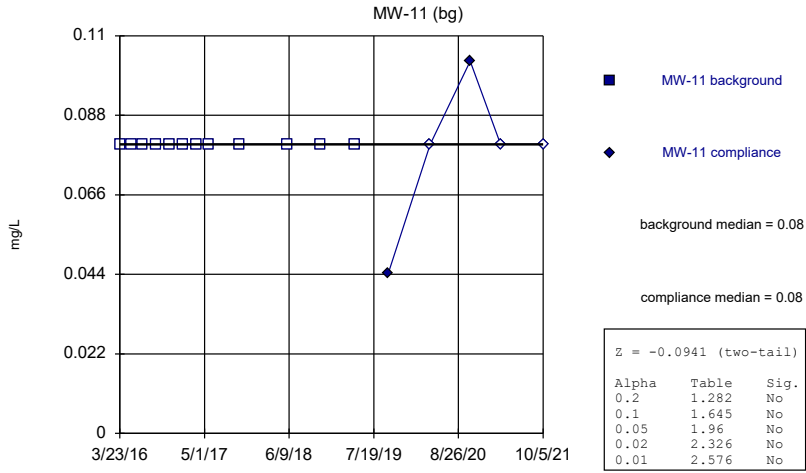
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Calcium (mg/L)	MW-14 (bg)	-3.217	Yes	Mann-W
Calcium (mg/L)	MW-19	2.902	Yes	Mann-W
Chloride (mg/L)	MW-14 (bg)	-2.696	Yes	Mann-W
Chloride (mg/L)	MW-18 (bg)	-2.69	Yes	Mann-W
Fluoride (mg/L)	MW-19	-2.932	Yes	Mann-W
Sulfate (mg/L)	MW-11 (bg)	-2.864	Yes	Mann-W
Sulfate (mg/L)	MW-15	-3.141	Yes	Mann-W

# Welch's t-test/Mann-Whitney - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 11:57 AM

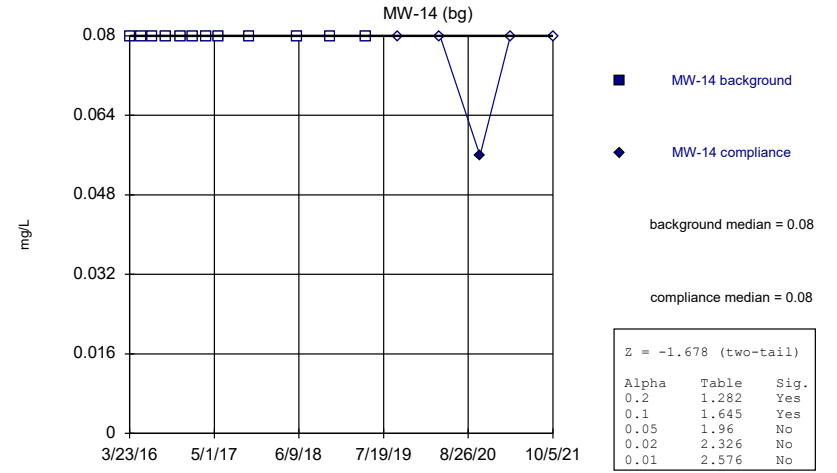
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Boron (mg/L)	MW-11 (bg)	-0.0941	No	Mann-W
Boron (mg/L)	MW-14 (bg)	-1.678	No	Mann-W
Boron (mg/L)	MW-15	-1.678	No	Mann-W
Boron (mg/L)	MW-18 (bg)	-0.2616	No	Mann-W
Calcium (mg/L)	MW-11 (bg)	0.9129	No	Mann-W
<b>Calcium (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-3.217</b>	<b>Yes</b>	<b>Mann-W</b>
Calcium (mg/L)	MW-15	-0.0532	No	Mann-W
Calcium (mg/L)	MW-16	-0.1975	No	Mann-W
Calcium (mg/L)	MW-17	0.583	No	Mann-W
Calcium (mg/L)	MW-18 (bg)	-2.268	No	Mann-W
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>2.902</b>	<b>Yes</b>	<b>Mann-W</b>
Chloride (mg/L)	MW-11 (bg)	2.029	No	Mann-W
<b>Chloride (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-2.696</b>	<b>Yes</b>	<b>Mann-W</b>
Chloride (mg/L)	MW-15	1.372	No	Mann-W
Chloride (mg/L)	MW-16	-0.7458	No	Mann-W
Chloride (mg/L)	MW-17	-1.003	No	Mann-W
<b>Chloride (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-2.69</b>	<b>Yes</b>	<b>Mann-W</b>
Chloride (mg/L)	MW-19	-0.1059	No	Mann-W
Fluoride (mg/L)	MW-11 (bg)	-0.4948	No	Mann-W
Fluoride (mg/L)	MW-14 (bg)	-2.337	No	Mann-W
Fluoride (mg/L)	MW-15	-0.6587	No	Mann-W
Fluoride (mg/L)	MW-16	-2.195	No	Mann-W
Fluoride (mg/L)	MW-17	-2.352	No	Mann-W
Fluoride (mg/L)	MW-18 (bg)	-1.296	No	Mann-W
<b>Fluoride (mg/L)</b>	<b>MW-19</b>	<b>-2.932</b>	<b>Yes</b>	<b>Mann-W</b>
pH (SU)	MW-11 (bg)	-1.088	No	Mann-W
pH (SU)	MW-14 (bg)	-0.7906	No	Mann-W
pH (SU)	MW-15	1.478	No	Mann-W
pH (SU)	MW-16	-0.6873	No	Mann-W
pH (SU)	MW-17	-0.1057	No	Mann-W
pH (SU)	MW-18 (bg)	2.191	No	Mann-W
pH (SU)	MW-19	1.381	No	Mann-W
<b>Sulfate (mg/L)</b>	<b>MW-11 (bg)</b>	<b>-2.864</b>	<b>Yes</b>	<b>Mann-W</b>
Sulfate (mg/L)	MW-14 (bg)	-1.229	No	Mann-W
<b>Sulfate (mg/L)</b>	<b>MW-15</b>	<b>-3.141</b>	<b>Yes</b>	<b>Mann-W</b>
Sulfate (mg/L)	MW-16	-1.949	No	Mann-W
Sulfate (mg/L)	MW-17	1.797	No	Mann-W
Sulfate (mg/L)	MW-18 (bg)	-0.4749	No	Mann-W
Sulfate (mg/L)	MW-19	-1.478	No	Mann-W
Total Dissolved Solids (mg/L)	MW-11 (bg)	0.5283	No	Mann-W
Total Dissolved Solids (mg/L)	MW-14 (bg)	-0.8987	No	Mann-W
Total Dissolved Solids (mg/L)	MW-15	1.389	No	Mann-W
Total Dissolved Solids (mg/L)	MW-16	1.004	No	Mann-W
Total Dissolved Solids (mg/L)	MW-17	1.535	No	Mann-W
Total Dissolved Solids (mg/L)	MW-18 (bg)	0.1593	No	Mann-W
Total Dissolved Solids (mg/L)	MW-19	0.8987	No	Mann-W

Mann-Whitney (Wilcoxon Rank Sum)



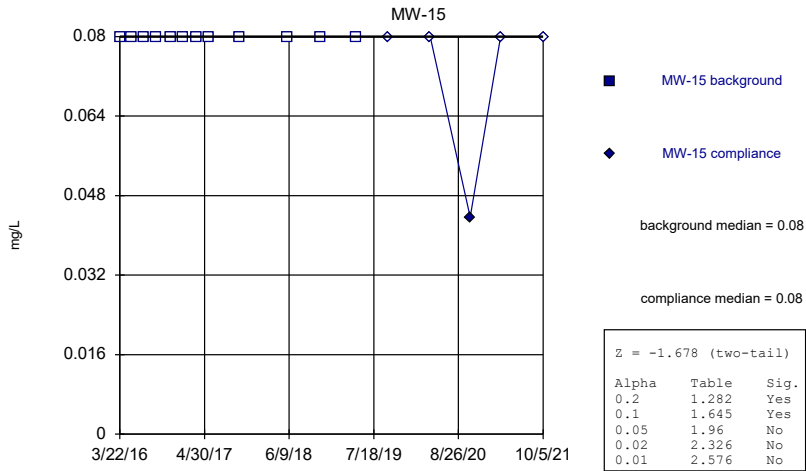
Constituent: Boron Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



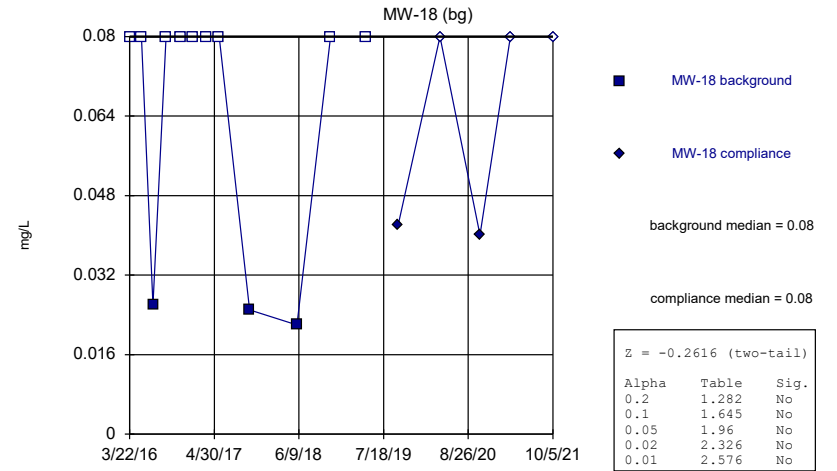
Constituent: Boron Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

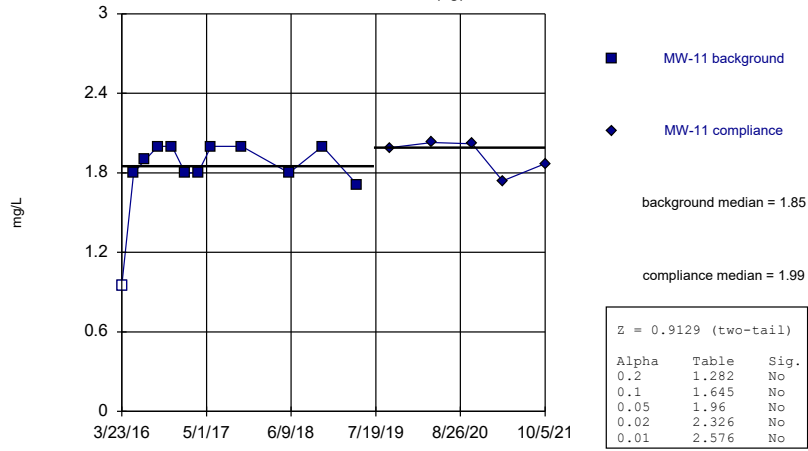
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Boron Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

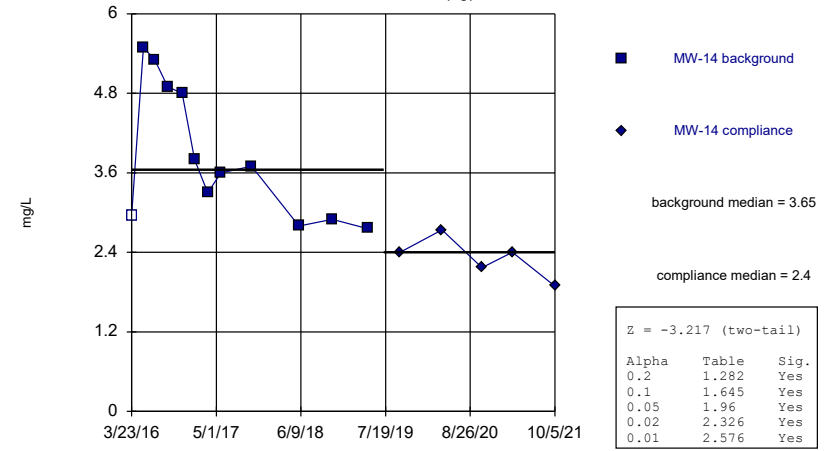
MW-11 (bg)



Constituent: Calcium Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

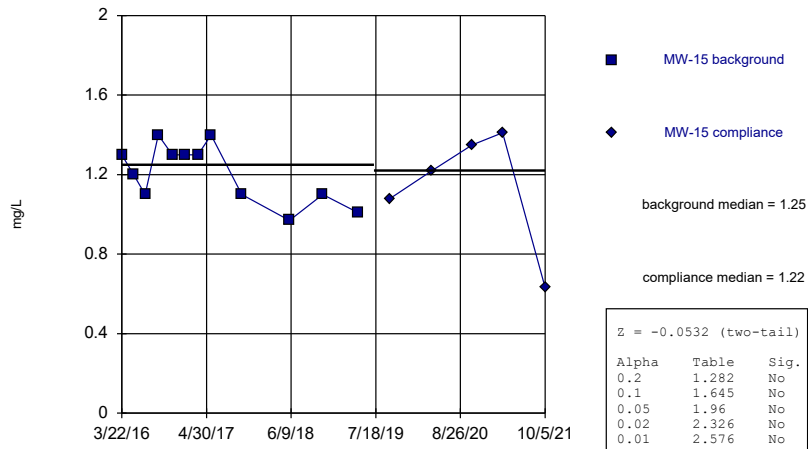
MW-14 (bg)



Constituent: Calcium Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

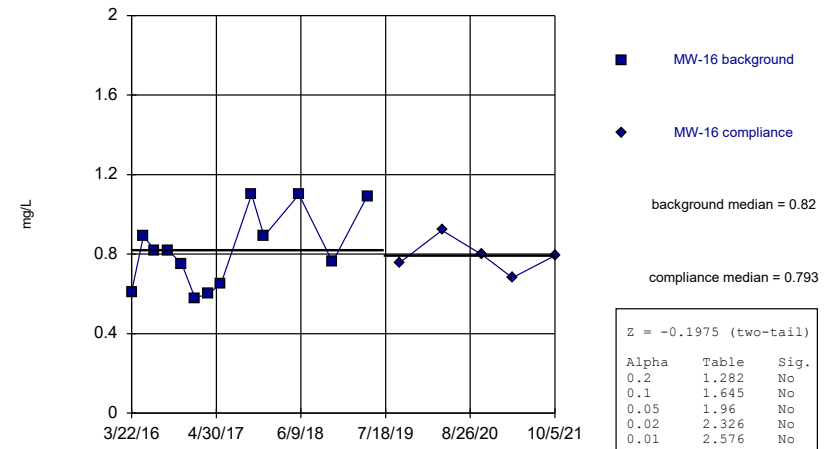
MW-15



Constituent: Calcium Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

MW-16

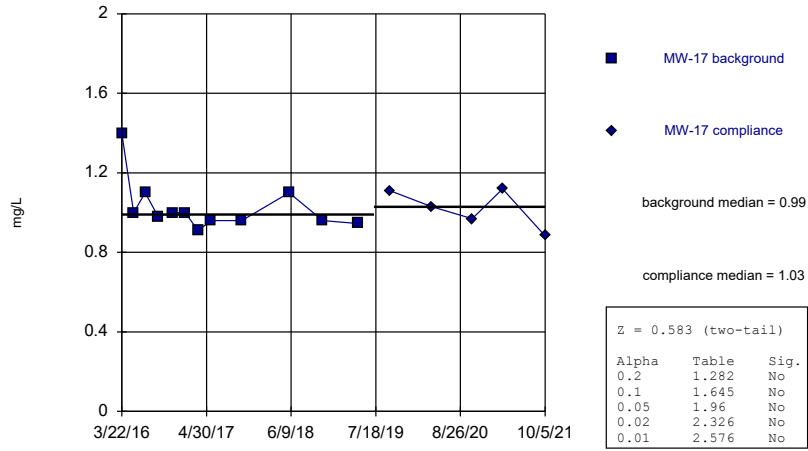


Constituent: Calcium Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR



Mann-Whitney (Wilcoxon Rank Sum)

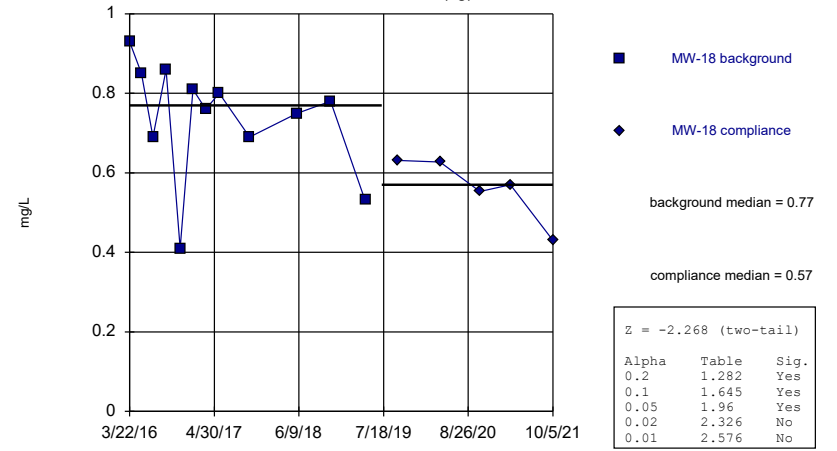
MW-17



Constituent: Calcium Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

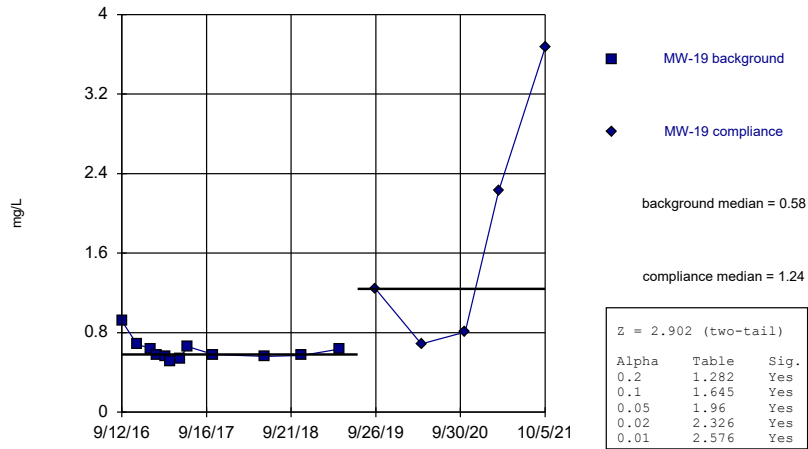
MW-18 (bg)



Constituent: Calcium Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

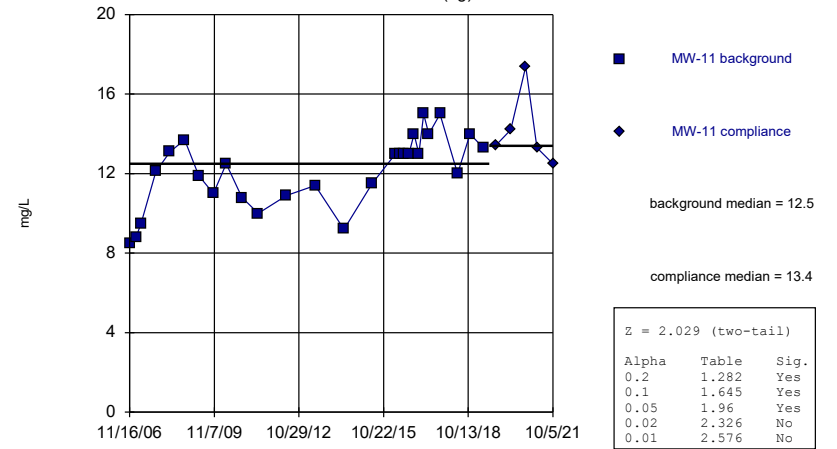
MW-19



Constituent: Calcium Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

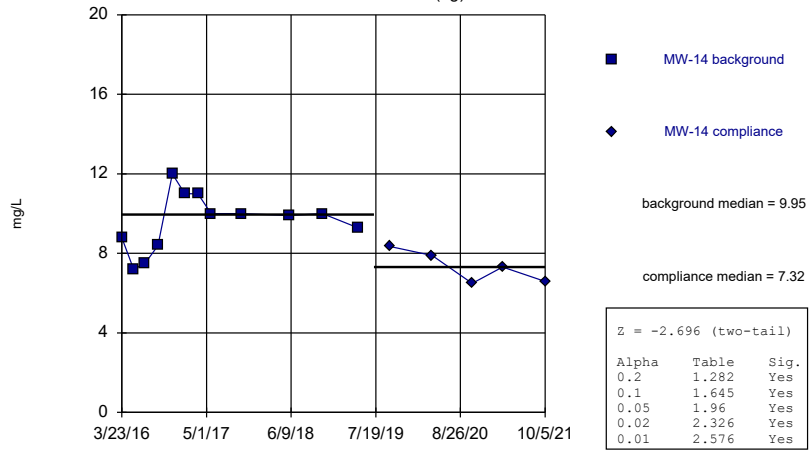
Mann-Whitney (Wilcoxon Rank Sum)

MW-11 (bg)



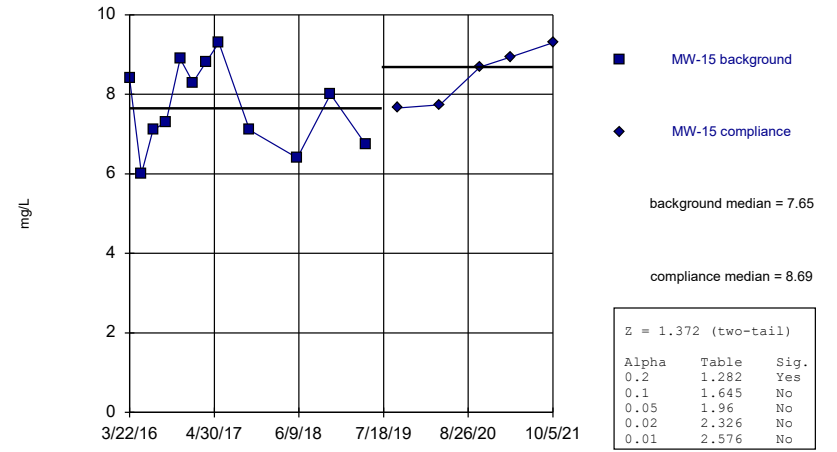
Constituent: Chloride Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-14 (bg)



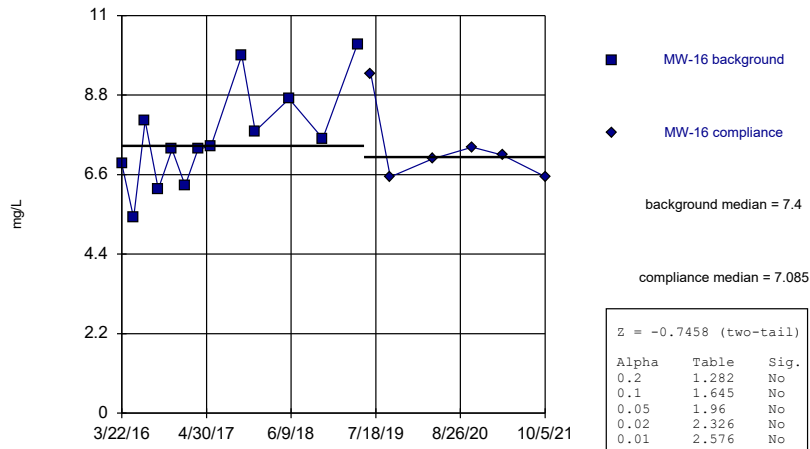
Constituent: Chloride Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-15



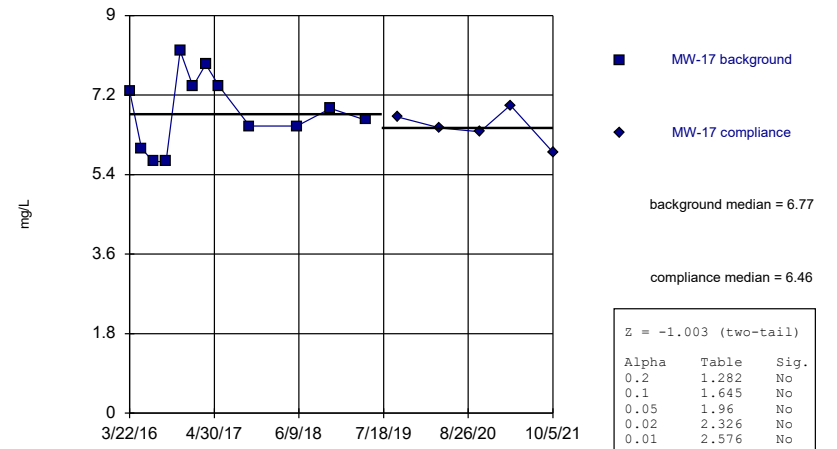
Constituent: Chloride Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-16



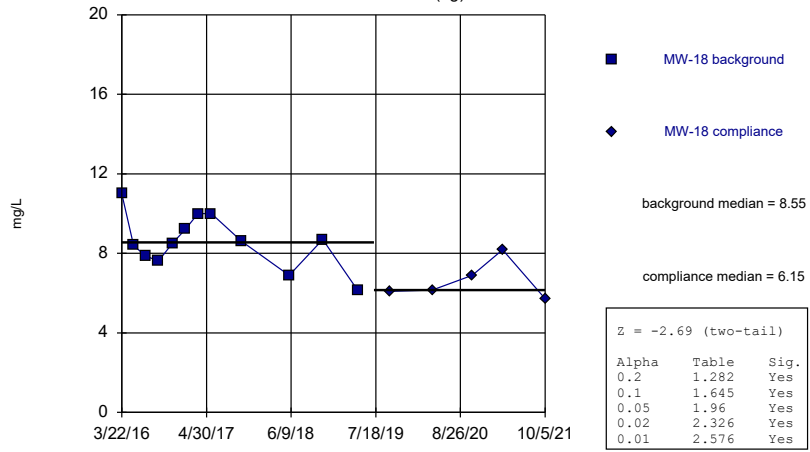
Constituent: Chloride Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-17



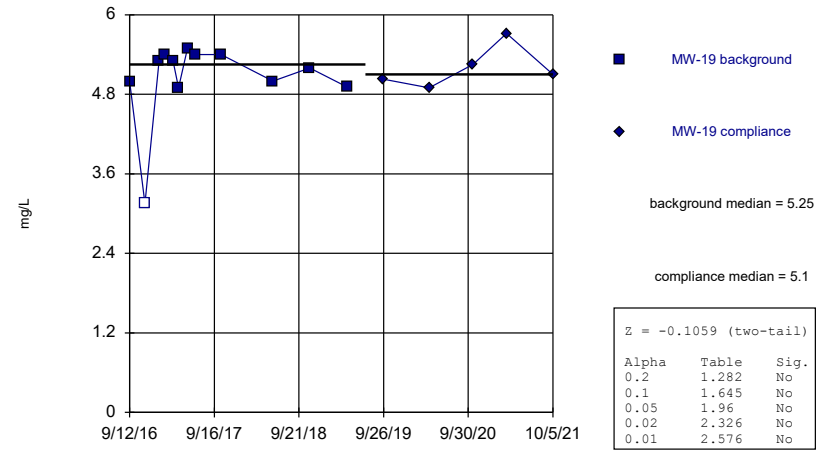
Constituent: Chloride Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-18 (bg)



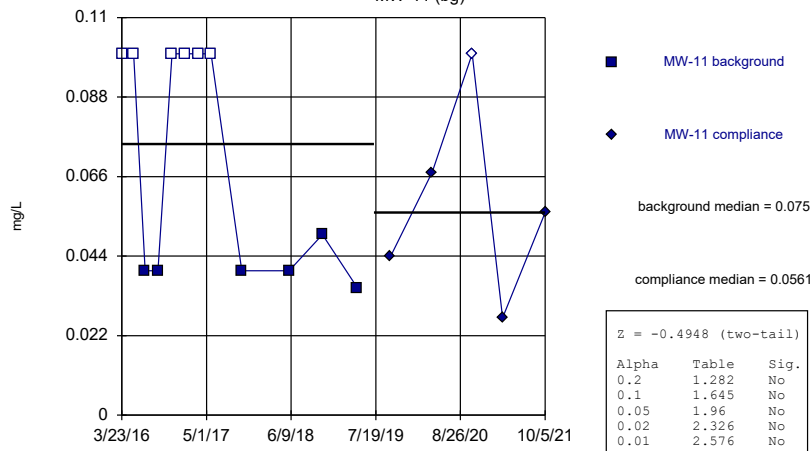
Constituent: Chloride Analysis Run 5/4/2022 11:55 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-19



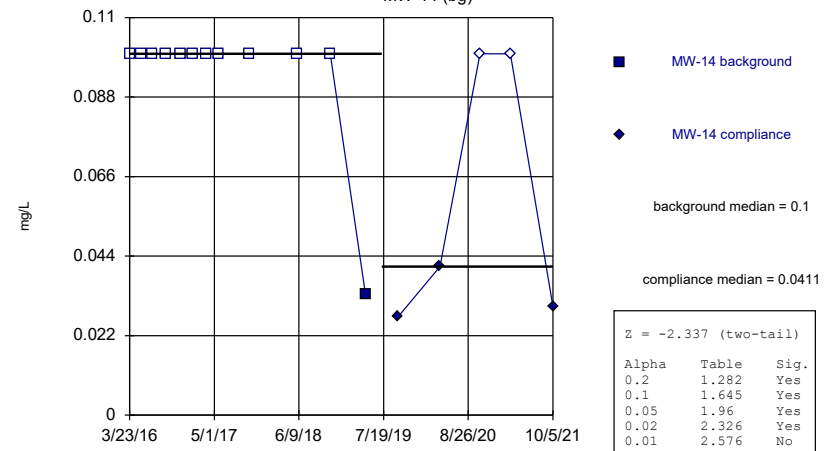
Constituent: Chloride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-11 (bg)



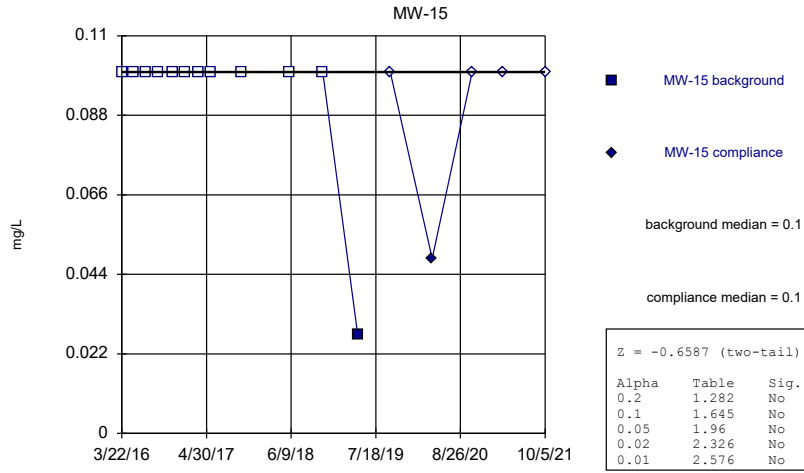
Constituent: Fluoride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-14 (bg)



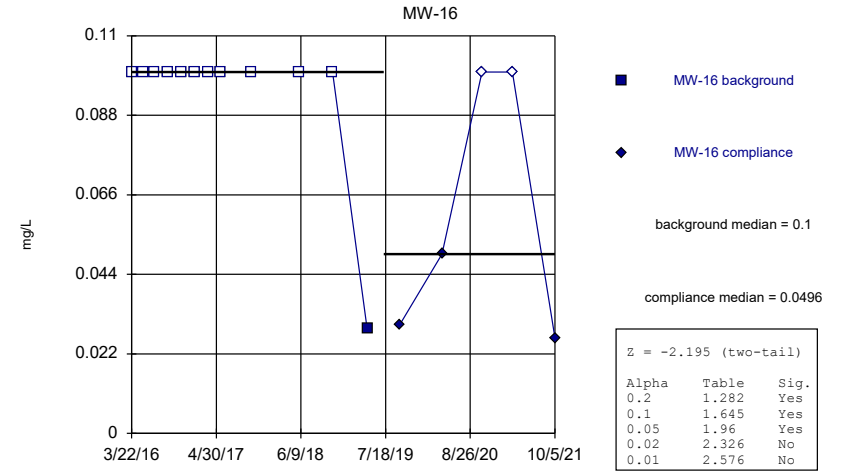
Constituent: Fluoride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



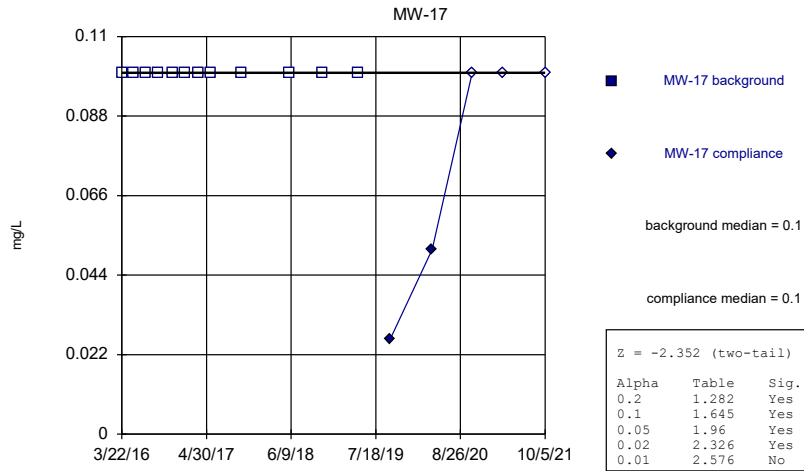
Constituent: Fluoride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



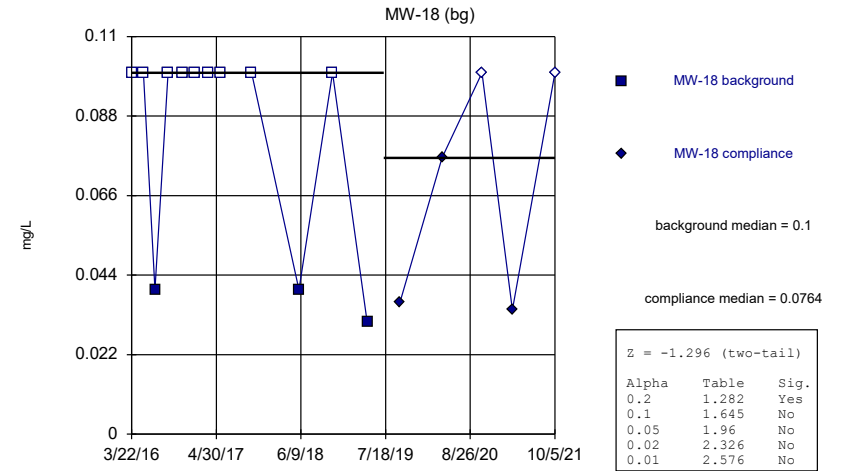
Constituent: Fluoride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



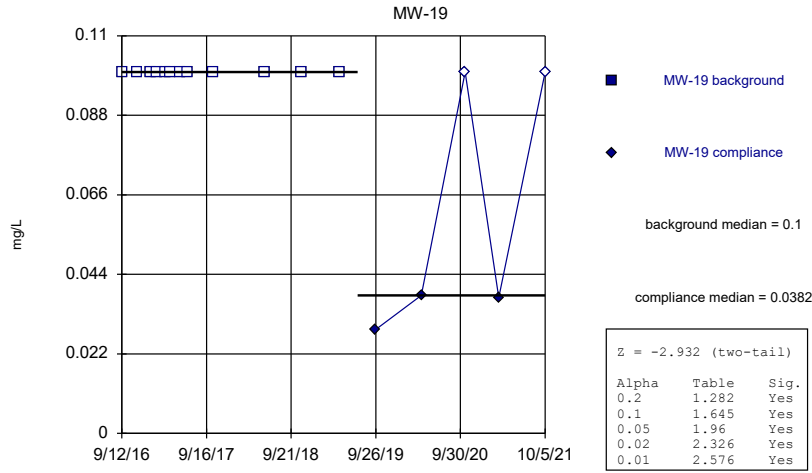
Constituent: Fluoride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



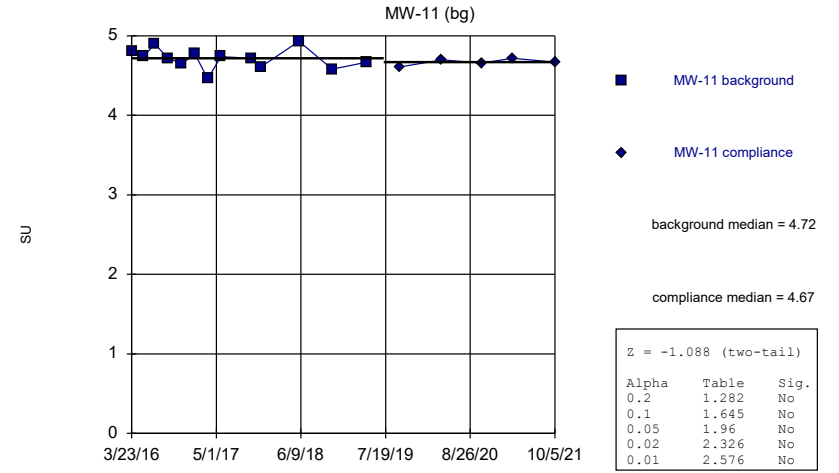
Constituent: Fluoride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



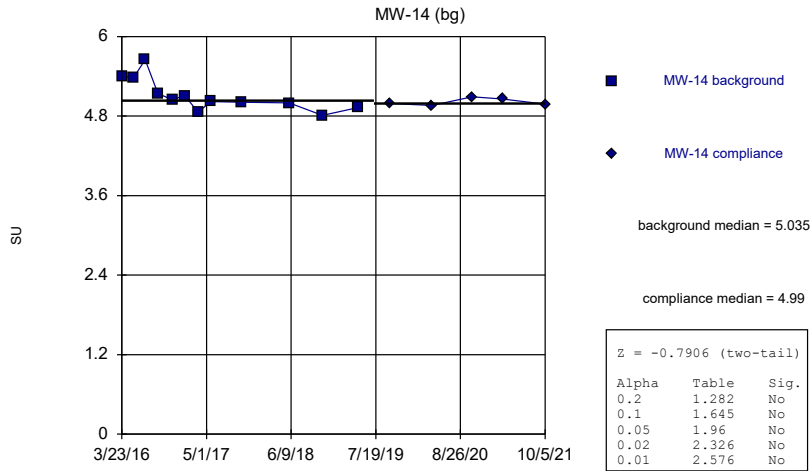
Constituent: Fluoride Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



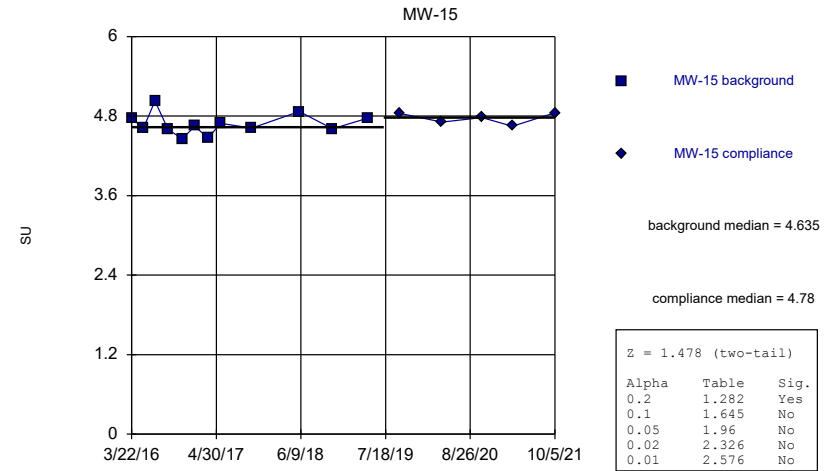
Constituent: pH Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



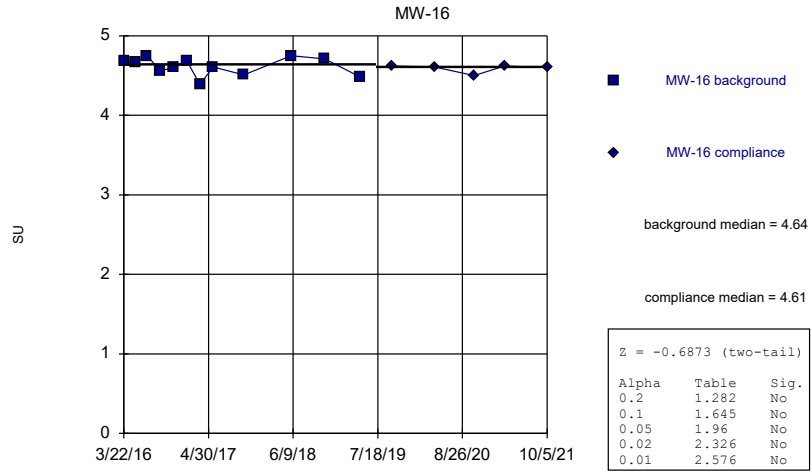
Constituent: pH Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



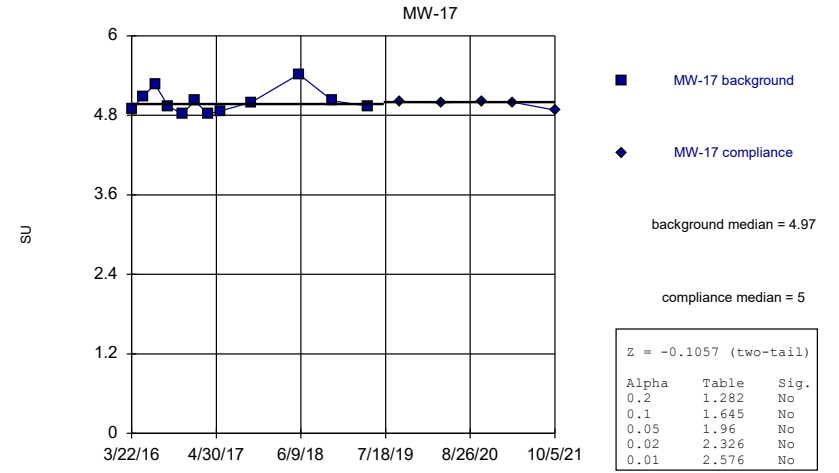
Constituent: pH Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



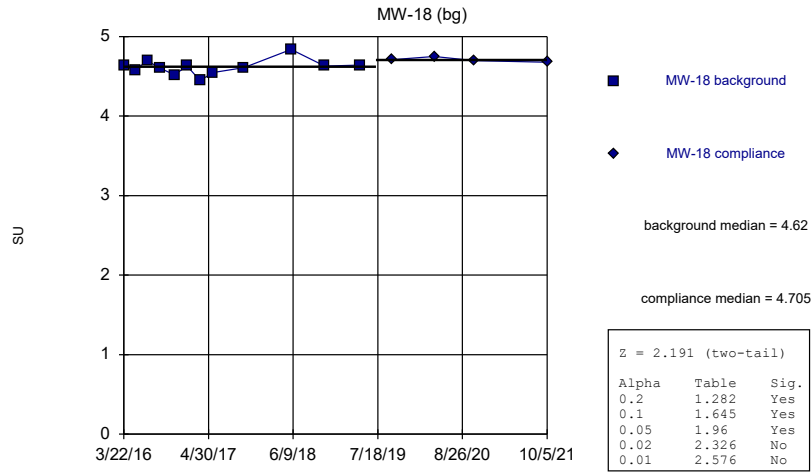
Constituent: pH Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



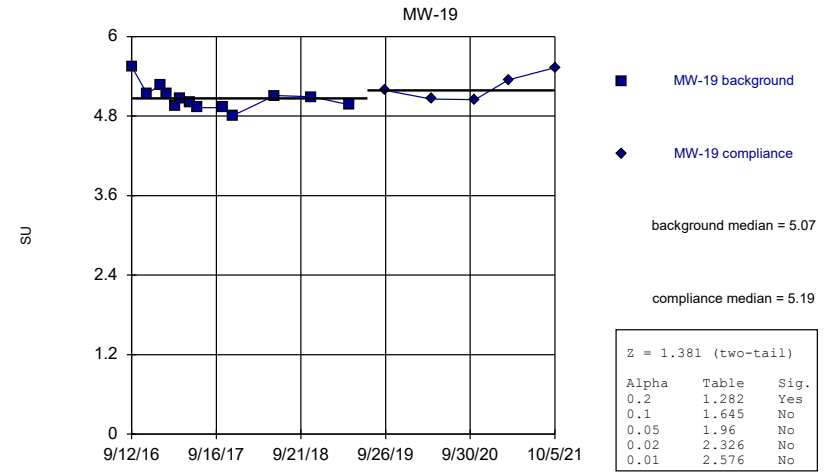
Constituent: pH Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: pH Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

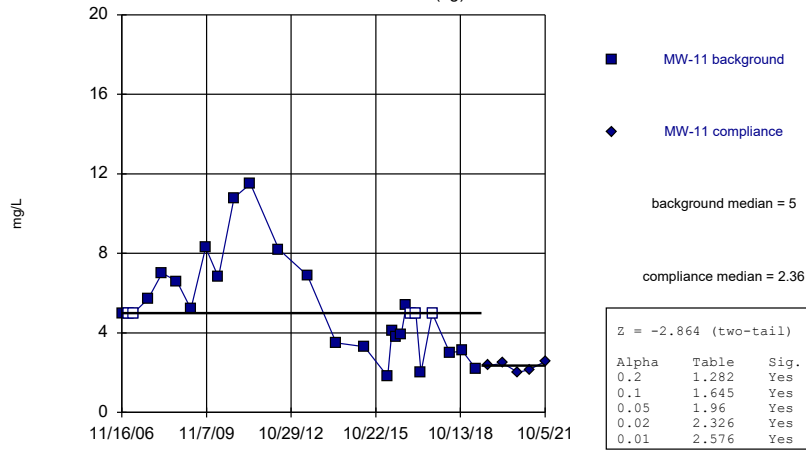
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: pH Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

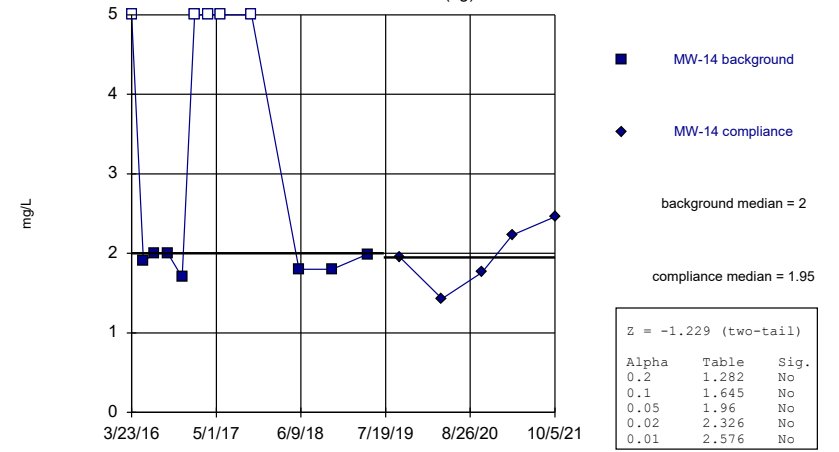
MW-11 (bg)



Constituent: Sulfate Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

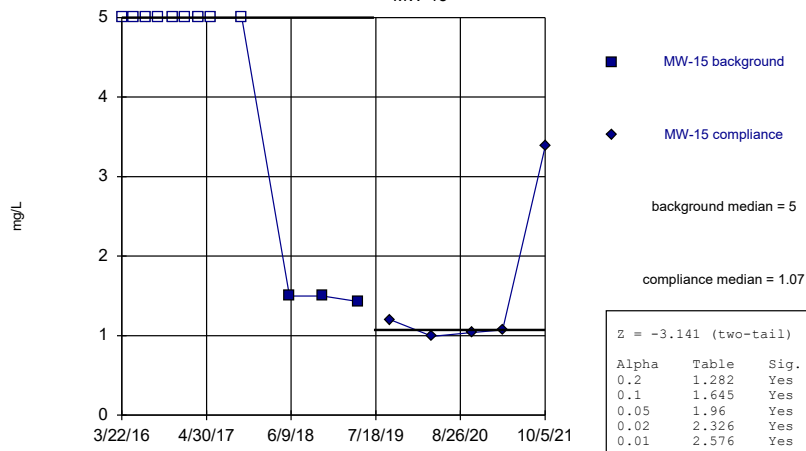
MW-14 (bg)



Constituent: Sulfate Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

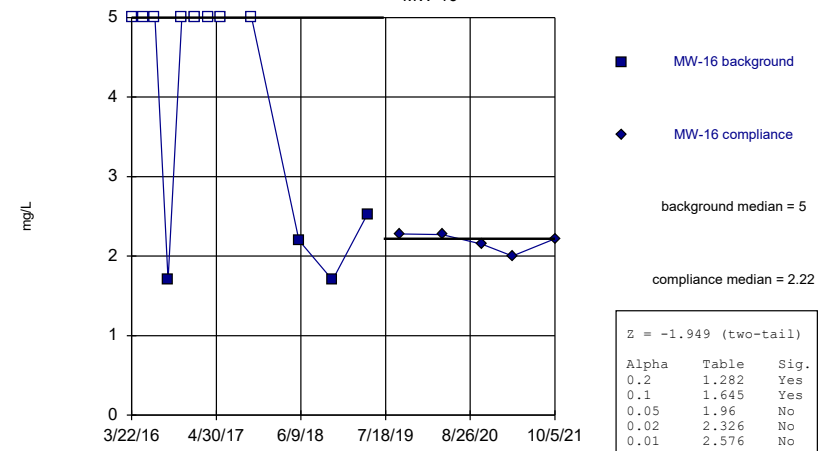
MW-15



Constituent: Sulfate Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

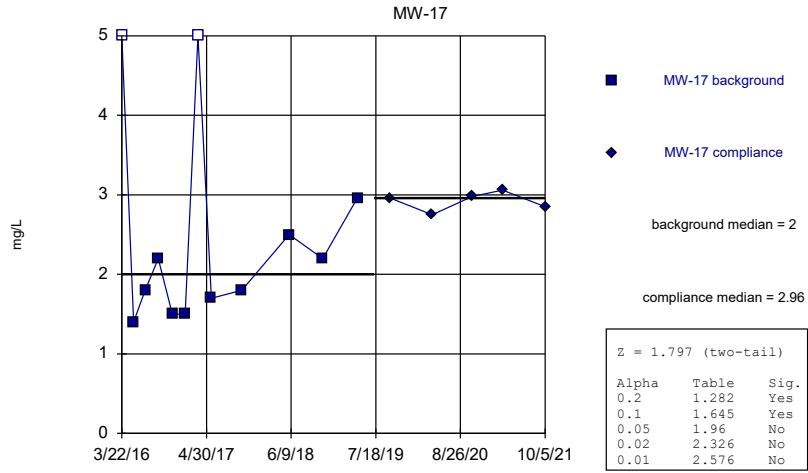
Mann-Whitney (Wilcoxon Rank Sum)

MW-16



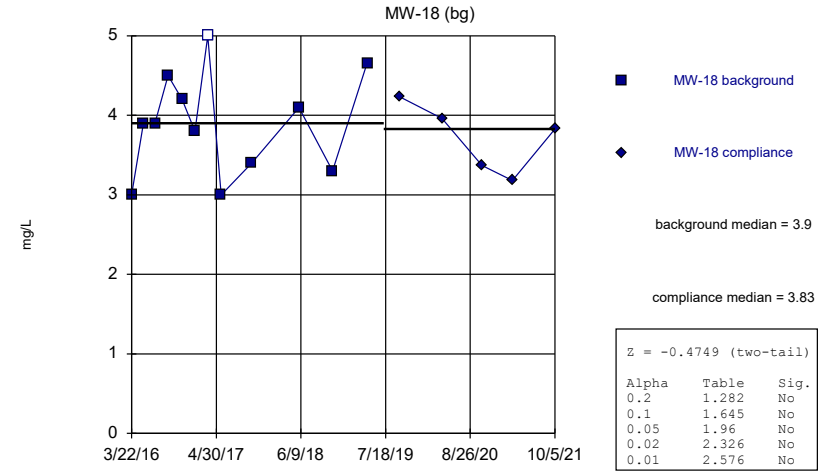
Constituent: Sulfate Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



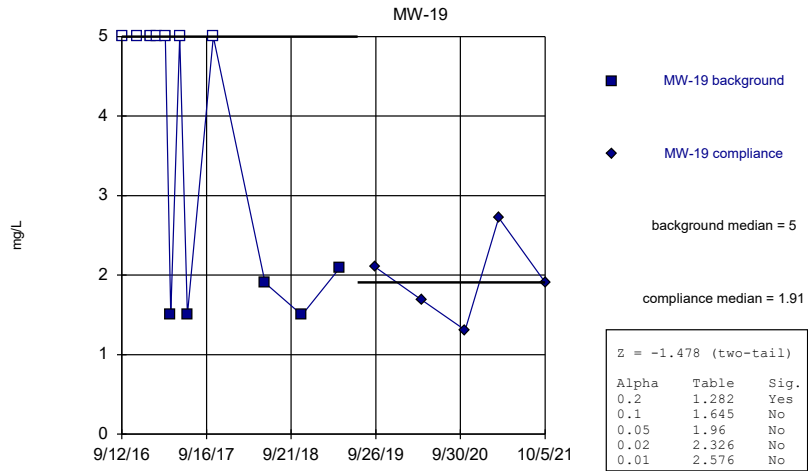
Constituent: Sulfate Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



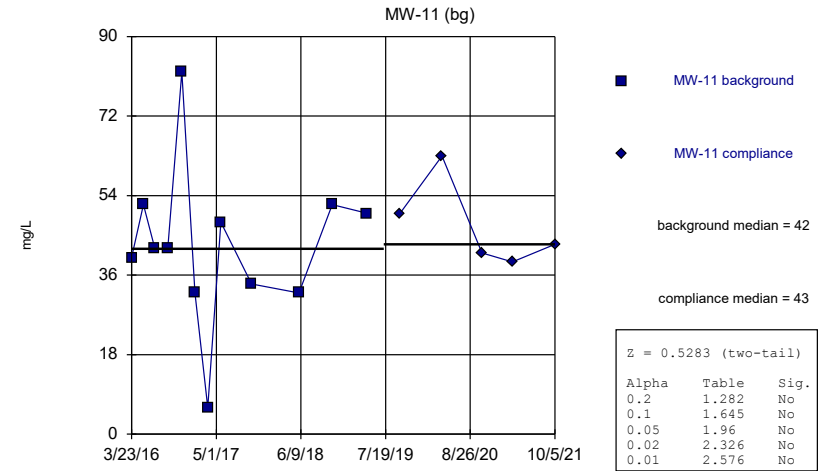
Constituent: Sulfate Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Sulfate Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

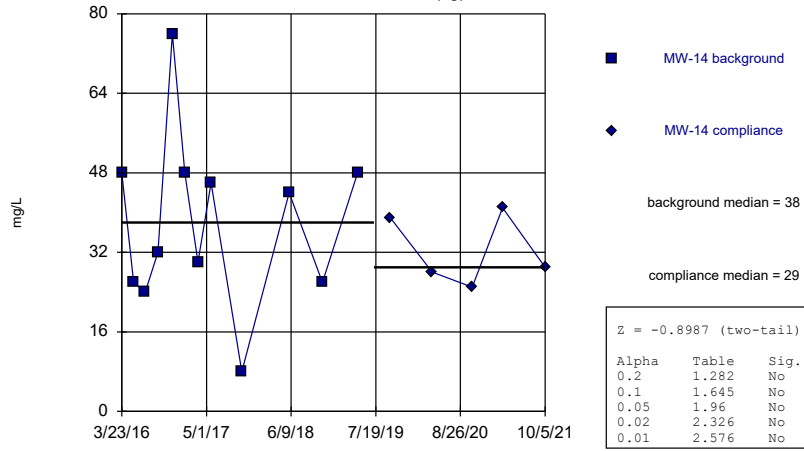


Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR



Mann-Whitney (Wilcoxon Rank Sum)

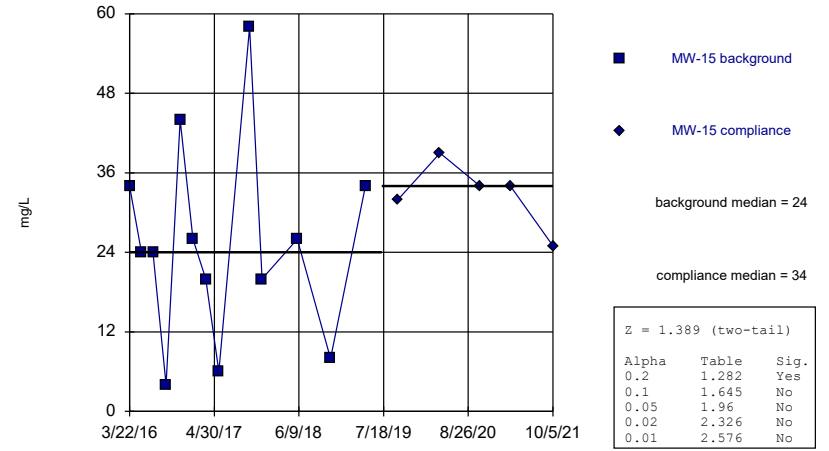
MW-14 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

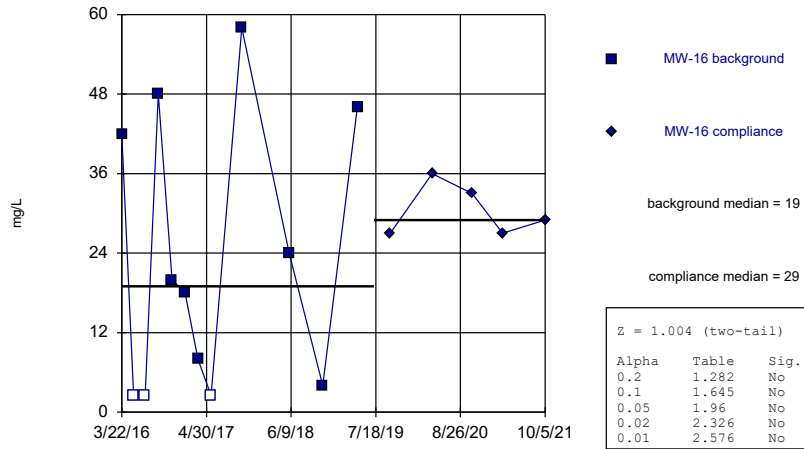
MW-15



Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)

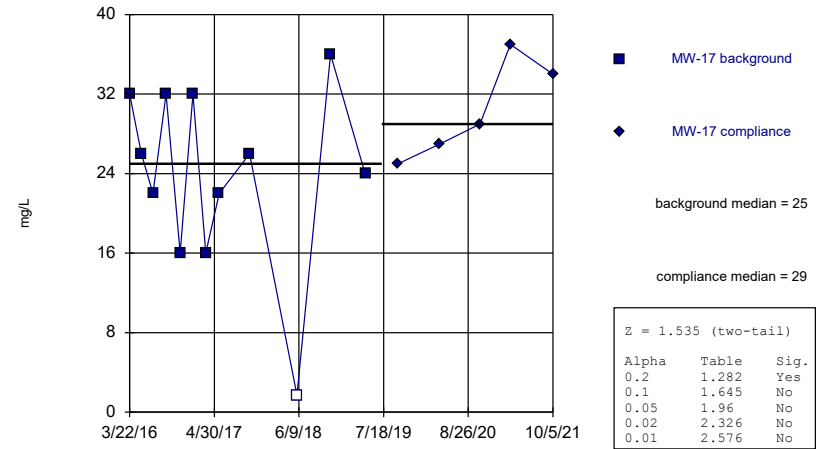
MW-16



Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

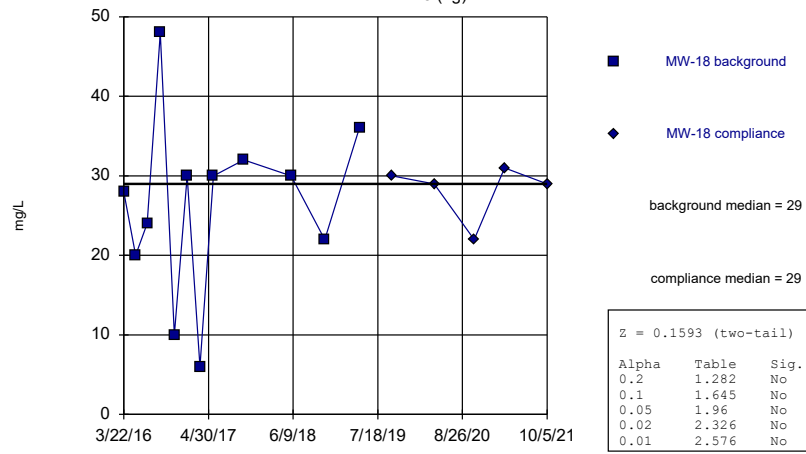
Mann-Whitney (Wilcoxon Rank Sum)

MW-17



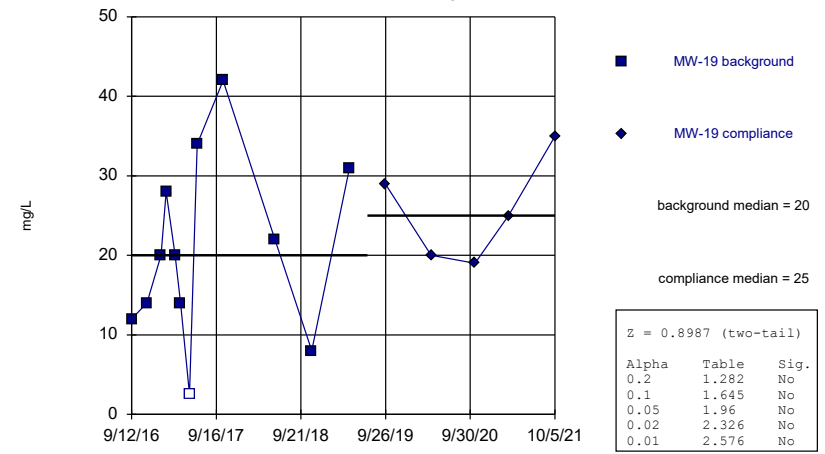
Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-18 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

Mann-Whitney (Wilcoxon Rank Sum)  
MW-19



Constituent: Total Dissolved Solids Analysis Run 5/4/2022 11:56 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	<0.08	
9/12/2016	<0.08	
11/18/2016	<0.08	
1/19/2017	<0.08	
3/22/2017	<0.08	
5/24/2017	<0.08	
10/17/2017	<0.08	
5/31/2018	<0.08	
11/7/2018	<0.08	
4/22/2019	<0.08	
9/27/2019		0.0443 (J)
4/13/2020		<0.08
10/22/2020		0.103
3/16/2021		<0.08
10/5/2021		<0.08

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	<0.08	
9/12/2016	<0.08	
11/19/2016	<0.08	
1/18/2017	<0.08	
3/22/2017	<0.08	
5/24/2017	<0.08	
10/17/2017	<0.08	
6/1/2018	<0.08	
11/7/2018	<0.08	
4/23/2019	<0.08	
9/26/2019		<0.08
4/13/2020		<0.08
10/22/2020		0.0559 (J)
3/16/2021		<0.08
10/5/2021		<0.08

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	<0.08	
9/12/2016	<0.08	
11/19/2016	<0.08	
1/19/2017	<0.08	
3/21/2017	<0.08	
5/23/2017	<0.08	
10/17/2017	<0.08	
6/1/2018	<0.08	
11/7/2018	<0.08	
4/23/2019	<0.08	
9/26/2019		<0.08
4/13/2020		<0.08
10/22/2020		0.0437 (J)
3/16/2021		<0.08
10/5/2021		<0.08

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Boron (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	0.026 (J)	
9/12/2016	<0.08	
11/18/2016	<0.08	
1/18/2017	<0.08	
3/21/2017	<0.08	
5/24/2017	<0.08	
10/17/2017	0.025 (J)	
5/31/2018	0.022 (J)	
11/8/2018	<0.08	
4/22/2019	<0.08	
9/26/2019		0.042 (J)
4/14/2020		<0.08
10/22/2020		0.0401 (J)
3/16/2021		<0.08
10/5/2021		<0.08

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	<1.9 (*)	
5/18/2016	1.8	
7/12/2016	1.9	
9/12/2016	2	
11/18/2016	2	
1/19/2017	1.8	
3/22/2017	1.8	
5/24/2017	2	
10/17/2017	2	
5/31/2018	1.8	
11/7/2018	2	
4/22/2019	1.71	
9/27/2019		1.99
4/13/2020		2.03
10/22/2020		2.02
3/16/2021		1.74
10/5/2021		1.87

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<5.9 (*)	
5/18/2016	5.5	
7/12/2016	5.3	
9/12/2016	4.9	
11/19/2016	4.8	
1/18/2017	3.8	
3/22/2017	3.3	
5/24/2017	3.6	
10/17/2017	3.7	
6/1/2018	2.8	
11/7/2018	2.9	
4/23/2019	2.76	
9/26/2019		2.4
4/13/2020		2.74
10/22/2020		2.17
3/16/2021		2.4
10/5/2021		1.89



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	1.3 (B1)	
5/18/2016	1.2	
7/12/2016	1.1	
9/12/2016	1.4	
11/19/2016	1.3	
1/19/2017	1.3	
3/21/2017	1.3	
5/23/2017	1.4	
10/17/2017	1.1	
6/1/2018	0.97	
11/7/2018	1.1	
4/23/2019	1.01	
9/26/2019		1.08
4/13/2020		1.22
10/22/2020		1.35
3/16/2021		1.41
10/5/2021		0.632

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	0.61 (B1)	
5/18/2016	0.89	
7/11/2016	0.82	
9/13/2016	0.82	
11/17/2016	0.75	
1/18/2017	0.58	
3/21/2017	0.6	
5/23/2017	0.65	
10/17/2017	1.1	
12/15/2017	0.89 (RS)	
5/31/2018	1.1	
11/8/2018	0.76	
4/22/2019	1.09	
9/26/2019		0.758
4/14/2020		0.92
10/21/2020		0.798
3/16/2021		0.681
10/5/2021		0.793

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	1.4 (B1)	
5/18/2016	1	
7/12/2016	1.1	
9/12/2016	0.98	
11/18/2016	1	
1/18/2017	1	
3/21/2017	0.91	
5/24/2017	0.96	
10/17/2017	0.96	
5/31/2018	1.1	
11/8/2018	0.96	
4/22/2019	0.946	
9/26/2019		1.11
4/13/2020		1.03
10/22/2020		0.969
3/16/2021		1.12
10/5/2021		0.883

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	0.93 (B1)	
5/18/2016	0.85	
7/12/2016	0.69	
9/12/2016	0.86	
11/18/2016	0.41	
1/18/2017	0.81	
3/21/2017	0.76	
5/24/2017	0.8	
10/17/2017	0.69	
5/31/2018	0.75	
11/8/2018	0.78	
4/22/2019	0.531	
9/26/2019		0.631
4/14/2020		0.627
10/22/2020		0.553
3/16/2021		0.57
10/5/2021		0.43 (J)

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	0.92	
11/18/2016	0.68	
1/18/2017	0.64	
2/10/2017	0.58	
3/21/2017	0.56	
4/14/2017	0.51	
5/23/2017	0.54	
6/26/2017	0.66	
10/17/2017	0.58	
5/31/2018	0.56	
11/8/2018	0.57	
4/22/2019	0.634	
9/26/2019		1.24
4/13/2020		0.687
10/21/2020		0.806
3/16/2021		2.23
10/5/2021		3.67

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
11/16/2006	8.5	
2/5/2007	8.8	
4/12/2007	9.5	
10/17/2007	12.1	
4/17/2008	13.1	
10/24/2008	13.7	
4/21/2009	11.9	
10/26/2009	11	
4/12/2010	12.5	
10/30/2010	10.8	
5/25/2011	10	
5/25/2012	10.9	
5/28/2013	11.4	
5/31/2014	9.2	
5/29/2015	11.5	
3/23/2016	13	
5/18/2016	13	
7/12/2016	13	
9/12/2016	13	
11/18/2016	14	
1/19/2017	13	
3/22/2017	15	
5/24/2017	14	
10/17/2017	15	
5/31/2018	12	
11/7/2018	14	
4/22/2019	13.3	
9/27/2019		13.4
4/13/2020		14.2
10/22/2020		17.4
3/16/2021		13.3
10/5/2021		12.5

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	8.8 (B1)	
5/18/2016	7.2	
7/12/2016	7.5	
9/12/2016	8.4	
11/19/2016	12	
1/18/2017	11	
3/22/2017	11	
5/24/2017	10	
10/17/2017	10	
6/1/2018	9.9	
11/7/2018	10	
4/23/2019	9.3	
9/26/2019		8.35
4/13/2020		7.9
10/22/2020		6.5
3/16/2021		7.32
10/5/2021		6.59

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	8.4 (B1)	
5/18/2016	6	
7/12/2016	7.1	
9/12/2016	7.3	
11/19/2016	8.9	
1/19/2017	8.3	
3/21/2017	8.8	
5/23/2017	9.3	
10/17/2017	7.1	
6/1/2018	6.4	
11/7/2018	8	
4/23/2019	6.75	
9/26/2019		7.66
4/13/2020		7.74
10/22/2020		8.69
3/16/2021		8.94
10/5/2021		9.3



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	6.9 (B1)	
5/18/2016	5.4	
7/11/2016	8.1	
9/13/2016	6.2	
11/17/2016	7.3	
1/18/2017	6.3	
3/21/2017	7.3	
5/23/2017	7.4	
10/17/2017	9.9	
12/19/2017	7.8 (RS)	
5/31/2018	8.7	
11/8/2018	7.6	
4/22/2019	10.2	
6/25/2019		9.4
9/26/2019		6.54
4/14/2020		7.03
10/21/2020		7.36
3/16/2021		7.14
10/5/2021		6.55

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	7.3 (B1)	
5/18/2016	6	
7/12/2016	5.7	
9/12/2016	5.7	
11/18/2016	8.2	
1/18/2017	7.4	
3/21/2017	7.9	
5/24/2017	7.4	
10/17/2017	6.5	
5/31/2018	6.5	
11/8/2018	6.9	
4/22/2019	6.64	
9/26/2019		6.7
4/13/2020		6.46
10/22/2020		6.37
3/16/2021		6.97
10/5/2021		5.91

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	11 (B1)	
5/18/2016	8.4	
7/12/2016	7.9	
9/12/2016	7.6	
11/18/2016	8.5	
1/18/2017	9.2	
3/21/2017	10	
5/24/2017	10	
10/17/2017	8.6	
5/31/2018	6.9	
11/8/2018	8.7	
4/22/2019	6.17	
9/26/2019		6.09
4/14/2020		6.15
10/22/2020		6.89
3/16/2021		8.18
10/5/2021		5.72

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	5	
11/18/2016	<6.3 (*)	
1/18/2017	5.3	
2/10/2017	5.4	
3/21/2017	5.3	
4/14/2017	4.9 (B)	
5/23/2017	5.5	
6/26/2017	5.4	
10/17/2017	5.4	
5/31/2018	5	
11/8/2018	5.2	
4/22/2019	4.91	
9/26/2019		5.03
4/13/2020		4.9
10/21/2020		5.25
3/16/2021		5.72
10/5/2021		5.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	<0.1	
5/18/2016	<0.1	
7/12/2016	0.04 (J)	
9/12/2016	0.04 (J)	
11/18/2016	<0.1	
1/19/2017	<0.1	
3/22/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	0.04 (J)	
5/31/2018	0.04 (J)	
11/7/2018	0.05 (J)	
4/22/2019	0.0353 (J)	
9/27/2019		0.0438 (J)
4/13/2020		0.0672 (J)
10/22/2020		<0.1
3/16/2021		0.0269 (J)
10/5/2021		0.0561 (J)

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	<0.1	
9/12/2016	<0.1	
11/19/2016	<0.1	
1/18/2017	<0.1	
3/22/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	<0.1	
6/1/2018	<0.1	
11/7/2018	<0.1	
4/23/2019	0.0335 (J)	
9/26/2019		0.0272 (J)
4/13/2020		0.0411 (J)
10/22/2020		<0.1
3/16/2021		<0.1
10/5/2021		0.03 (J)

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	<0.1	
9/12/2016	<0.1	
11/19/2016	<0.1	
1/19/2017	<0.1	
3/21/2017	<0.1	
5/23/2017	<0.1	
10/17/2017	<0.1	
6/1/2018	<0.1	
11/7/2018	<0.1	
4/23/2019	0.0275 (J)	
9/26/2019		<0.1
4/13/2020		0.0484 (J)
10/22/2020		<0.1
3/16/2021		<0.1
10/5/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/11/2016	<0.1	
9/13/2016	<0.1	
11/17/2016	<0.1	
1/18/2017	<0.1	
3/21/2017	<0.1	
5/23/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	<0.1	
11/8/2018	<0.1	
4/22/2019	0.029 (J)	
9/26/2019		0.0302 (J)
4/14/2020		0.0496 (J)
10/21/2020		<0.1
3/16/2021		<0.1
10/5/2021		0.0264 (J)



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	<0.1	
9/12/2016	<0.1	
11/18/2016	<0.1	
1/18/2017	<0.1	
3/21/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	<0.1	
11/8/2018	<0.1	
4/22/2019	<0.1	
9/26/2019		0.0263 (J)
4/13/2020		0.0511 (J)
10/22/2020		<0.1
3/16/2021		<0.1
10/5/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	0.04 (J)	
9/12/2016	<0.1	
11/18/2016	<0.1	
1/18/2017	<0.1	
3/21/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	0.04 (J)	
11/8/2018	<0.1	
4/22/2019	0.0311 (J)	
9/26/2019		0.0366 (J)
4/14/2020		0.0764 (J)
10/22/2020		<0.1
3/16/2021		0.0344 (J)
10/5/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	<0.1	
11/18/2016	<0.1	
1/18/2017	<0.1	
2/10/2017	<0.1	
3/21/2017	<0.1	
4/14/2017	<0.1	
5/23/2017	<0.1	
6/26/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	<0.1	
11/8/2018	<0.1	
4/22/2019	<0.1	
9/26/2019		0.0287 (J)
4/13/2020		0.0382 (J)
10/21/2020		<0.1
3/16/2021		0.0376 (J)
10/5/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (SU) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	4.8	
5/18/2016	4.74	
7/12/2016	4.9	
9/12/2016	4.72	
11/18/2016	4.65	
1/19/2017	4.77	
3/22/2017	4.46	
5/24/2017	4.74	
10/17/2017	4.72	
11/30/2017	4.61	
5/31/2018	4.93	
11/7/2018	4.58	
4/22/2019	4.67	
9/27/2019		4.61
4/13/2020		4.7
10/22/2020		4.66
3/16/2021		4.72
10/5/2021		4.67

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (SU) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	5.4	
5/18/2016	5.38	
7/12/2016	5.65	
9/12/2016	5.14	
11/19/2016	5.05	
1/18/2017	5.11	
3/22/2017	4.86	
5/24/2017	5.02	
10/17/2017	5.01	
6/1/2018	5	
11/7/2018	4.81	
4/23/2019	4.93	
9/26/2019		4.99
4/13/2020		4.96
10/22/2020		5.09
3/16/2021		5.06
10/5/2021		4.98

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (SU) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	4.77	
5/18/2016	4.62	
7/12/2016	5.03	
9/12/2016	4.6	
11/19/2016	4.46	
1/19/2017	4.65	
3/21/2017	4.47	
5/23/2017	4.69	
10/17/2017	4.62	
6/1/2018	4.87	
11/7/2018	4.61	
4/23/2019	4.77	
9/26/2019		4.84
4/13/2020		4.71
10/22/2020		4.78
3/16/2021		4.65
10/5/2021		4.85

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (SU) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	4.68	
5/18/2016	4.67	
7/11/2016	4.75	
9/13/2016	4.56	
11/17/2016	4.6	
1/18/2017	4.68	
3/21/2017	4.39	
5/23/2017	4.61	
10/17/2017	4.51	
5/31/2018	4.75	
11/8/2018	4.71	
4/22/2019	4.49	
9/26/2019		4.62
4/14/2020		4.61
10/21/2020		4.5
3/16/2021		4.62
10/5/2021		4.6

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (SU) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	4.89	
5/18/2016	5.09	
7/12/2016	5.27	
9/12/2016	4.94	
11/18/2016	4.82	
1/18/2017	5.02	
3/21/2017	4.82	
5/24/2017	4.87	
10/17/2017	5	
5/31/2018	5.42	
11/8/2018	5.02	
4/22/2019	4.94	
9/26/2019		5.01
4/13/2020		4.99
10/22/2020		5.01
3/16/2021		5
10/5/2021		4.88



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (SU) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	4.63	
5/18/2016	4.58	
7/12/2016	4.7	
9/12/2016	4.6	
11/18/2016	4.52	
1/18/2017	4.63	
3/21/2017	4.45	
5/24/2017	4.55	
10/17/2017	4.61	
5/31/2018	4.84	
11/8/2018	4.63	
4/22/2019	4.64	
9/26/2019		4.71
4/14/2020		4.75
10/22/2020		4.7
10/5/2021		4.68

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (SU) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	5.55	
11/18/2016	5.14	
1/18/2017	5.27	
2/10/2017	5.14	
3/21/2017	4.96	
4/14/2017	5.07	
5/23/2017	5.01	
6/26/2017	4.93	
10/17/2017	4.93	
11/30/2017	4.81	
5/31/2018	5.11	
11/8/2018	5.09	
4/22/2019	4.97	
9/26/2019		5.19
4/13/2020		5.06
10/21/2020		5.05
3/16/2021		5.35
10/5/2021		5.53

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
11/16/2006	5	
2/5/2007	<5	
4/12/2007	<5	
10/17/2007	5.7	
4/17/2008	7	
10/24/2008	6.6	
4/21/2009	5.2	
10/26/2009	8.3	
4/12/2010	6.8	
10/30/2010	10.8	
5/25/2011	11.5	
5/25/2012	8.2	
5/28/2013	6.9	
5/31/2014	3.5	
5/29/2015	3.3	
3/23/2016	1.8 (J)	
5/18/2016	4.1	
7/12/2016	3.8 (J)	
9/12/2016	3.9 (J)	
11/18/2016	5.4	
1/19/2017	<5	
3/22/2017	<5	
5/24/2017	2 (J)	
10/17/2017	<5	
5/31/2018	3 (J)	
11/7/2018	3.1 (J)	
4/22/2019	2.22	
9/27/2019		2.36
4/13/2020		2.47
10/22/2020		2.01
3/16/2021		2.15
10/5/2021		2.57

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<5	
5/18/2016	1.9	
7/12/2016	2 (J)	
9/12/2016	2 (J)	
11/19/2016	1.7 (J)	
1/18/2017	<5	
3/22/2017	<5	
5/24/2017	<5	
10/17/2017	<5	
6/1/2018	1.8 (J)	
11/7/2018	1.8 (J)	
4/23/2019	1.99	
9/26/2019		1.95
4/13/2020		1.43
10/22/2020		1.76
3/16/2021		2.23
10/5/2021		2.46

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	<5	
5/18/2016	<5	
7/12/2016	<5	
9/12/2016	<5	
11/19/2016	<5	
1/19/2017	<5	
3/21/2017	<5	
5/23/2017	<5	
10/17/2017	<5	
6/1/2018	1.5 (J)	
11/7/2018	1.5 (J)	
4/23/2019	1.43	
9/26/2019		1.2
4/13/2020		0.992 (J)
10/22/2020		1.04
3/16/2021		1.07
10/5/2021		3.38

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	<5	
5/18/2016	<5	
7/11/2016	<5	
9/13/2016	1.7 (J)	
11/17/2016	<5	
1/18/2017	<5	
3/21/2017	<5	
5/23/2017	<5	
10/17/2017	<5	
5/31/2018	2.2 (J)	
11/8/2018	1.7 (J)	
4/22/2019	2.52	
9/26/2019		2.28
4/14/2020		2.27
10/21/2020		2.15
3/16/2021		2
10/5/2021		2.22

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	<5	
5/18/2016	1.4	
7/12/2016	1.8 (J)	
9/12/2016	2.2 (J)	
11/18/2016	1.5 (J)	
1/18/2017	1.5 (J)	
3/21/2017	<5	
5/24/2017	1.7 (J)	
10/17/2017	1.8 (J)	
5/31/2018	2.5 (J)	
11/8/2018	2.2 (J)	
4/22/2019	2.96	
9/26/2019		2.96
4/13/2020		2.75
10/22/2020		2.98
3/16/2021		3.06
10/5/2021		2.85

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	3 (J)	
5/18/2016	3.9 (J)	
7/12/2016	3.9 (J)	
9/12/2016	4.5 (J)	
11/18/2016	4.2 (J)	
1/18/2017	3.8 (J)	
3/21/2017	<5 (*)	
5/24/2017	3 (J)	
10/17/2017	3.4 (J)	
5/31/2018	4.1 (J)	
11/8/2018	3.3 (J)	
4/22/2019	4.66	
9/26/2019		4.23
4/14/2020		3.96
10/22/2020		3.37
3/16/2021		3.18
10/5/2021		3.83



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	<5	
11/18/2016	<5	
1/18/2017	<5	
2/10/2017	<5	
3/21/2017	<5	
4/14/2017	1.5 (J)	
5/23/2017	<5	
6/26/2017	1.5 (J)	
10/17/2017	<5	
5/31/2018	1.9 (J)	
11/8/2018	1.5 (J)	
4/22/2019	2.09	
9/26/2019		2.1
4/13/2020		1.69
10/21/2020		1.31
3/16/2021		2.72
10/5/2021		1.91

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	40	
5/18/2016	52	
7/12/2016	42	
9/12/2016	42	
11/18/2016	82	
1/19/2017	32	
3/22/2017	6	
5/24/2017	48	
10/17/2017	34	
5/31/2018	32	
11/7/2018	52	
4/22/2019	50	
9/27/2019		50
4/13/2020		63
10/22/2020		41
3/16/2021		39
10/5/2021		43

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	48 (B1)	
5/18/2016	26	
7/12/2016	24	
9/12/2016	32	
11/19/2016	76	
1/18/2017	48	
3/22/2017	30	
5/24/2017	46	
10/17/2017	8	
6/1/2018	44	
11/7/2018	26	
4/23/2019	48	
9/26/2019		39
4/13/2020		28
10/22/2020		25
3/16/2021		41
10/5/2021		29

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	34 (B1)	
5/18/2016	24	
7/12/2016	24	
9/12/2016	4 (J)	
11/19/2016	44	
1/19/2017	26	
3/21/2017	20	
5/23/2017	6	
10/17/2017	58	
12/15/2017	20 (RS)	
6/1/2018	26	
11/7/2018	8	
4/23/2019	34	
9/26/2019		32
4/13/2020		39
10/22/2020		34
3/16/2021		34
10/5/2021		25

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	42 (B1)	
5/18/2016	<5	
7/11/2016	<5	
9/13/2016	48	
11/17/2016	20	
1/18/2017	18	
3/21/2017	8	
5/23/2017	<5	
10/17/2017	58	
5/31/2018	24	
11/8/2018	4 (J)	
4/22/2019	46	
9/26/2019		27
4/14/2020		36
10/21/2020		33
3/16/2021		27
10/5/2021		29

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	32 (B1)	
5/18/2016	26	
7/12/2016	22	
9/12/2016	32	
11/18/2016	16	
1/18/2017	32	
3/21/2017	16	
5/24/2017	22	
10/17/2017	26	
5/31/2018	<3.4	
11/8/2018	36	
4/22/2019	24	
9/26/2019		25
4/13/2020		27
10/22/2020		29
3/16/2021		37
10/5/2021		34

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	28 (B1)	
5/18/2016	20	
7/12/2016	24	
9/12/2016	48	
11/18/2016	10	
1/18/2017	30	
3/21/2017	6	
5/24/2017	30	
10/17/2017	32	
5/31/2018	30	
11/8/2018	22	
4/22/2019	36	
9/26/2019		30
4/14/2020		29
10/22/2020		22
3/16/2021		31
10/5/2021		29

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 11:57 AM View: Mann-Whitney  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-19	MW-19
9/12/2016	12	
11/18/2016	14	
1/18/2017	20	
2/10/2017	28	
3/21/2017	20	
4/14/2017	14	
5/23/2017	<5	
6/26/2017	34	
10/17/2017	42	
5/31/2018	22	
11/8/2018	8	
4/22/2019	31	
9/26/2019		29
4/13/2020		20
10/21/2020		19
3/16/2021		25
10/5/2021		35



FIGURE E.

# Appendix III Intrawell Prediction Limits - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 4:28 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig. Bg	NBg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-18	0.08	n/a	3/16/2022	0.0927	Yes 17	n/a	n/a	70.59	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Calcium (mg/L)	MW-16	1.146	n/a	3/15/2022	1.18	Yes 18	0.8117	0.1645	0	None	No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-19	0.8608	n/a	3/15/2022	5.84	Yes 12	0.7847	0.06412	0	None	sqrt(x)	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-16	10.07	n/a	3/15/2022	10.8	Yes 19	7.533	1.263	0	None	No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-19	5.802	n/a	3/15/2022	6.91	Yes 17	706.2	208.1	5.882	None	x^4	0.00188	Param Intra 1 of 2
pH (SU)	MW-19	5.525	4.715	3/15/2022	5.82	Yes 18	5.12	0.1992	0	None	No	0.0009398	Param Intra 1 of 2
Sulfate (mg/L)	MW-18	5.034	n/a	3/16/2022	7.04	Yes 17	3.843	0.5798	5.882	None	No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-17	43.75	n/a	3/16/2022	55	Yes 17	25.75	8.766	5.882	None	No	0.00188	Param Intra 1 of 2

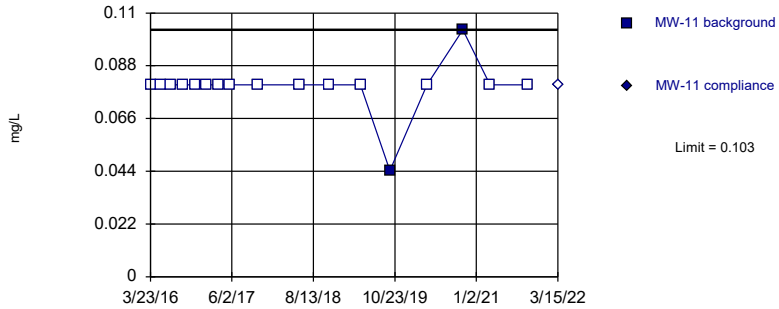
# Appendix III Intrawell Prediction Limits - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/4/2022, 4:28 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-11	0.103	n/a	3/15/2022	0.08ND	No	17	n/a	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-14	0.08	n/a	3/15/2022	0.08ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-15	0.08	n/a	3/15/2022	0.08ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>MW-18</b>	<b>0.08</b>	<b>n/a</b>	<b>3/16/2022</b>	<b>0.0927</b>	<b>Yes</b>	<b>17</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>70.59</b>	<b>n/a</b>	<b>n/a</b>	<b>0.005914</b>	<b>NP Intra (NDs) 1 of 2</b>
Calcium (mg/L)	MW-11	2.125	n/a	3/15/2022	1.87	No	17	24.35	9.256	5.882	None		x^5	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-14	5.702	n/a	3/15/2022	2.59	No	17	3.406	1.117	5.882	None		No	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-15	1.597	n/a	3/15/2022	0.703	No	17	1.187	0.2	0	None		No	0.00188	Param Intra 1 of 2
<b>Calcium (mg/L)</b>	<b>MW-16</b>	<b>1.146</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>1.18</b>	<b>Yes</b>	<b>18</b>	<b>0.8117</b>	<b>0.1645</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Calcium (mg/L)	MW-17	1.27	n/a	3/16/2022	1.04	No	17	0.01917	0.1071	0	None		ln(x)	0.00188	Param Intra 1 of 2
Calcium (mg/L)	MW-18	0.9976	n/a	3/16/2022	0.406J	No	17	0.6866	0.1514	0	None		No	0.00188	Param Intra 1 of 2
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>0.8608</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>5.84</b>	<b>Yes</b>	<b>12</b>	<b>0.7847</b>	<b>0.06412</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>sqrt(x)</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Chloride (mg/L)	MW-11	16.08	n/a	3/15/2022	13.6	No	32	12.44	1.948	0	None		No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-14	12.3	n/a	3/15/2022	8.36	No	17	8.927	1.643	0	None		No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-15	10.02	n/a	3/15/2022	5.55	No	17	7.922	1.023	0	None		No	0.00188	Param Intra 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-16</b>	<b>10.07</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>10.8</b>	<b>Yes</b>	<b>19</b>	<b>7.533</b>	<b>1.263</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Chloride (mg/L)	MW-17	8.234	n/a	3/16/2022	7	No	17	6.738	0.7281	0	None		No	0.00188	Param Intra 1 of 2
Chloride (mg/L)	MW-18	11.16	n/a	3/16/2022	6.05	No	17	8	1.54	0	None		No	0.00188	Param Intra 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-19</b>	<b>5.802</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>6.91</b>	<b>Yes</b>	<b>17</b>	<b>706.2</b>	<b>208.1</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>x^4</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	MW-11	0.1	n/a	3/15/2022	0.1ND	No	17	n/a	n/a	41.18	n/a		n/a	0.005914	NP Intra (normality) 1 of 2
Fluoride (mg/L)	MW-14	0.1	n/a	3/15/2022	0.0364J	No	17	n/a	n/a	76.47	n/a		n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-15	0.1	n/a	3/15/2022	0.0302J	No	17	n/a	n/a	88.24	n/a		n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-16	0.1	n/a	3/15/2022	0.0438J	No	17	n/a	n/a	76.47	n/a		n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-17	0.1	n/a	3/16/2022	0.0399J	No	17	n/a	n/a	88.24	n/a		n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-18	0.1	n/a	3/16/2022	0.1ND	No	17	n/a	n/a	64.71	n/a		n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-19	0.1	n/a	3/15/2022	0.0423J	No	17	n/a	n/a	82.35	n/a		n/a	0.005914	NP Intra (NDs) 1 of 2
pH (SU)	MW-11	4.927	4.479	3/15/2022	4.73	No	18	4.703	0.1101	0	None		No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-14	5.519	4.651	3/15/2022	5.07	No	17	5.085	0.2112	0	None		No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-15	5.006	4.405	3/15/2022	4.87	No	17	4.705	0.1462	0	None		No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-16	4.808	4.41	3/15/2022	4.58	No	17	4.609	0.09695	0	None		No	0.0009398	Param Intra 1 of 2
pH (SU)	MW-17	5.314	4.695	3/16/2022	4.91	No	17	1.71	0.0172	0	None		x^(1/3)	0.0009398	Param Intra 1 of 2
pH (SU)	MW-18	4.833	4.445	3/16/2022	4.79	No	16	4.639	0.09337	0	None		No	0.0009398	Param Intra 1 of 2
<b>pH (SU)</b>	<b>MW-19</b>	<b>5.525</b>	<b>4.715</b>	<b>3/15/2022</b>	<b>5.82</b>	<b>Yes</b>	<b>18</b>	<b>5.12</b>	<b>0.1992</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0009398</b>	<b>Param Intra 1 of 2</b>	
Sulfate (mg/L)	MW-11	9.282	n/a	3/15/2022	2.88	No	32	4.514	2.549	15.63	Kaplan-Meier		No	0.00188	Param Intra 1 of 2
Sulfate (mg/L)	MW-14	5	n/a	3/15/2022	2.1	No	17	n/a	n/a	29.41	n/a		n/a	0.005914	NP Intra (normality) 1 of 2
Sulfate (mg/L)	MW-15	5	n/a	3/15/2022	1.33	No	17	n/a	n/a	52.94	n/a		n/a	0.005914	NP Intra (NDs) 1 of 2
Sulfate (mg/L)	MW-16	5	n/a	3/15/2022	2.29	No	17	n/a	n/a	47.06	n/a		n/a	0.005914	NP Intra (normality) 1 of 2
Sulfate (mg/L)	MW-17	4.97	n/a	3/16/2022	3.38	No	17	1.583	0.3149	11.76	None		sqrt(x)	0.00188	Param Intra 1 of 2
<b>Sulfate (mg/L)</b>	<b>MW-18</b>	<b>5.034</b>	<b>n/a</b>	<b>3/16/2022</b>	<b>7.04</b>	<b>Yes</b>	<b>17</b>	<b>3.843</b>	<b>0.5798</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Sulfate (mg/L)	MW-19	5	n/a	3/15/2022	4.86	No	17	n/a	n/a	41.18	n/a		n/a	0.005914	NP Intra (normality) 1 of 2
Total Dissolved Solids (mg/L)	MW-11	76.12	n/a	3/15/2022	53	No	17	44	15.64	0	None		No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-14	67.34	n/a	3/15/2022	56	No	17	36.35	15.09	0	None		No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-15	54.62	n/a	3/15/2022	51	No	18	27.33	13.43	0	None		No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-16	59.48	n/a	3/15/2022	34	No	17	24.46	17.05	17.65	Kaplan-Meier		No	0.00188	Param Intra 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>MW-17</b>	<b>43.75</b>	<b>n/a</b>	<b>3/16/2022</b>	<b>55</b>	<b>Yes</b>	<b>17</b>	<b>25.75</b>	<b>8.766</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Total Dissolved Solids (mg/L)	MW-18	46.41	n/a	3/16/2022	25	No	17	26.88	9.506	0	None		No	0.00188	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-19	43.34	n/a	3/15/2022	36	No	17	22.09	10.35	5.882	None		No	0.00188	Param Intra 1 of 2

Within Limit

Prediction Limit  
Intrawell Non-parametric

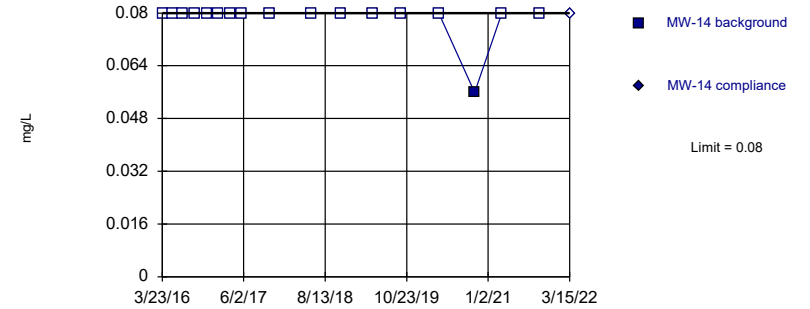


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

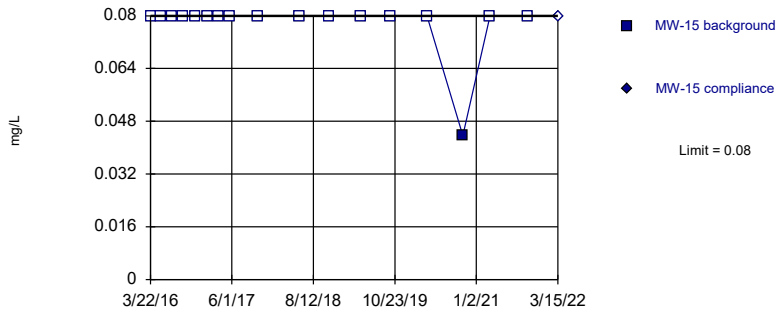


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

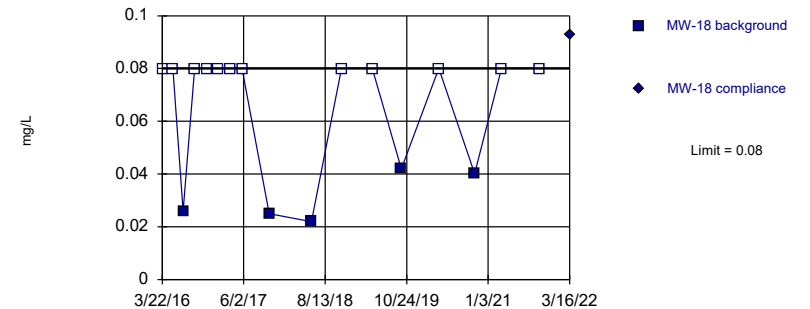


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit  
Intrawell Non-parametric

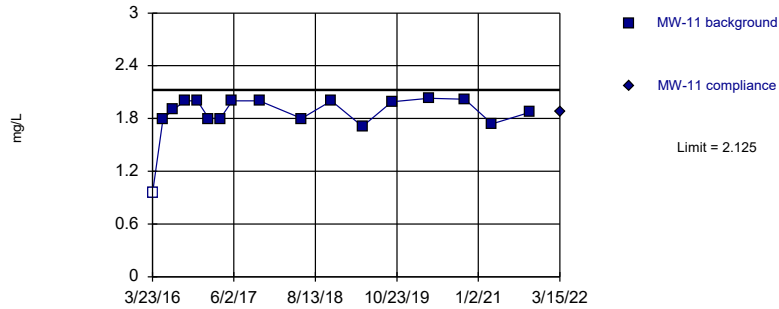


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 70.59% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
 Intrawell Parametric

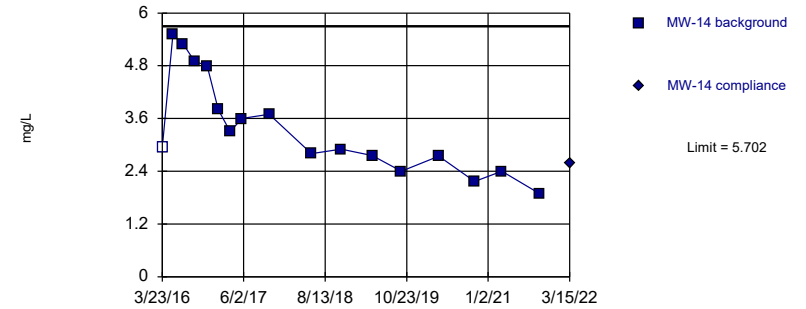


Background Data Summary (based on x^5 transformation): Mean=24.35, Std. Dev.=9.256, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8606, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
 Intrawell Parametric

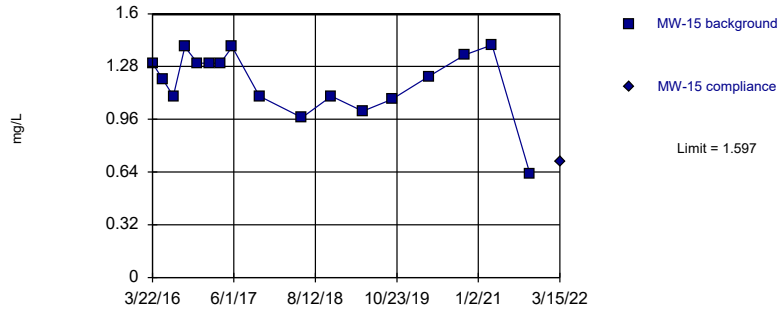


Background Data Summary: Mean=3.406, Std. Dev.=1.117, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9118, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
 Intrawell Parametric

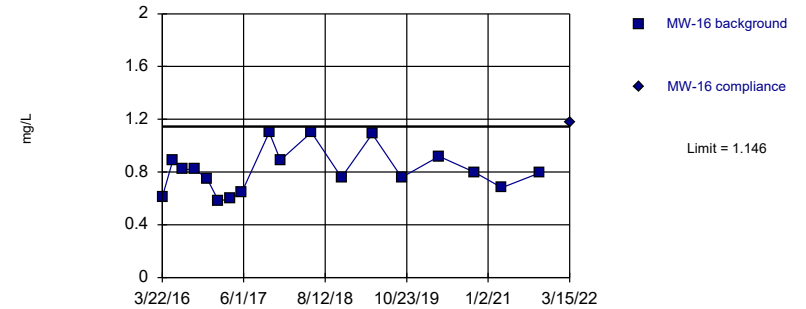


Background Data Summary: Mean=1.187, Std. Dev.=0.2, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8807, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit  
 Intrawell Parametric

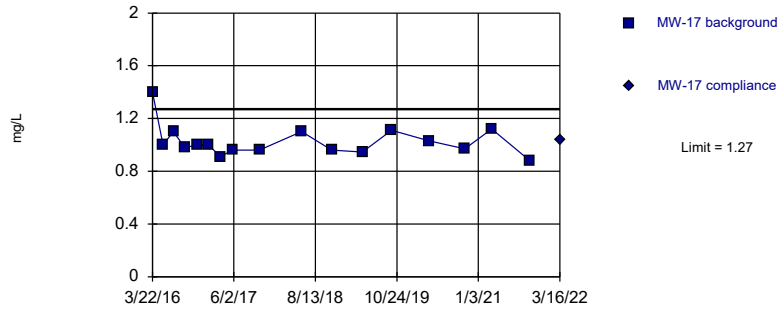


Background Data Summary: Mean=0.8117, Std. Dev.=0.1645, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9244, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

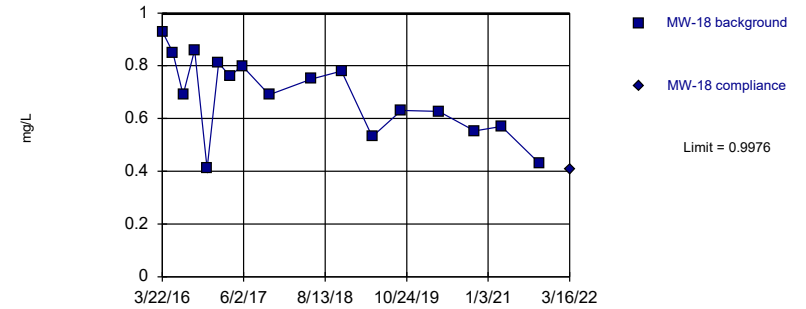


Background Data Summary (based on natural log transformation): Mean=0.01917, Std. Dev.=0.1071, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8548, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

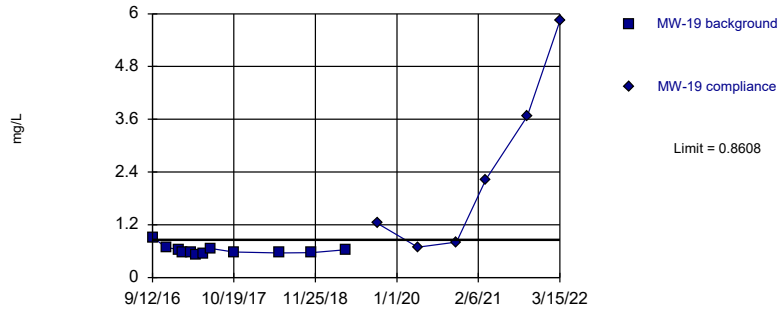


Background Data Summary: Mean=0.6866, Std. Dev.=0.1514, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.964, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit  
Intrawell Parametric

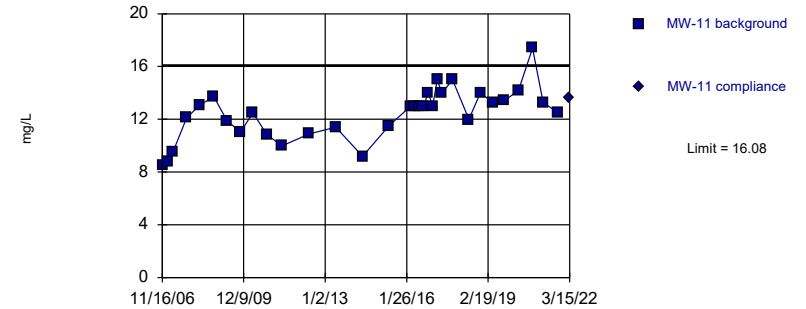


Background Data Summary (based on square root transformation): Mean=0.7847, Std. Dev.=0.06412, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8069, critical = 0.805. Kappa = 2.232 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

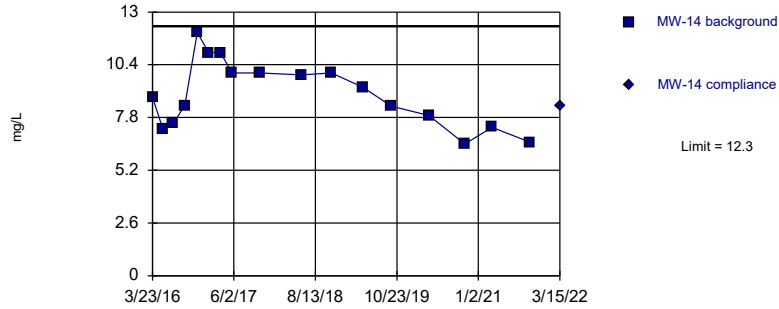


Background Data Summary: Mean=12.44, Std. Dev.=1.948, n=32. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9664, critical = 0.904. Kappa = 1.87 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

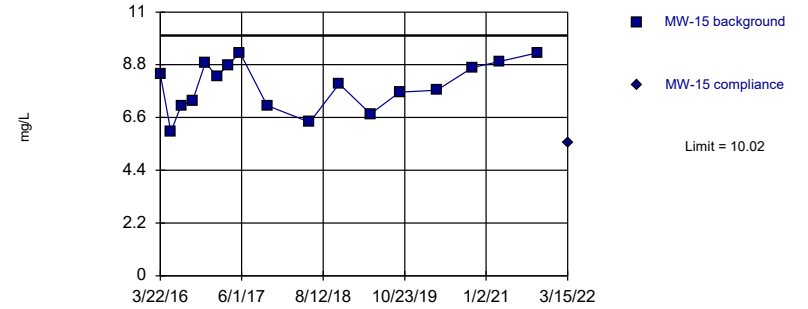


Background Data Summary: Mean=8.927, Std. Dev.=1.643, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9575, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

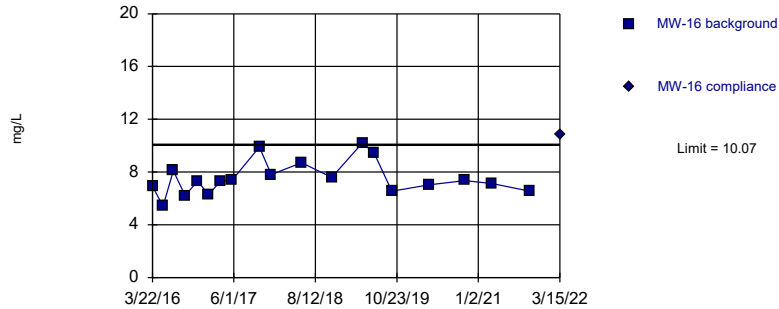


Background Data Summary: Mean=7.922, Std. Dev.=1.023, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9501, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit  
Intrawell Parametric

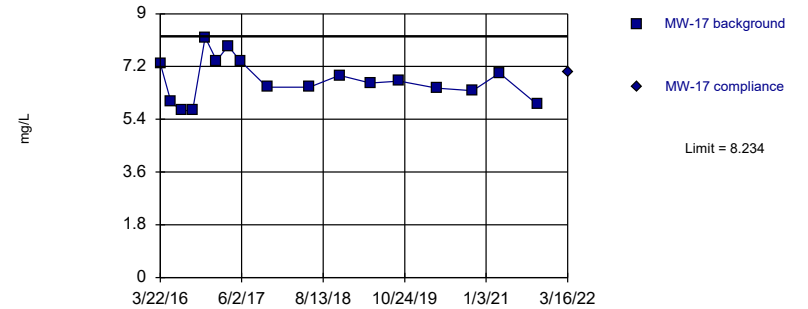


Background Data Summary: Mean=7.533, Std. Dev.=1.263, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9348, critical = 0.863. Kappa = 2.01 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

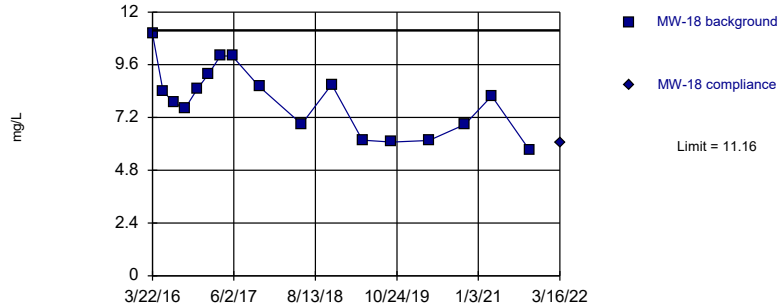


Background Data Summary: Mean=6.738, Std. Dev.=0.7281, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9598, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

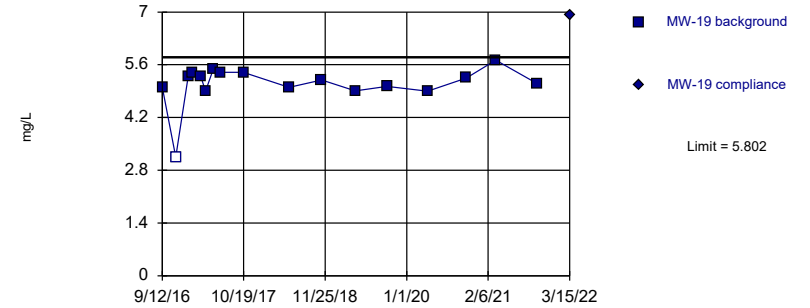


Background Data Summary: Mean=8, Std. Dev.=1.54, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.958, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit  
Intrawell Parametric

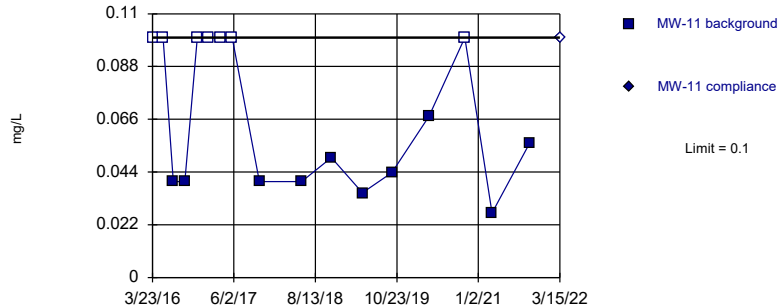


Background Data Summary (based on x^4 transformation): Mean=706.2, Std. Dev.=208.1, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.885, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

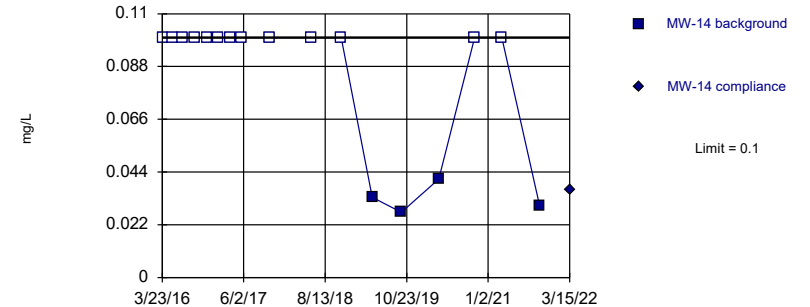


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 41.18% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric



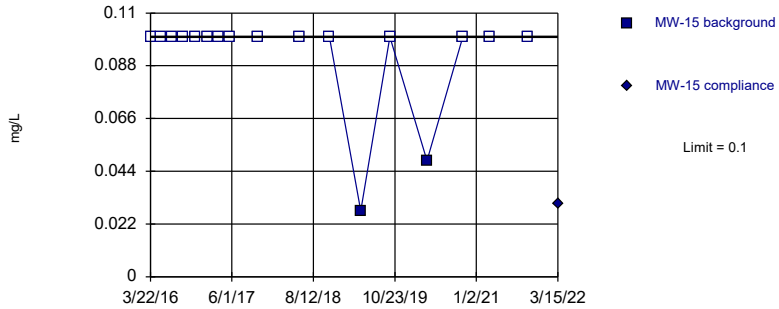
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR



Within Limit

Prediction Limit  
 Intrawell Non-parametric

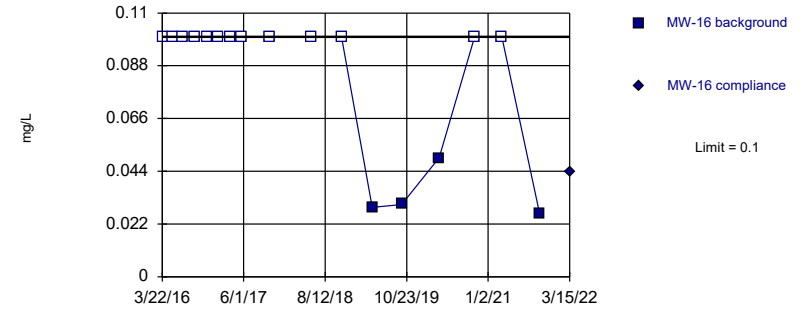


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
 Intrawell Non-parametric

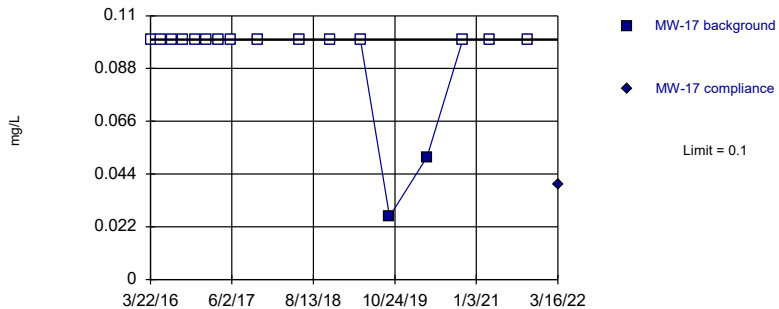


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 5/4/2022 4:13 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
 Intrawell Non-parametric

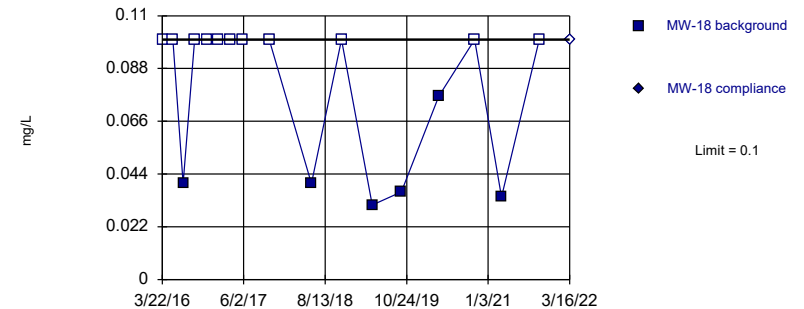


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
 Intrawell Non-parametric

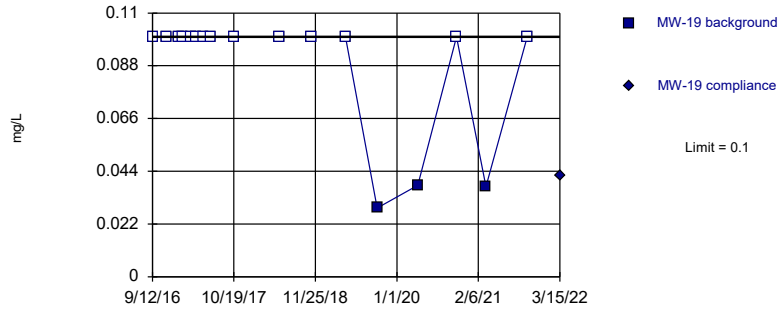


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 64.71% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
 Intrawell Non-parametric

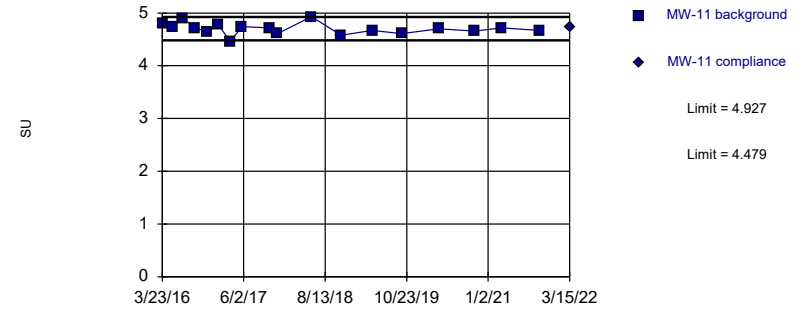


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 82.35% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

Prediction Limit  
 Intrawell Parametric

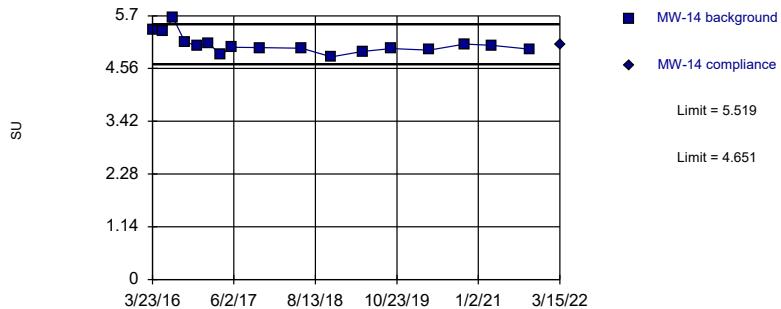


Background Data Summary: Mean=4.703, Std. Dev.=0.1101, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9628, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

Prediction Limit  
 Intrawell Parametric

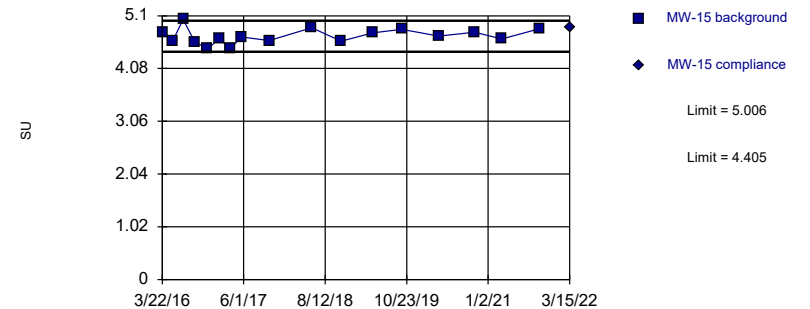


Background Data Summary: Mean=5.085, Std. Dev.=0.2112, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8539, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

Prediction Limit  
 Intrawell Parametric

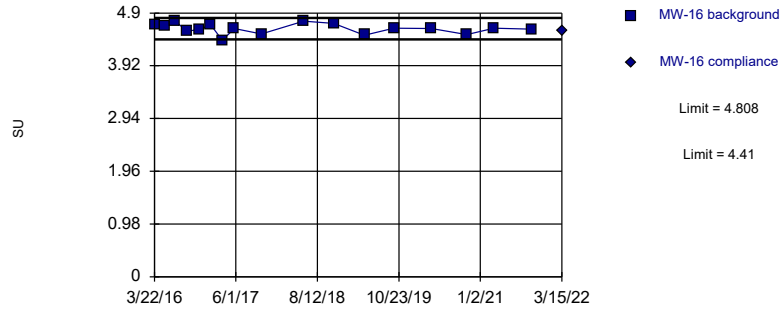


Background Data Summary: Mean=4.705, Std. Dev.=0.1462, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9668, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

### Prediction Limit Intrawell Parametric

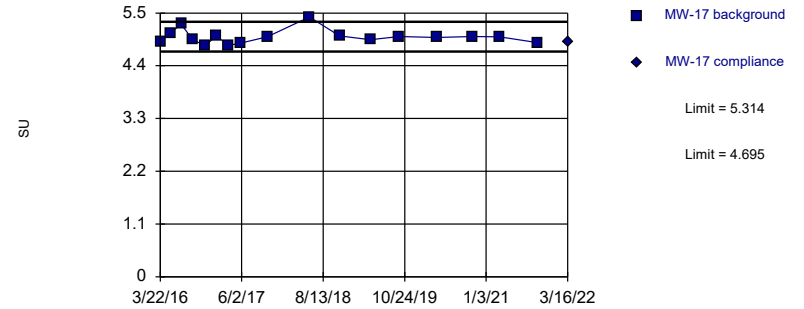


Background Data Summary: Mean=4.609, Std. Dev.=0.09695, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9549, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

### Prediction Limit Intrawell Parametric

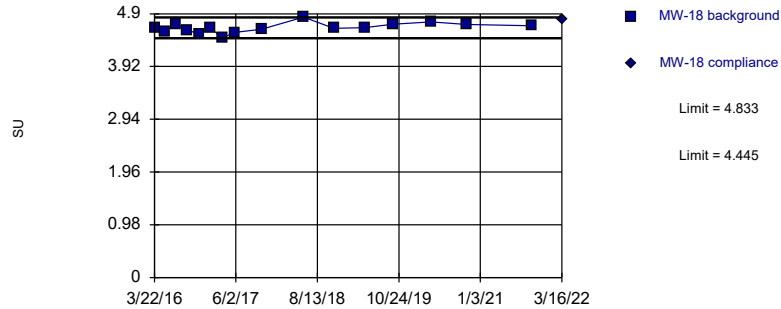


Background Data Summary (based on cube root transformation): Mean=1.71, Std. Dev.=0.0172, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8526, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

### Prediction Limit Intrawell Parametric

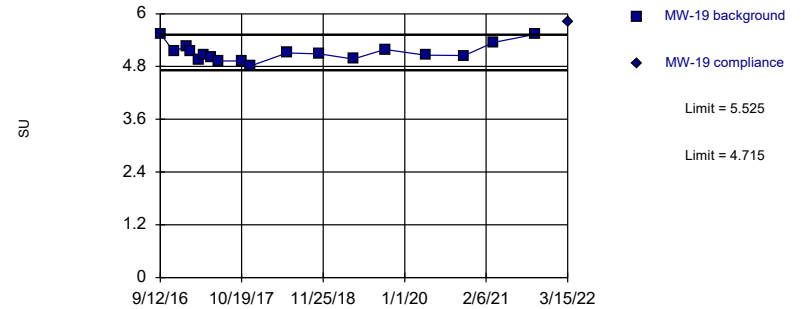


Background Data Summary: Mean=4.639, Std. Dev.=0.09337, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9831, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limits

### Prediction Limit Intrawell Parametric

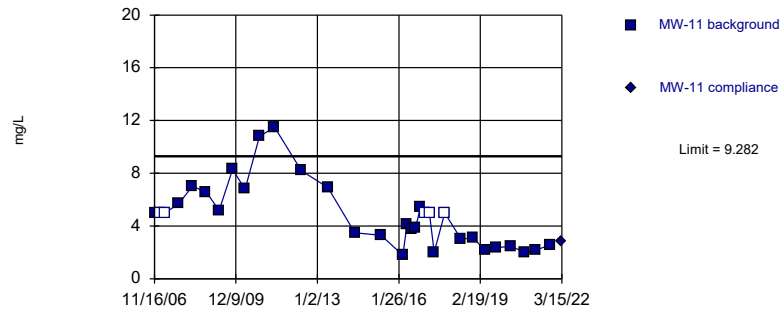


Background Data Summary: Mean=5.12, Std. Dev.=0.1992, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9196, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

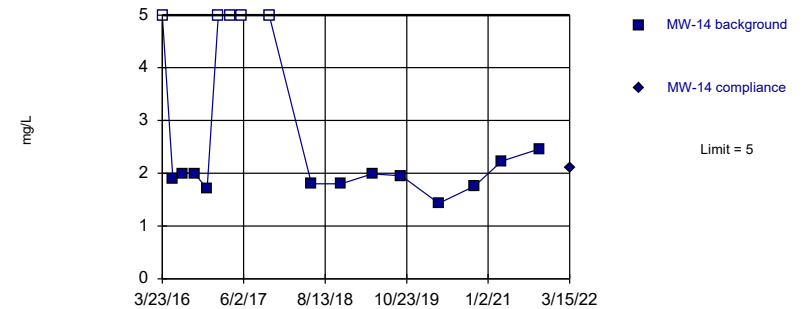


Background Data Summary (after Kaplan-Meier Adjustment): Mean=4.514, Std. Dev.=2.549, n=32, 15.63% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9053, critical = 0.904. Kappa = 1.87 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

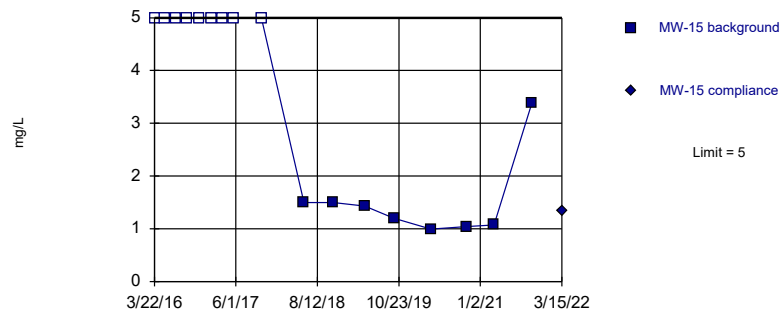


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 29.41% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Sulfate Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

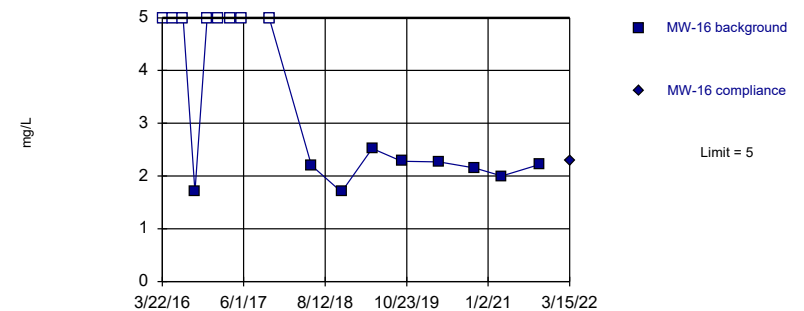


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 52.94% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Sulfate Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

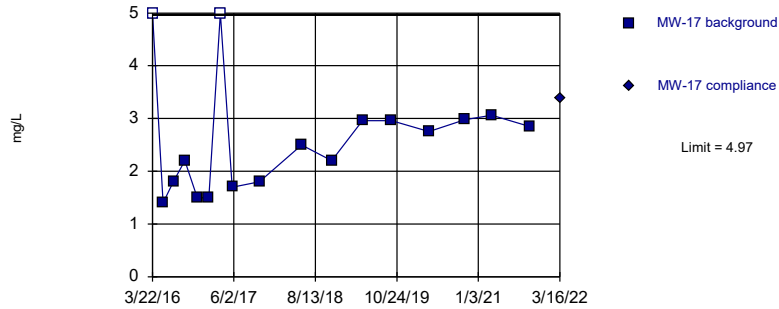


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 47.06% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Sulfate Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

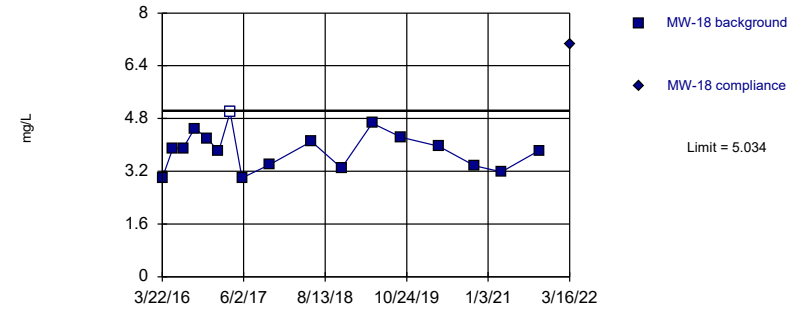


Background Data Summary (based on square root transformation): Mean=1.583, Std. Dev.=0.3149, n=17, 11.76% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8958, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit  
Intrawell Parametric

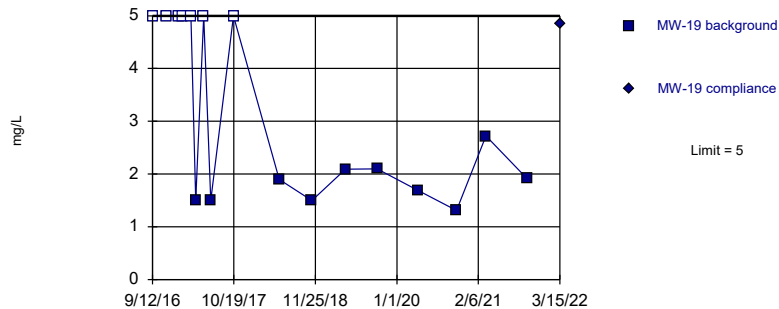


Background Data Summary: Mean=3.843, Std. Dev.=0.5798, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9625, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

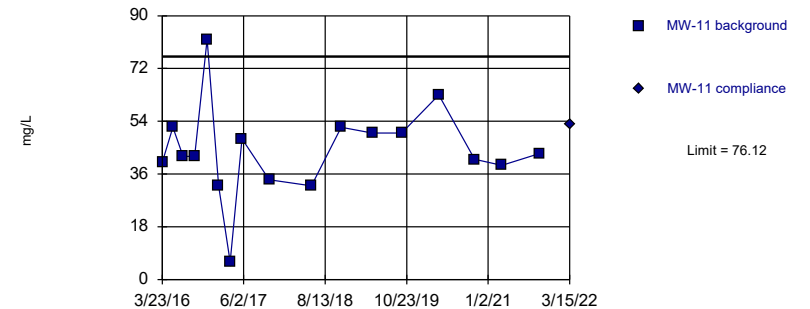


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 41.18% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Sulfate Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

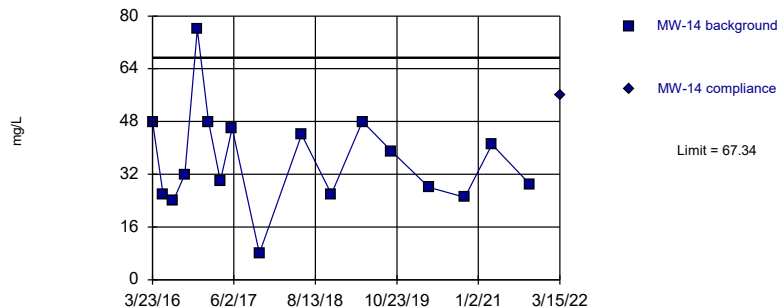


Background Data Summary: Mean=44, Std. Dev.=15.64, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9169, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

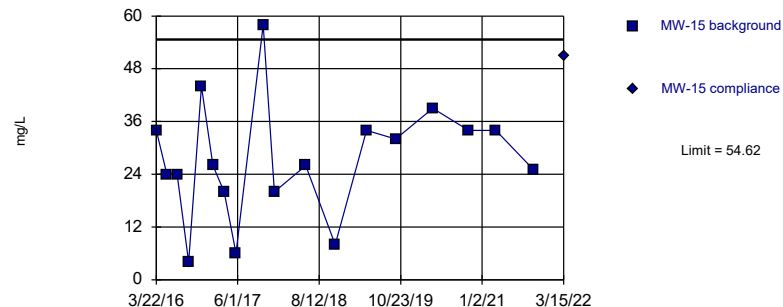


Background Data Summary: Mean=36.35, Std. Dev.=15.09, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9195, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric



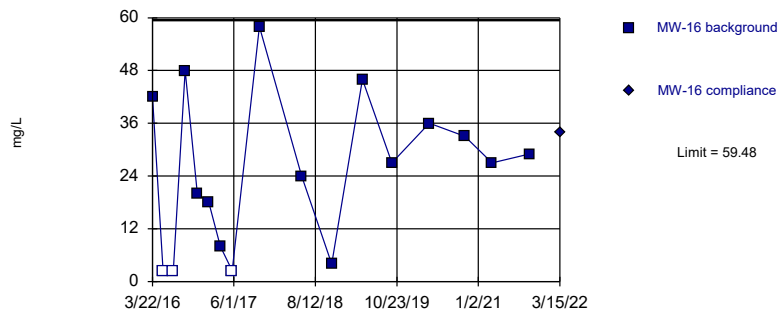
Background Data Summary: Mean=27.33, Std. Dev.=13.43, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9546, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

Within Limit

Prediction Limit  
Intrawell Parametric



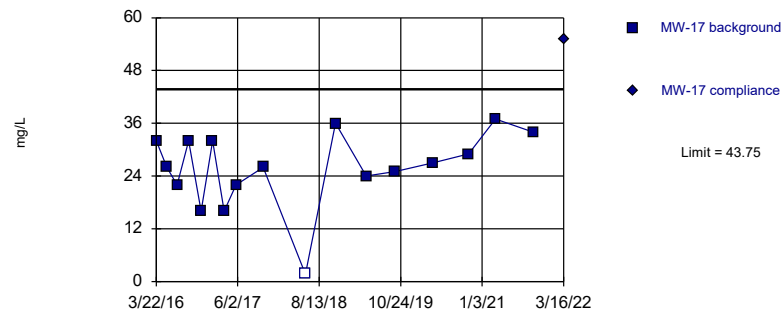
Background Data Summary (after Kaplan-Meier Adjustment): Mean=24.46, Std. Dev.=17.05, n=17, 17.65% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9408, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

Exceeds Limit

Prediction Limit  
Intrawell Parametric

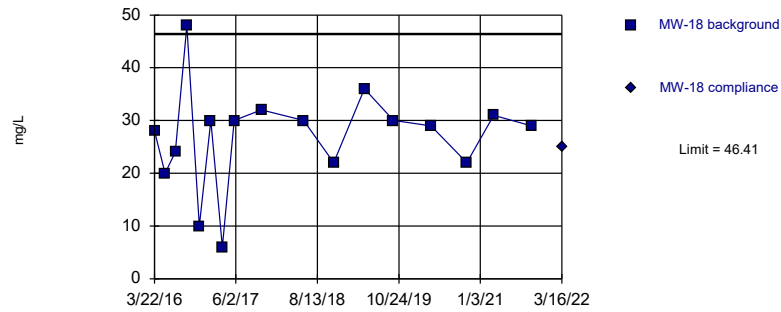


Background Data Summary: Mean=25.75, Std. Dev.=8.766, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9063, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric



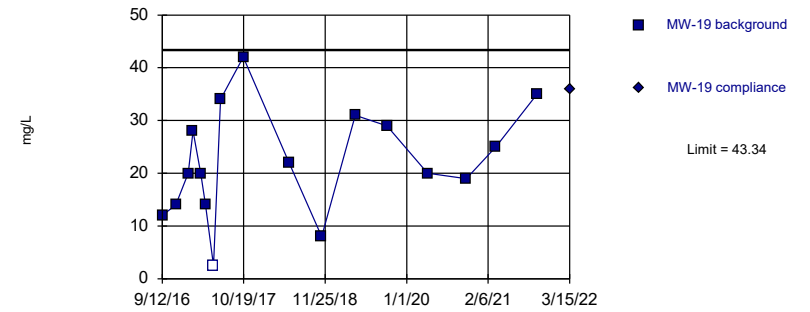
Background Data Summary: Mean=26.88, Std. Dev.=9.506, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9103, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=22.09, Std. Dev.=10.35, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9883, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 5/4/2022 4:14 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	<0.08	
9/12/2016	<0.08	
11/18/2016	<0.08	
1/19/2017	<0.08	
3/22/2017	<0.08	
5/24/2017	<0.08	
10/17/2017	<0.08	
5/31/2018	<0.08	
11/7/2018	<0.08	
4/22/2019	<0.08	
9/27/2019	0.0443 (J)	
4/13/2020	<0.08	
10/22/2020	0.103	
3/16/2021	<0.08	
10/5/2021	<0.08	
3/15/2022		<0.08



# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	<0.08	
9/12/2016	<0.08	
11/19/2016	<0.08	
1/18/2017	<0.08	
3/22/2017	<0.08	
5/24/2017	<0.08	
10/17/2017	<0.08	
6/1/2018	<0.08	
11/7/2018	<0.08	
4/23/2019	<0.08	
9/26/2019	<0.08	
4/13/2020	<0.08	
10/22/2020	0.0559 (J)	
3/16/2021	<0.08	
10/5/2021	<0.08	
3/15/2022		<0.08

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	<0.08	
9/12/2016	<0.08	
11/19/2016	<0.08	
1/19/2017	<0.08	
3/21/2017	<0.08	
5/23/2017	<0.08	
10/17/2017	<0.08	
6/1/2018	<0.08	
11/7/2018	<0.08	
4/23/2019	<0.08	
9/26/2019	<0.08	
4/13/2020	<0.08	
10/22/2020	0.0437 (J)	
3/16/2021	<0.08	
10/5/2021	<0.08	
3/15/2022		<0.08

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	<0.08 (B1)	
5/18/2016	<0.08	
7/12/2016	0.026 (J)	
9/12/2016	<0.08	
11/18/2016	<0.08	
1/18/2017	<0.08	
3/21/2017	<0.08	
5/24/2017	<0.08	
10/17/2017	0.025 (J)	
5/31/2018	0.022 (J)	
11/8/2018	<0.08	
4/22/2019	<0.08	
9/26/2019	0.042 (J)	
4/14/2020	<0.08	
10/22/2020	0.0401 (J)	
3/16/2021	<0.08	
10/5/2021	<0.08	
3/16/2022		0.0927

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	<1.9 (*)	
5/18/2016	1.8	
7/12/2016	1.9	
9/12/2016	2	
11/18/2016	2	
1/19/2017	1.8	
3/22/2017	1.8	
5/24/2017	2	
10/17/2017	2	
5/31/2018	1.8	
11/7/2018	2	
4/22/2019	1.71	
9/27/2019	1.99	
4/13/2020	2.03	
10/22/2020	2.02	
3/16/2021	1.74	
10/5/2021	1.87	
3/15/2022		1.87

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<5.9 (*)	
5/18/2016	5.5	
7/12/2016	5.3	
9/12/2016	4.9	
11/19/2016	4.8	
1/18/2017	3.8	
3/22/2017	3.3	
5/24/2017	3.6	
10/17/2017	3.7	
6/1/2018	2.8	
11/7/2018	2.9	
4/23/2019	2.76	
9/26/2019	2.4	
4/13/2020	2.74	
10/22/2020	2.17	
3/16/2021	2.4	
10/5/2021	1.89	
3/15/2022		2.59

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	1.3 (B1)	
5/18/2016	1.2	
7/12/2016	1.1	
9/12/2016	1.4	
11/19/2016	1.3	
1/19/2017	1.3	
3/21/2017	1.3	
5/23/2017	1.4	
10/17/2017	1.1	
6/1/2018	0.97	
11/7/2018	1.1	
4/23/2019	1.01	
9/26/2019	1.08	
4/13/2020	1.22	
10/22/2020	1.35	
3/16/2021	1.41	
10/5/2021	0.632	
3/15/2022		0.703

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	0.61 (B1)	
5/18/2016	0.89	
7/11/2016	0.82	
9/13/2016	0.82	
11/17/2016	0.75	
1/18/2017	0.58	
3/21/2017	0.6	
5/23/2017	0.65	
10/17/2017	1.1	
12/15/2017	0.89 (RS)	
5/31/2018	1.1	
11/8/2018	0.76	
4/22/2019	1.09	
9/26/2019	0.758	
4/14/2020	0.92	
10/21/2020	0.798	
3/16/2021	0.681	
10/5/2021	0.793	
3/15/2022		1.18

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	1.4 (B1)	
5/18/2016	1	
7/12/2016	1.1	
9/12/2016	0.98	
11/18/2016	1	
1/18/2017	1	
3/21/2017	0.91	
5/24/2017	0.96	
10/17/2017	0.96	
5/31/2018	1.1	
11/8/2018	0.96	
4/22/2019	0.946	
9/26/2019	1.11	
4/13/2020	1.03	
10/22/2020	0.969	
3/16/2021	1.12	
10/5/2021	0.883	
3/16/2022		1.04



# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	0.93 (B1)	
5/18/2016	0.85	
7/12/2016	0.69	
9/12/2016	0.86	
11/18/2016	0.41	
1/18/2017	0.81	
3/21/2017	0.76	
5/24/2017	0.8	
10/17/2017	0.69	
5/31/2018	0.75	
11/8/2018	0.78	
4/22/2019	0.531	
9/26/2019	0.631	
4/14/2020	0.627	
10/22/2020	0.553	
3/16/2021	0.57	
10/5/2021	0.43 (J)	
3/16/2022		0.406 (J)

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	0.92	
11/18/2016	0.68	
1/18/2017	0.64	
2/10/2017	0.58	
3/21/2017	0.56	
4/14/2017	0.51	
5/23/2017	0.54	
6/26/2017	0.66	
10/17/2017	0.58	
5/31/2018	0.56	
11/8/2018	0.57	
4/22/2019	0.634	
9/26/2019		1.24
4/13/2020		0.687
10/21/2020		0.806
3/16/2021		2.23
10/5/2021		3.67
3/15/2022		5.84

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
11/16/2006	8.5	
2/5/2007	8.8	
4/12/2007	9.5	
10/17/2007	12.1	
4/17/2008	13.1	
10/24/2008	13.7	
4/21/2009	11.9	
10/26/2009	11	
4/12/2010	12.5	
10/30/2010	10.8	
5/25/2011	10	
5/25/2012	10.9	
5/28/2013	11.4	
5/31/2014	9.2	
5/29/2015	11.5	
3/23/2016	13	
5/18/2016	13	
7/12/2016	13	
9/12/2016	13	
11/18/2016	14	
1/19/2017	13	
3/22/2017	15	
5/24/2017	14	
10/17/2017	15	
5/31/2018	12	
11/7/2018	14	
4/22/2019	13.3	
9/27/2019	13.4	
4/13/2020	14.2	
10/22/2020	17.4	
3/16/2021	13.3	
10/5/2021	12.5	
3/15/2022		13.6

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	8.8 (B1)	
5/18/2016	7.2	
7/12/2016	7.5	
9/12/2016	8.4	
11/19/2016	12	
1/18/2017	11	
3/22/2017	11	
5/24/2017	10	
10/17/2017	10	
6/1/2018	9.9	
11/7/2018	10	
4/23/2019	9.3	
9/26/2019	8.35	
4/13/2020	7.9	
10/22/2020	6.5	
3/16/2021	7.32	
10/5/2021	6.59	
3/15/2022		8.36

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	8.4 (B1)	
5/18/2016	6	
7/12/2016	7.1	
9/12/2016	7.3	
11/19/2016	8.9	
1/19/2017	8.3	
3/21/2017	8.8	
5/23/2017	9.3	
10/17/2017	7.1	
6/1/2018	6.4	
11/7/2018	8	
4/23/2019	6.75	
9/26/2019	7.66	
4/13/2020	7.74	
10/22/2020	8.69	
3/16/2021	8.94	
10/5/2021	9.3	
3/15/2022		5.55

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	6.9 (B1)	
5/18/2016	5.4	
7/11/2016	8.1	
9/13/2016	6.2	
11/17/2016	7.3	
1/18/2017	6.3	
3/21/2017	7.3	
5/23/2017	7.4	
10/17/2017	9.9	
12/19/2017	7.8 (RS)	
5/31/2018	8.7	
11/8/2018	7.6	
4/22/2019	10.2	
6/25/2019	9.4	
9/26/2019	6.54	
4/14/2020	7.03	
10/21/2020	7.36	
3/16/2021	7.14	
10/5/2021	6.55	
3/15/2022		10.8

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	7.3 (B1)	
5/18/2016	6	
7/12/2016	5.7	
9/12/2016	5.7	
11/18/2016	8.2	
1/18/2017	7.4	
3/21/2017	7.9	
5/24/2017	7.4	
10/17/2017	6.5	
5/31/2018	6.5	
11/8/2018	6.9	
4/22/2019	6.64	
9/26/2019	6.7	
4/13/2020	6.46	
10/22/2020	6.37	
3/16/2021	6.97	
10/5/2021	5.91	
3/16/2022		7

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	11 (B1)	
5/18/2016	8.4	
7/12/2016	7.9	
9/12/2016	7.6	
11/18/2016	8.5	
1/18/2017	9.2	
3/21/2017	10	
5/24/2017	10	
10/17/2017	8.6	
5/31/2018	6.9	
11/8/2018	8.7	
4/22/2019	6.17	
9/26/2019	6.09	
4/14/2020	6.15	
10/22/2020	6.89	
3/16/2021	8.18	
10/5/2021	5.72	
3/16/2022		6.05



# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	5	
11/18/2016	<6.3 (*)	
1/18/2017	5.3	
2/10/2017	5.4	
3/21/2017	5.3	
4/14/2017	4.9 (B)	
5/23/2017	5.5	
6/26/2017	5.4	
10/17/2017	5.4	
5/31/2018	5	
11/8/2018	5.2	
4/22/2019	4.91	
9/26/2019	5.03	
4/13/2020	4.9	
10/21/2020	5.25	
3/16/2021	5.72	
10/5/2021	5.1	
3/15/2022		6.91

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	<0.1	
5/18/2016	<0.1	
7/12/2016	0.04 (J)	
9/12/2016	0.04 (J)	
11/18/2016	<0.1	
1/19/2017	<0.1	
3/22/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	0.04 (J)	
5/31/2018	0.04 (J)	
11/7/2018	0.05 (J)	
4/22/2019	0.0353 (J)	
9/27/2019	0.0438 (J)	
4/13/2020	0.0672 (J)	
10/22/2020	<0.1	
3/16/2021	0.0269 (J)	
10/5/2021	0.0561 (J)	
3/15/2022		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	<0.1	
9/12/2016	<0.1	
11/19/2016	<0.1	
1/18/2017	<0.1	
3/22/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	<0.1	
6/1/2018	<0.1	
11/7/2018	<0.1	
4/23/2019	0.0335 (J)	
9/26/2019	0.0272 (J)	
4/13/2020	0.0411 (J)	
10/22/2020	<0.1	
3/16/2021	<0.1	
10/5/2021	0.03 (J)	
3/15/2022		0.0364 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	<0.1	
9/12/2016	<0.1	
11/19/2016	<0.1	
1/19/2017	<0.1	
3/21/2017	<0.1	
5/23/2017	<0.1	
10/17/2017	<0.1	
6/1/2018	<0.1	
11/7/2018	<0.1	
4/23/2019	0.0275 (J)	
9/26/2019	<0.1	
4/13/2020	0.0484 (J)	
10/22/2020	<0.1	
3/16/2021	<0.1	
10/5/2021	<0.1	
3/15/2022		0.0302 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/11/2016	<0.1	
9/13/2016	<0.1	
11/17/2016	<0.1	
1/18/2017	<0.1	
3/21/2017	<0.1	
5/23/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	<0.1	
11/8/2018	<0.1	
4/22/2019	0.029 (J)	
9/26/2019	0.0302 (J)	
4/14/2020	0.0496 (J)	
10/21/2020	<0.1	
3/16/2021	<0.1	
10/5/2021	0.0264 (J)	
3/15/2022		0.0438 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	<0.1	
9/12/2016	<0.1	
11/18/2016	<0.1	
1/18/2017	<0.1	
3/21/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	<0.1	
11/8/2018	<0.1	
4/22/2019	<0.1	
9/26/2019	0.0263 (J)	
4/13/2020	0.0511 (J)	
10/22/2020	<0.1	
3/16/2021	<0.1	
10/5/2021	<0.1	
3/16/2022		0.0399 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	<0.1 (B1)	
5/18/2016	<0.1	
7/12/2016	0.04 (J)	
9/12/2016	<0.1	
11/18/2016	<0.1	
1/18/2017	<0.1	
3/21/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	0.04 (J)	
11/8/2018	<0.1	
4/22/2019	0.0311 (J)	
9/26/2019	0.0366 (J)	
4/14/2020	0.0764 (J)	
10/22/2020	<0.1	
3/16/2021	0.0344 (J)	
10/5/2021	<0.1	
3/16/2022		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	<0.1	
11/18/2016	<0.1	
1/18/2017	<0.1	
2/10/2017	<0.1	
3/21/2017	<0.1	
4/14/2017	<0.1	
5/23/2017	<0.1	
6/26/2017	<0.1	
10/17/2017	<0.1	
5/31/2018	<0.1	
11/8/2018	<0.1	
4/22/2019	<0.1	
9/26/2019	0.0287 (J)	
4/13/2020	0.0382 (J)	
10/21/2020	<0.1	
3/16/2021	0.0376 (J)	
10/5/2021	<0.1	
3/15/2022		0.0423 (J)



# Prediction Limit

Constituent: pH (SU) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	4.8	
5/18/2016	4.74	
7/12/2016	4.9	
9/12/2016	4.72	
11/18/2016	4.65	
1/19/2017	4.77	
3/22/2017	4.46	
5/24/2017	4.74	
10/17/2017	4.72	
11/30/2017	4.61	
5/31/2018	4.93	
11/7/2018	4.58	
4/22/2019	4.67	
9/27/2019	4.61	
4/13/2020	4.7	
10/22/2020	4.66	
3/16/2021	4.72	
10/5/2021	4.67	
3/15/2022		4.73

# Prediction Limit

Constituent: pH (SU) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	5.4	
5/18/2016	5.38	
7/12/2016	5.65	
9/12/2016	5.14	
11/19/2016	5.05	
1/18/2017	5.11	
3/22/2017	4.86	
5/24/2017	5.02	
10/17/2017	5.01	
6/1/2018	5	
11/7/2018	4.81	
4/23/2019	4.93	
9/26/2019	4.99	
4/13/2020	4.96	
10/22/2020	5.09	
3/16/2021	5.06	
10/5/2021	4.98	
3/15/2022		5.07

# Prediction Limit

Constituent: pH (SU) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	4.77	
5/18/2016	4.62	
7/12/2016	5.03	
9/12/2016	4.6	
11/19/2016	4.46	
1/19/2017	4.65	
3/21/2017	4.47	
5/23/2017	4.69	
10/17/2017	4.62	
6/1/2018	4.87	
11/7/2018	4.61	
4/23/2019	4.77	
9/26/2019	4.84	
4/13/2020	4.71	
10/22/2020	4.78	
3/16/2021	4.65	
10/5/2021	4.85	
3/15/2022		4.87

# Prediction Limit

Constituent: pH (SU) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	4.68	
5/18/2016	4.67	
7/11/2016	4.75	
9/13/2016	4.56	
11/17/2016	4.6	
1/18/2017	4.68	
3/21/2017	4.39	
5/23/2017	4.61	
10/17/2017	4.51	
5/31/2018	4.75	
11/8/2018	4.71	
4/22/2019	4.49	
9/26/2019	4.62	
4/14/2020	4.61	
10/21/2020	4.5	
3/16/2021	4.62	
10/5/2021	4.6	
3/15/2022		4.58

# Prediction Limit

Constituent: pH (SU) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	4.89	
5/18/2016	5.09	
7/12/2016	5.27	
9/12/2016	4.94	
11/18/2016	4.82	
1/18/2017	5.02	
3/21/2017	4.82	
5/24/2017	4.87	
10/17/2017	5	
5/31/2018	5.42	
11/8/2018	5.02	
4/22/2019	4.94	
9/26/2019	5.01	
4/13/2020	4.99	
10/22/2020	5.01	
3/16/2021	5	
10/5/2021	4.88	
3/16/2022		4.91

# Prediction Limit

Constituent: pH (SU) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	4.63	
5/18/2016	4.58	
7/12/2016	4.7	
9/12/2016	4.6	
11/18/2016	4.52	
1/18/2017	4.63	
3/21/2017	4.45	
5/24/2017	4.55	
10/17/2017	4.61	
5/31/2018	4.84	
11/8/2018	4.63	
4/22/2019	4.64	
9/26/2019	4.71	
4/14/2020	4.75	
10/22/2020	4.7	
10/5/2021	4.68	
3/16/2022		4.79

# Prediction Limit

Constituent: pH (SU) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	5.55	
11/18/2016	5.14	
1/18/2017	5.27	
2/10/2017	5.14	
3/21/2017	4.96	
4/14/2017	5.07	
5/23/2017	5.01	
6/26/2017	4.93	
10/17/2017	4.93	
11/30/2017	4.81	
5/31/2018	5.11	
11/8/2018	5.09	
4/22/2019	4.97	
9/26/2019	5.19	
4/13/2020	5.06	
10/21/2020	5.05	
3/16/2021	5.35	
10/5/2021	5.53	
3/15/2022		5.82

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
11/16/2006	5	
2/5/2007	<5	
4/12/2007	<5	
10/17/2007	5.7	
4/17/2008	7	
10/24/2008	6.6	
4/21/2009	5.2	
10/26/2009	8.3	
4/12/2010	6.8	
10/30/2010	10.8	
5/25/2011	11.5	
5/25/2012	8.2	
5/28/2013	6.9	
5/31/2014	3.5	
5/29/2015	3.3	
3/23/2016	1.8 (J)	
5/18/2016	4.1	
7/12/2016	3.8 (J)	
9/12/2016	3.9 (J)	
11/18/2016	5.4	
1/19/2017	<5	
3/22/2017	<5	
5/24/2017	2 (J)	
10/17/2017	<5	
5/31/2018	3 (J)	
11/7/2018	3.1 (J)	
4/22/2019	2.22	
9/27/2019	2.36	
4/13/2020	2.47	
10/22/2020	2.01	
3/16/2021	2.15	
10/5/2021	2.57	
3/15/2022		2.88



# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<5	
5/18/2016	1.9	
7/12/2016	2 (J)	
9/12/2016	2 (J)	
11/19/2016	1.7 (J)	
1/18/2017	<5	
3/22/2017	<5	
5/24/2017	<5	
10/17/2017	<5	
6/1/2018	1.8 (J)	
11/7/2018	1.8 (J)	
4/23/2019	1.99	
9/26/2019	1.95	
4/13/2020	1.43	
10/22/2020	1.76	
3/16/2021	2.23	
10/5/2021	2.46	
3/15/2022		2.1

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	<5	
5/18/2016	<5	
7/12/2016	<5	
9/12/2016	<5	
11/19/2016	<5	
1/19/2017	<5	
3/21/2017	<5	
5/23/2017	<5	
10/17/2017	<5	
6/1/2018	1.5 (J)	
11/7/2018	1.5 (J)	
4/23/2019	1.43	
9/26/2019	1.2	
4/13/2020	0.992 (J)	
10/22/2020	1.04	
3/16/2021	1.07	
10/5/2021	3.38	
3/15/2022		1.33

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	<5	
5/18/2016	<5	
7/11/2016	<5	
9/13/2016	1.7 (J)	
11/17/2016	<5	
1/18/2017	<5	
3/21/2017	<5	
5/23/2017	<5	
10/17/2017	<5	
5/31/2018	2.2 (J)	
11/8/2018	1.7 (J)	
4/22/2019	2.52	
9/26/2019	2.28	
4/14/2020	2.27	
10/21/2020	2.15	
3/16/2021	2	
10/5/2021	2.22	
3/15/2022		2.29

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	<5	
5/18/2016	1.4	
7/12/2016	1.8 (J)	
9/12/2016	2.2 (J)	
11/18/2016	1.5 (J)	
1/18/2017	1.5 (J)	
3/21/2017	<5	
5/24/2017	1.7 (J)	
10/17/2017	1.8 (J)	
5/31/2018	2.5 (J)	
11/8/2018	2.2 (J)	
4/22/2019	2.96	
9/26/2019	2.96	
4/13/2020	2.75	
10/22/2020	2.98	
3/16/2021	3.06	
10/5/2021	2.85	
3/16/2022		3.38

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	3 (J)	
5/18/2016	3.9 (J)	
7/12/2016	3.9 (J)	
9/12/2016	4.5 (J)	
11/18/2016	4.2 (J)	
1/18/2017	3.8 (J)	
3/21/2017	<5 (*)	
5/24/2017	3 (J)	
10/17/2017	3.4 (J)	
5/31/2018	4.1 (J)	
11/8/2018	3.3 (J)	
4/22/2019	4.66	
9/26/2019	4.23	
4/14/2020	3.96	
10/22/2020	3.37	
3/16/2021	3.18	
10/5/2021	3.83	
3/16/2022		7.04

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	<5	
11/18/2016	<5	
1/18/2017	<5	
2/10/2017	<5	
3/21/2017	<5	
4/14/2017	1.5 (J)	
5/23/2017	<5	
6/26/2017	1.5 (J)	
10/17/2017	<5	
5/31/2018	1.9 (J)	
11/8/2018	1.5 (J)	
4/22/2019	2.09	
9/26/2019	2.1	
4/13/2020	1.69	
10/21/2020	1.31	
3/16/2021	2.72	
10/5/2021	1.91	
3/15/2022		4.86

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	40	
5/18/2016	52	
7/12/2016	42	
9/12/2016	42	
11/18/2016	82	
1/19/2017	32	
3/22/2017	6	
5/24/2017	48	
10/17/2017	34	
5/31/2018	32	
11/7/2018	52	
4/22/2019	50	
9/27/2019	50	
4/13/2020	63	
10/22/2020	41	
3/16/2021	39	
10/5/2021	43	
3/15/2022		53

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	48 (B1)	
5/18/2016	26	
7/12/2016	24	
9/12/2016	32	
11/19/2016	76	
1/18/2017	48	
3/22/2017	30	
5/24/2017	46	
10/17/2017	8	
6/1/2018	44	
11/7/2018	26	
4/23/2019	48	
9/26/2019	39	
4/13/2020	28	
10/22/2020	25	
3/16/2021	41	
10/5/2021	29	
3/15/2022		56



# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	34 (B1)	
5/18/2016	24	
7/12/2016	24	
9/12/2016	4 (J)	
11/19/2016	44	
1/19/2017	26	
3/21/2017	20	
5/23/2017	6	
10/17/2017	58	
12/15/2017	20 (RS)	
6/1/2018	26	
11/7/2018	8	
4/23/2019	34	
9/26/2019	32	
4/13/2020	39	
10/22/2020	34	
3/16/2021	34	
10/5/2021	25	
3/15/2022		51

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	42 (B1)	
5/18/2016	<5	
7/11/2016	<5	
9/13/2016	48	
11/17/2016	20	
1/18/2017	18	
3/21/2017	8	
5/23/2017	<5	
10/17/2017	58	
5/31/2018	24	
11/8/2018	4 (J)	
4/22/2019	46	
9/26/2019	27	
4/14/2020	36	
10/21/2020	33	
3/16/2021	27	
10/5/2021	29	
3/15/2022		34

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits

Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	32 (B1)	
5/18/2016	26	
7/12/2016	22	
9/12/2016	32	
11/18/2016	16	
1/18/2017	32	
3/21/2017	16	
5/24/2017	22	
10/17/2017	26	
5/31/2018	<3.4	
11/8/2018	36	
4/22/2019	24	
9/26/2019	25	
4/13/2020	27	
10/22/2020	29	
3/16/2021	37	
10/5/2021	34	
3/16/2022		55

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits

Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-18	MW-18
3/22/2016	28 (B1)	
5/18/2016	20	
7/12/2016	24	
9/12/2016	48	
11/18/2016	10	
1/18/2017	30	
3/21/2017	6	
5/24/2017	30	
10/17/2017	32	
5/31/2018	30	
11/8/2018	22	
4/22/2019	36	
9/26/2019	30	
4/14/2020	29	
10/22/2020	22	
3/16/2021	31	
10/5/2021	29	
3/16/2022		25

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2022 4:28 PM View: Prediction Limits  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	12	
11/18/2016	14	
1/18/2017	20	
2/10/2017	28	
3/21/2017	20	
4/14/2017	14	
5/23/2017	<5	
6/26/2017	34	
10/17/2017	42	
5/31/2018	22	
11/8/2018	8	
4/22/2019	31	
9/26/2019	29	
4/13/2020	20	
10/21/2020	19	
3/16/2021	25	
10/5/2021	35	
3/15/2022		36

FIGURE F.

# Appendix III Interwell Prediction Limits - Two-Step - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:38 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-19	4.625	n/a	3/15/2022	5.84	Yes	54		1.341	0.4515	3.704	None	sqrt(x)	0.00188	Param Inter 1 of 2
pH (SU)	MW-19	5.65	4.45	3/15/2022	5.82	Yes	54	n/a		n/a	0	n/a	n/a	0.001314	NP Inter (normality) 1 of 2

# Appendix III Interwell Prediction Limits - Two-Step - All Results

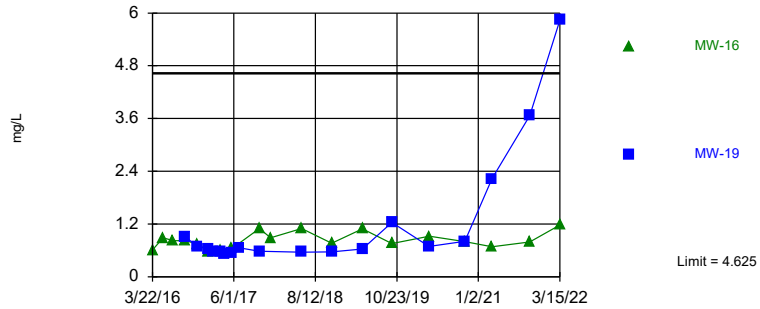
Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:38 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	NB	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-16	4.625	n/a	3/15/2022	1.18	No	54	1.341	0.4515	3.704	None	sqrt(x)	0.00188	Param Inter 1 of 2	
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>4.625</b>	<b>n/a</b>	<b>3/15/2022</b>	<b>5.84</b>	<b>Yes</b>	<b>54</b>	<b>1.341</b>	<b>0.4515</b>	<b>3.704</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.00188</b>	<b>Param Inter 1 of 2</b>	
Chloride (mg/L)	MW-16	15.15	n/a	3/15/2022	10.8	No	69	10.34	2.711	0	None	No	0.00188	Param Inter 1 of 2	
Chloride (mg/L)	MW-19	15.15	n/a	3/15/2022	6.91	No	69	10.34	2.711	0	None	No	0.00188	Param Inter 1 of 2	
<b>pH (SU)</b>	<b>MW-19</b>	<b>5.65</b>	<b>4.45</b>	<b>3/15/2022</b>	<b>5.82</b>	<b>Yes</b>	<b>54</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.001314</b>	<b>NP Inter (normality) 1 of 2</b>	
Total Dissolved Solids (mg/L)	MW-17	63.58	n/a	3/16/2022	55	No	54	36.24	15.24	0	None	No	0.00188	Param Inter 1 of 2	



Exceeds Limit: MW-19

Prediction Limit  
Interwell Parametric

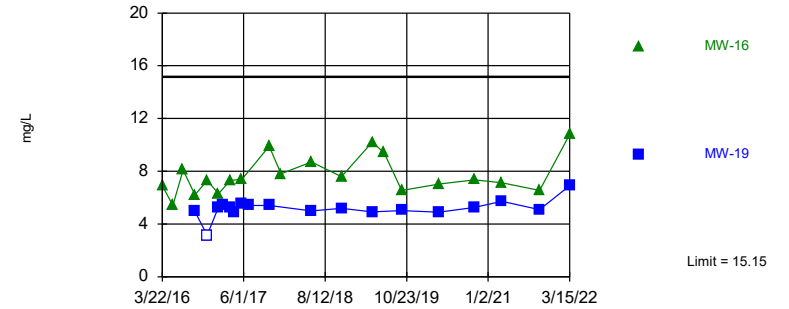


Background Data Summary (based on square root transformation): Mean=1.341, Std. Dev.=0.4515, n=54, 3.704% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9542, critical = 0.939. Kappa = 1.794 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 2 points to limit. Assumes 2 future values.

Constituent: Calcium Analysis Run 5/5/2022 7:21 PM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Interwell Parametric

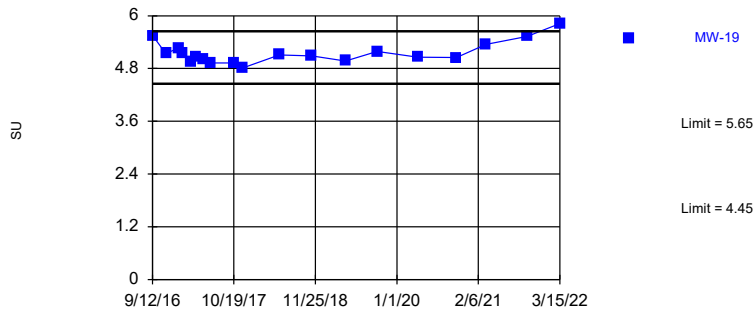


Background Data Summary: Mean=10.34, Std. Dev.=2.711, n=69. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9754, critical = 0.951. Kappa = 1.773 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 2 points to limit. Assumes 2 future values.

Constituent: Chloride Analysis Run 5/5/2022 7:21 PM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limits: MW-19

Prediction Limit  
Interwell Non-parametric

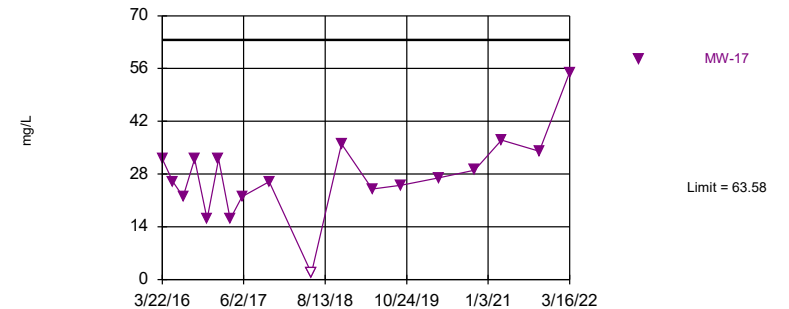


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 54 background values. Annual per-constituent alpha = 0.01048. Individual comparison alpha = 0.001314 (1 of 2). Assumes 3 future values.

Constituent: pH Analysis Run 5/5/2022 7:21 PM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Interwell Parametric



Background Data Summary: Mean=36.24, Std. Dev.=15.24, n=54. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9505, critical = 0.939. Kappa = 1.794 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Assumes 3 future values.

Constituent: Total Dissolved Solids Analysis Run 5/5/2022 7:21 PM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/5/2022 7:38 PM View: Interwell

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-18 (bg)	MW-16	MW-14 (bg)	MW-11 (bg)	MW-19
3/22/2016	0.93 (B1)	0.61 (B1)			
3/23/2016			<5.9 (*)	<5.9 (*)	
5/18/2016	0.85	0.89	5.5	1.8	
7/11/2016		0.82			
7/12/2016	0.69		5.3	1.9	
9/12/2016	0.86		4.9	2	0.92
9/13/2016		0.82			
11/17/2016		0.75			
11/18/2016	0.41			2	0.68
11/19/2016			4.8		
1/18/2017	0.81	0.58	3.8		0.64
1/19/2017				1.8	
2/10/2017					0.58
3/21/2017	0.76	0.6			0.56
3/22/2017			3.3	1.8	
4/14/2017					0.51
5/23/2017		0.65			0.54
5/24/2017	0.8		3.6	2	
6/26/2017					0.66
10/17/2017	0.69	1.1	3.7	2	0.58
12/15/2017		0.89 (RS)			
5/31/2018	0.75	1.1		1.8	0.56
6/1/2018			2.8		
11/7/2018			2.9	2	
11/8/2018	0.78	0.76			0.57
4/22/2019	0.531	1.09		1.71	0.634
4/23/2019			2.76		
9/26/2019	0.631	0.758	2.4		1.24
9/27/2019				1.99	
4/13/2020			2.74	2.03	0.687
4/14/2020	0.627	0.92			
10/21/2020		0.798			0.806
10/22/2020	0.553		2.17	2.02	
3/16/2021	0.57	0.681	2.4	1.74	2.23
10/5/2021	0.43 (J)	0.793	1.89	1.87	3.67
3/15/2022		1.18	2.59	1.87	5.84
3/16/2022	0.406 (J)				

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2022 7:38 PM View: Interwell

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-18 (bg)	MW-16	MW-14 (bg)	MW-19
11/16/2006	8.5				
2/5/2007	8.8				
4/12/2007	9.5				
10/17/2007	12.1				
4/17/2008	13.1				
10/24/2008	13.7				
4/21/2009	11.9				
10/26/2009	11				
4/12/2010	12.5				
10/30/2010	10.8				
5/25/2011	10				
5/25/2012	10.9				
5/28/2013	11.4				
5/31/2014	9.2				
5/29/2015	11.5				
3/22/2016		11 (B1)	6.9 (B1)		
3/23/2016	13			8.8 (B1)	
5/18/2016	13	8.4	5.4	7.2	
7/11/2016			8.1		
7/12/2016	13	7.9		7.5	
9/12/2016	13	7.6		8.4	5
9/13/2016			6.2		
11/17/2016			7.3		
11/18/2016	14	8.5			<6.3 (*)
11/19/2016				12	
1/18/2017		9.2	6.3	11	5.3
1/19/2017	13				
2/10/2017					5.4
3/21/2017		10	7.3		5.3
3/22/2017	15			11	
4/14/2017					4.9 (B)
5/23/2017			7.4		5.5
5/24/2017	14	10		10	
6/26/2017					5.4
10/17/2017	15	8.6	9.9	10	5.4
12/19/2017			7.8 (RS)		
5/31/2018	12	6.9	8.7		5
6/1/2018				9.9	
11/7/2018	14			10	
11/8/2018		8.7	7.6		5.2
4/22/2019	13.3	6.17	10.2		4.91
4/23/2019				9.3	
6/25/2019			9.4		
9/26/2019		6.09	6.54	8.35	5.03
9/27/2019	13.4				
4/13/2020	14.2			7.9	4.9
4/14/2020		6.15	7.03		
10/21/2020			7.36		5.25
10/22/2020	17.4	6.89		6.5	
3/16/2021	13.3	8.18	7.14	7.32	5.72
10/5/2021	12.5	5.72	6.55	6.59	5.1
3/15/2022	13.6		10.8	8.36	6.91

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/5/2022 7:38 PM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-11 (bg)	MW-18 (bg)	MW-16	MW-14 (bg)	MW-19
3/16/2022		6.05			

# Prediction Limit

Constituent: pH (SU) Analysis Run 5/5/2022 7:38 PM View: Interwell

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-18 (bg)	MW-11 (bg)	MW-14 (bg)	MW-19
3/22/2016	4.63			
3/23/2016		4.8	5.4	
5/18/2016	4.58	4.74	5.38	
7/12/2016	4.7	4.9	5.65	
9/12/2016	4.6	4.72	5.14	5.55
11/18/2016	4.52	4.65		5.14
11/19/2016			5.05	
1/18/2017	4.63		5.11	5.27
1/19/2017		4.77		
2/10/2017				5.14
3/21/2017	4.45			4.96
3/22/2017		4.46	4.86	
4/14/2017				5.07
5/23/2017				5.01
5/24/2017	4.55	4.74	5.02	
6/26/2017				4.93
10/17/2017	4.61	4.72	5.01	4.93
11/30/2017		4.61		4.81
5/31/2018	4.84	4.93		5.11
6/1/2018			5	
11/7/2018		4.58	4.81	
11/8/2018	4.63			5.09
4/22/2019	4.64	4.67		4.97
4/23/2019			4.93	
9/26/2019	4.71		4.99	5.19
9/27/2019		4.61		
4/13/2020		4.7	4.96	5.06
4/14/2020	4.75			
10/21/2020				5.05
10/22/2020	4.7	4.66	5.09	
3/16/2021		4.72	5.06	5.35
10/5/2021	4.68	4.67	4.98	5.53
3/15/2022		4.73	5.07	5.82
3/16/2022	4.79			

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/5/2022 7:38 PM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-18 (bg)	MW-17	MW-14 (bg)	MW-11 (bg)
3/22/2016	28 (B1)	32 (B1)		
3/23/2016			48 (B1)	40
5/18/2016	20	26	26	52
7/12/2016	24	22	24	42
9/12/2016	48	32	32	42
11/18/2016	10	16		82
11/19/2016			76	
1/18/2017	30	32	48	
1/19/2017				32
3/21/2017	6	16		
3/22/2017			30	6
5/24/2017	30	22	46	48
10/17/2017	32	26	8	34
5/31/2018	30	<3.4		32
6/1/2018			44	
11/7/2018			26	52
11/8/2018	22	36		
4/22/2019	36	24		50
4/23/2019			48	
9/26/2019	30	25	39	
9/27/2019				50
4/13/2020		27	28	63
4/14/2020	29			
10/22/2020	22	29	25	41
3/16/2021	31	37	41	39
10/5/2021	29	34	29	43
3/15/2022			56	53
3/16/2022	25	55		

FIGURE G.

# Appendix III Trend Tests - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:45 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-14 (bg)	-0.4386	-116	-68	Yes	18	5.556	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-18 (bg)	-0.06549	-94	-68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-11 (bg)	0.2758	264	167	Yes	33	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-18 (bg)	-0.5483	-74	-68	Yes	18	0	n/a	n/a	0.01	NP

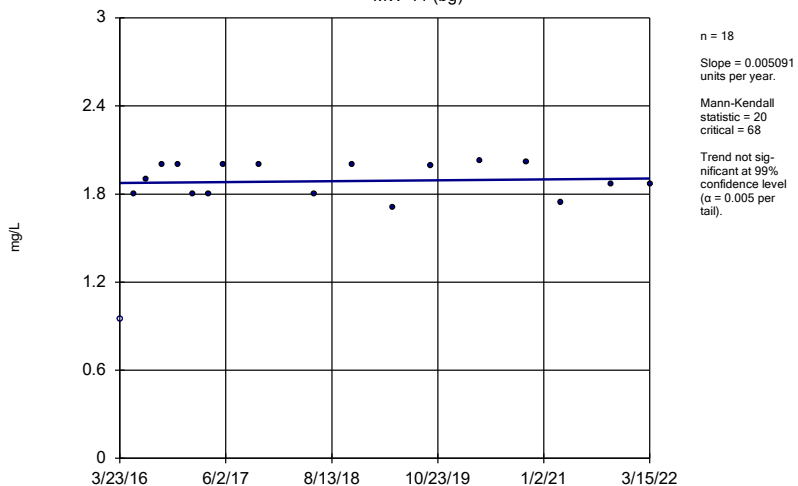


# Appendix III Trend Tests - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 5/5/2022, 7:45 PM

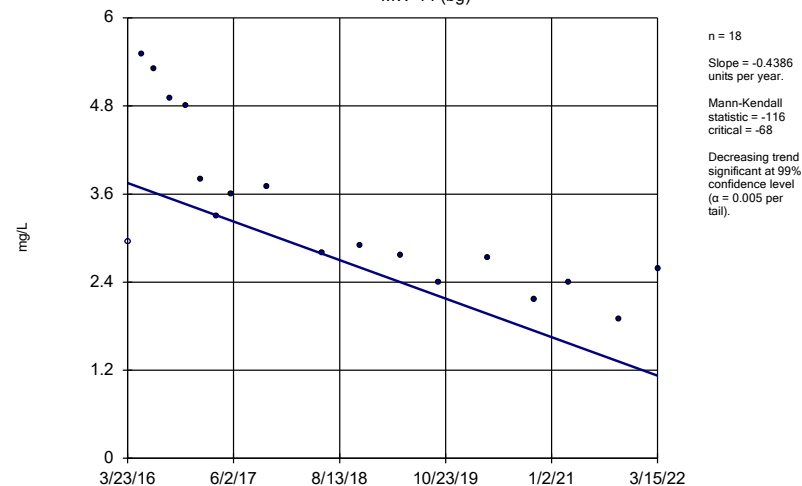
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-11 (bg)	0.005091	20	68	No	18	5.556	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-0.4386</b>	<b>-116</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>5.556</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-16	0.02429	32	74	No	19	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.06549</b>	<b>-94</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-19	0.07499	59	68	No	18	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-11 (bg)</b>	<b>0.2758</b>	<b>264</b>	<b>167</b>	<b>Yes</b>	<b>33</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-14 (bg)	-0.462	-49	-68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-16	0.2284	45	81	No	20	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.5483</b>	<b>-74</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-19	0.05302	23	68	No	18	5.556	n/a	n/a	0.01	NP
pH (SU)	MW-11 (bg)	-0.01384	-35	-74	No	19	0	n/a	n/a	0.01	NP
pH (SU)	MW-14 (bg)	-0.04636	-59	-68	No	18	0	n/a	n/a	0.01	NP
pH (SU)	MW-18 (bg)	0.0269	58	63	No	17	0	n/a	n/a	0.01	NP
pH (SU)	MW-19	0.01905	13	74	No	19	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-11 (bg)	1.035	19	68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-14 (bg)	0	-3	-68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-17	1.855	47	68	No	18	5.556	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	MW-18 (bg)	0.1804	11	68	No	18	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator MW-11 (bg)



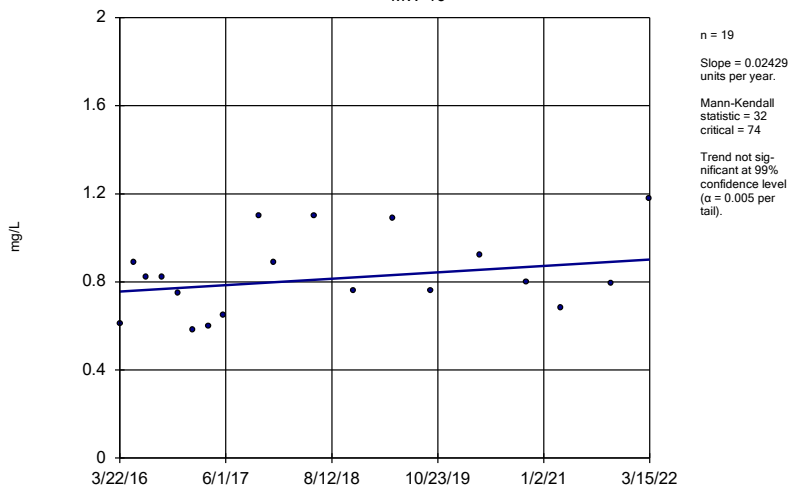
Constituent: Calcium Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-14 (bg)



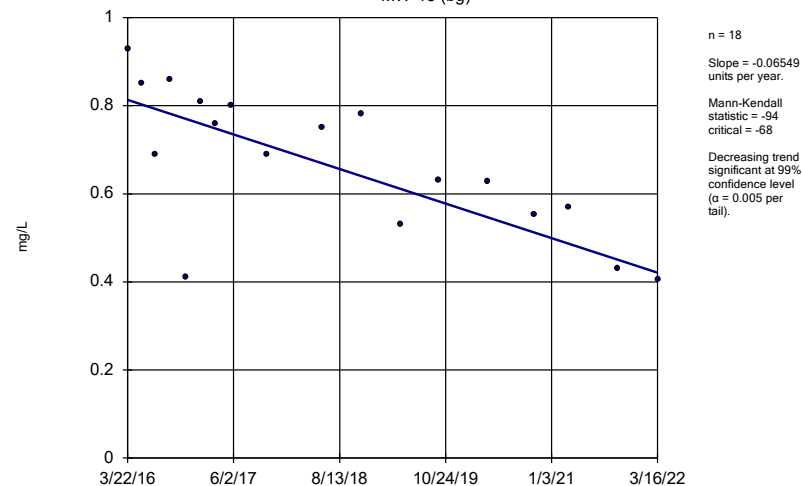
Constituent: Calcium Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-16



Constituent: Calcium Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

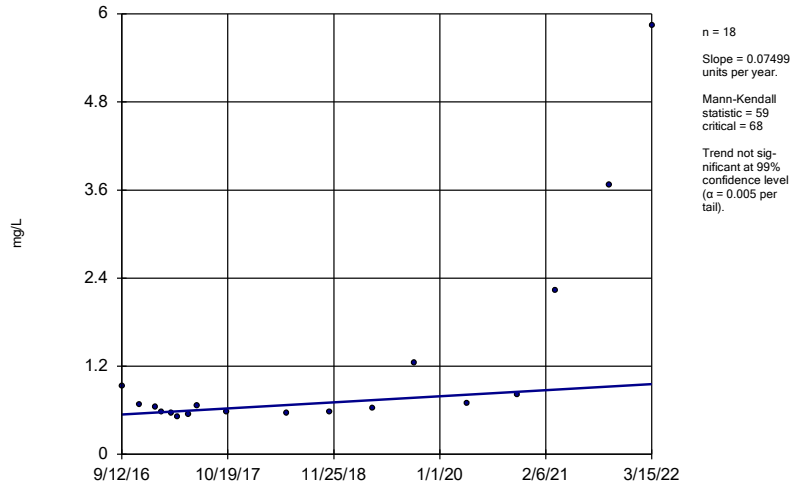
### Sen's Slope Estimator MW-18 (bg)



Constituent: Calcium Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

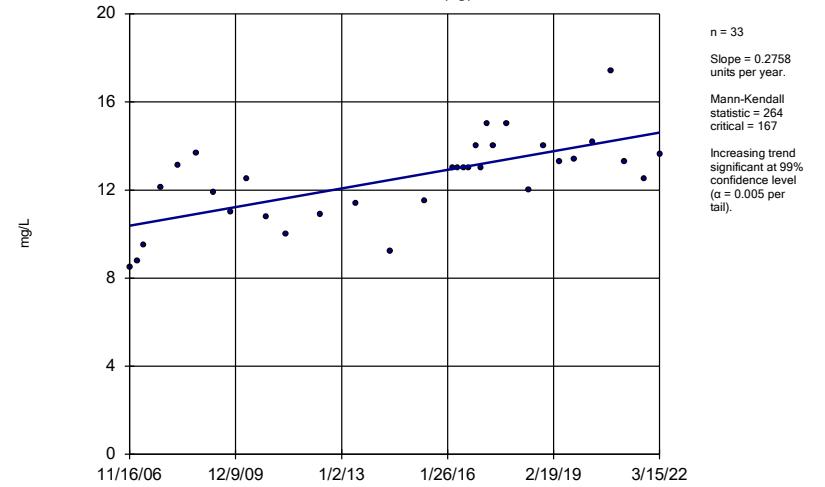
MW-19



Constituent: Calcium Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

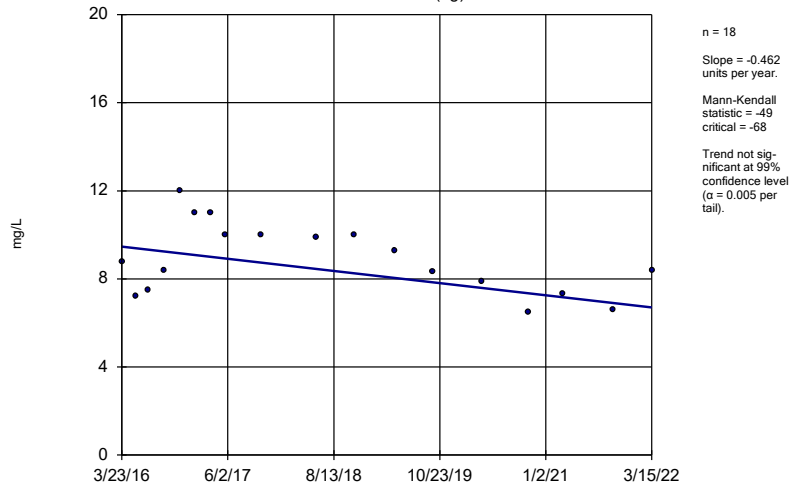
MW-11 (bg)



Constituent: Chloride Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

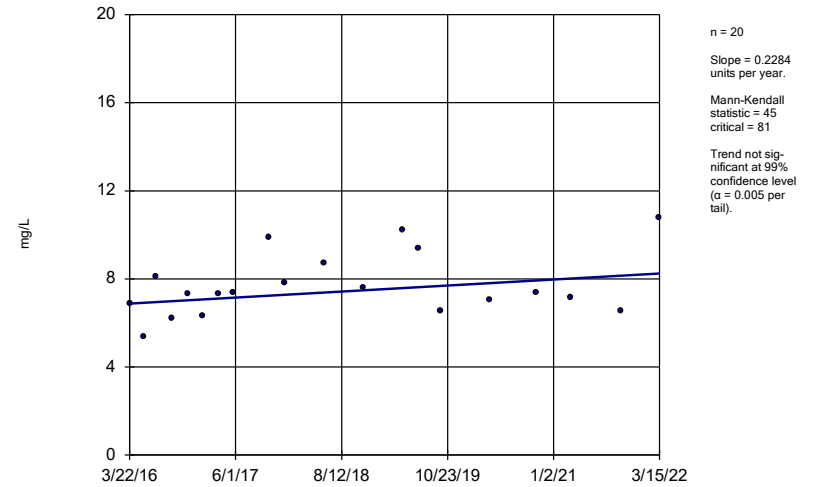
MW-14 (bg)



Constituent: Chloride Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

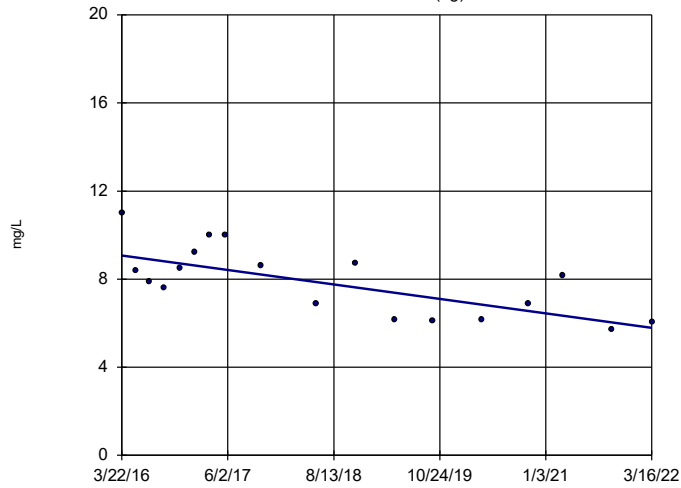
### Sen's Slope Estimator

MW-16



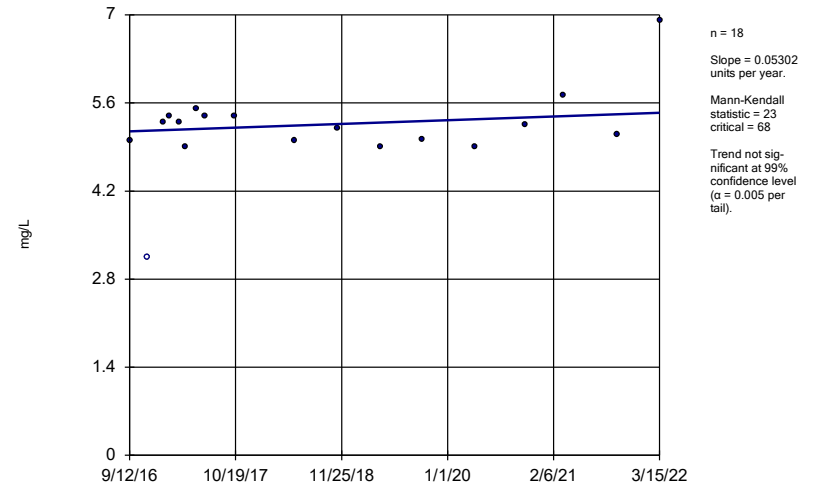
Constituent: Chloride Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-18 (bg)



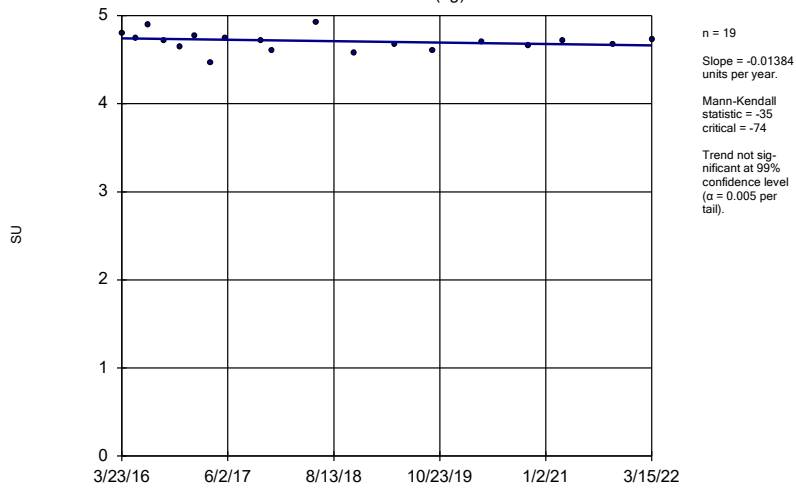
Constituent: Chloride Analysis Run 5/5/2022 7:43 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-19



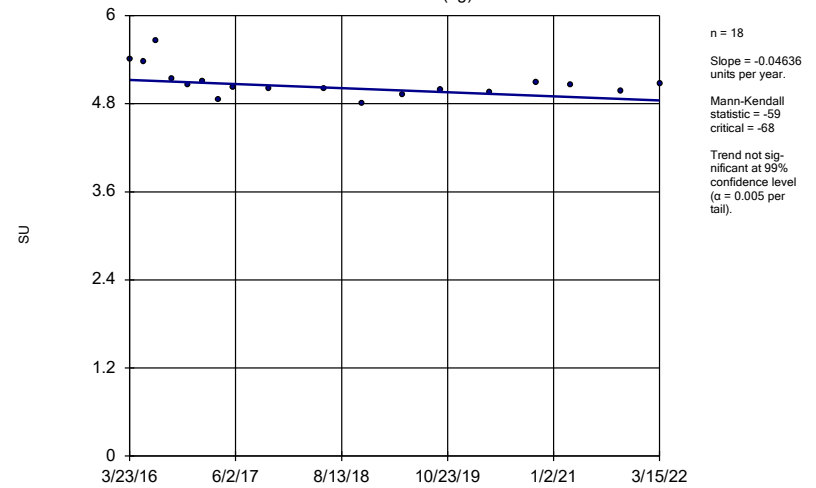
Constituent: Chloride Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-11 (bg)



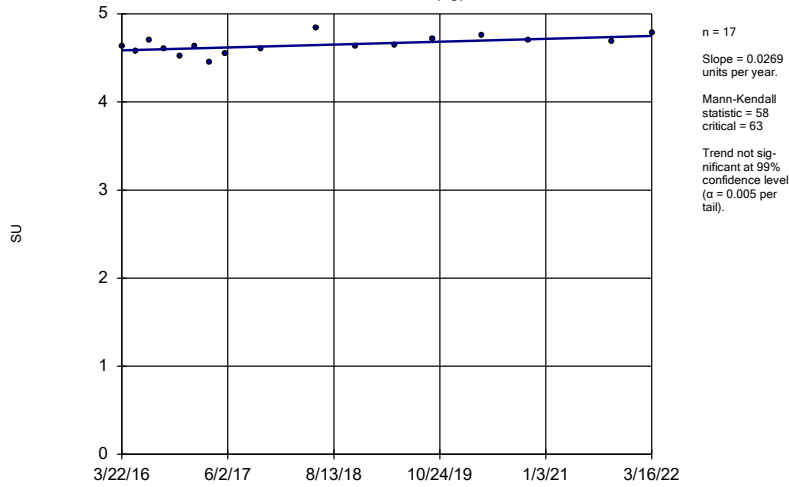
Constituent: pH Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-14 (bg)



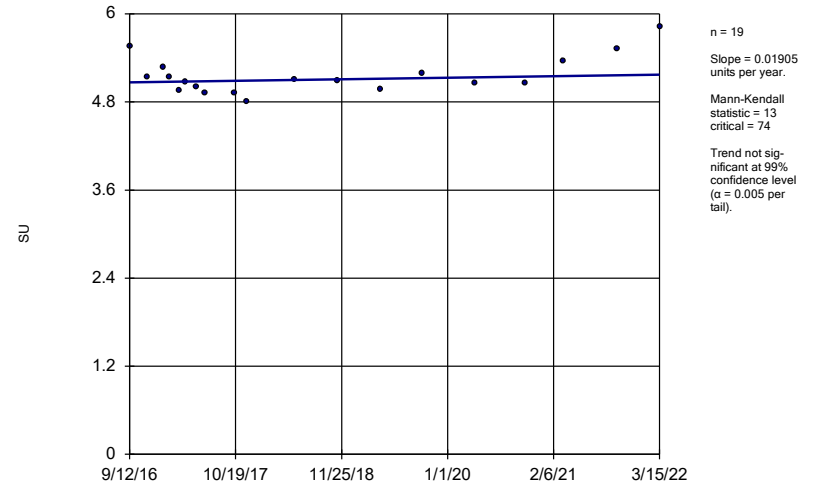
Constituent: pH Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-18 (bg)



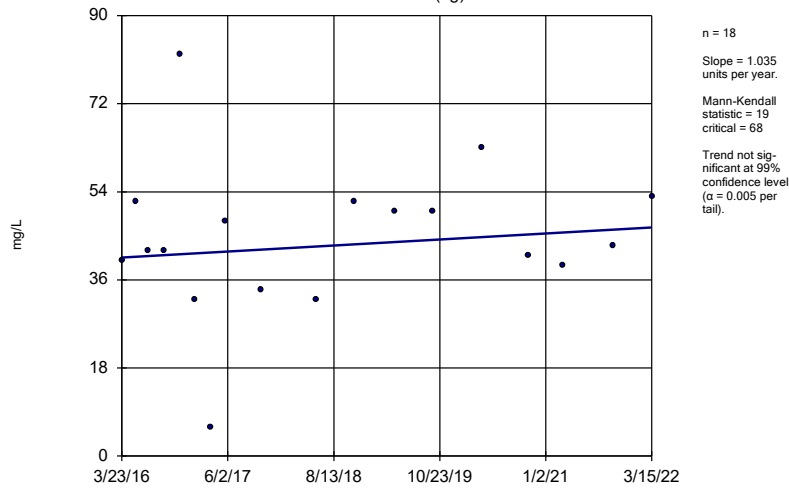
Constituent: pH Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-19



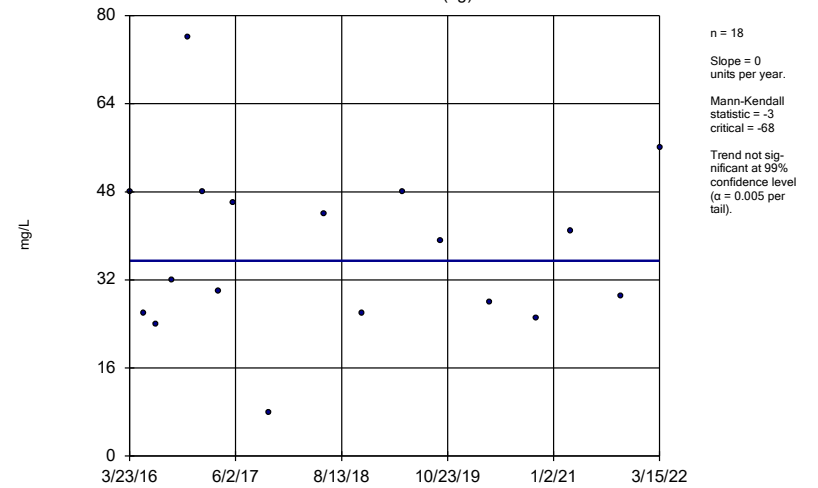
Constituent: pH Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-11 (bg)



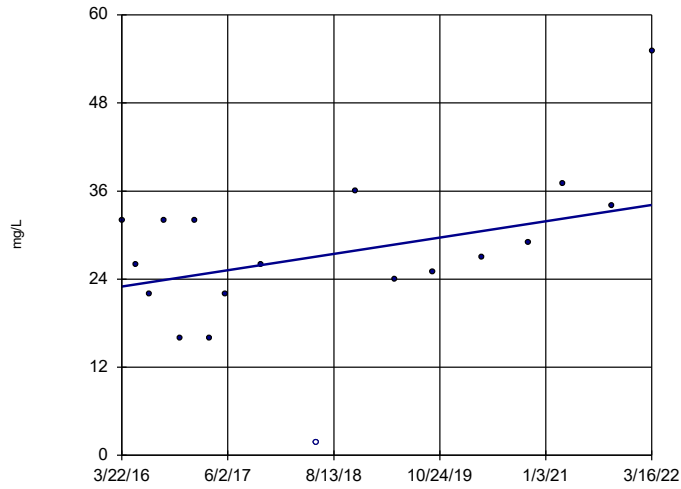
Constituent: Total Dissolved Solids Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-14 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

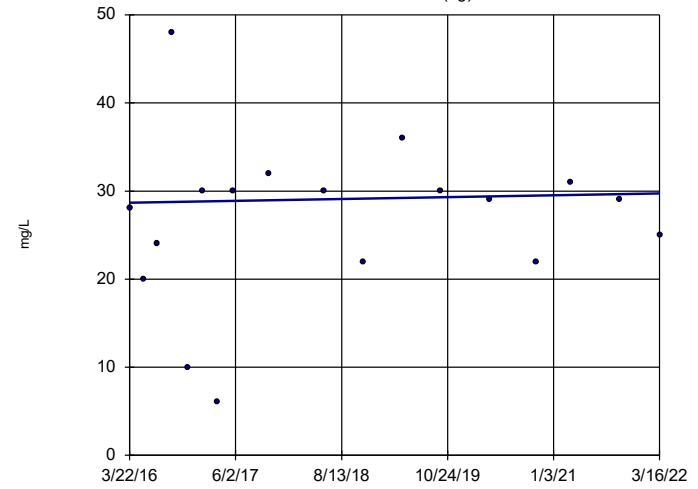
### Sen's Slope Estimator MW-17



n = 18  
Slope = 1.855  
units per year.  
Mann-Kendall  
statistic = 47  
critical = 68  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Total Dissolved Solids Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator MW-18 (bg)



n = 18  
Slope = 0.1804  
units per year.  
Mann-Kendall  
statistic = 11  
critical = 68  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

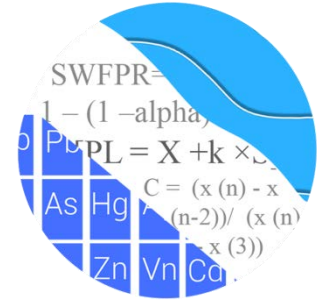
Constituent: Total Dissolved Solids Analysis Run 5/5/2022 7:44 PM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

**2nd**  
**Semi-Annual**  
**Monitoring Event**

# GROUNDWATER STATS CONSULTING

December 13, 2022

Southern Company Services  
Attn: Mr. Trey Singleton  
3535 Colonnade Parkway  
Birmingham, AL 35243



Re: Plant Daniel North Ash Management Unit (NAMU)  
Statistical Analysis – October 2022

Dear Mr. Singleton,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the 2022 Groundwater Monitoring Annual report for Mississippi Power Company’s Plant Daniel NAMU. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at Daniel NAMU for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** MW-11, MW-14, and MW-18
- **Downgradient wells:** MW-15, MW-16, MW-17, and MW-19

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician to Groundwater Stats Consulting.

The CCR program monitors the constituents listed below. The terms “parameters” and “constituents” are used interchangeably throughout this report.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS



Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A list of well/constituent pairs containing 100% non-detects follow this letter.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. For calculating intrawell prediction limits, the substitution is performed for individual wells and may differ across wells. This generally gives the most conservative limit in each case.

Time series plots for Appendix III parameters are provided for all wells and are used to evaluate concentrations over time as well as for the purpose of updating statistical limits (Figure A). Additionally, box plots are included for all constituents at upgradient and downgradient wells (Figure B). Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graph; however, no values were flagged as outliers (Figure C). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells.

During the previous screening, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods were recommended. Power curves were provided with the screening to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance recommendations as discussed below.

## **Summary of Statistical Methods**

Based on the evaluation for federal regulatory requirements, the following methods were selected for Appendix III constituents:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. Parametric prediction limits (or tolerance limits or confidence intervals as applicable) are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended

by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The following approaches are used for handling non-detects (USEPA, 2009):

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit will be shown as the original reporting limit.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents are re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater quality. While this was not required for this report, in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

### Two-Step Statistical Analysis

Intrawell statistical methods, combined with a 1-of-2 resample plan, may be used as a conservative first step for identifying potential facility impacts in downgradient wells. Intrawell methods use background data for individual wells and may be overly sensitive to natural variation. In particular for nonparametric limits with small background sample

sizes, the probability of a false positive is much higher than the desired annual sitewide rate of 10%. Therefore, a large number of exceedances may occur as a result of natural variation rather than facility impacts. A second step can be used to further evaluate those exceedances and reduce the overall number of SSIs that result from natural variation. In instances where intrawell statistical methods identify an apparent SSI, a second step of interwell statistical evaluation may be used to determine whether the measurement exceeds the sitewide background limit based on pooled upgradient well data. This is similar in concept to the procedure used in compliance monitoring programs where an interwell statistical limit is used to determine “background” (USEPA Unified Guidance (2009), Chapter 7, Section 7.5). For the detection monitoring program, if the result does not exceed sitewide (interwell) background, an SSI is not declared.

When the result exceeds the sitewide (interwell) background, the 1-of-2 resample plan allows for collection of an independent resample to confirm or disconfirm the initial finding. A statistically significant increase is not declared unless the resample also exceeds the intrawell prediction limit (United States Environmental Protection Agency (USEPA) Unified Guidance, March 2009, Chapter 19). When the resample confirms the initial exceedance, further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). When any resample falls within the statistical limit, the initial exceedance is considered to be a false positive result, and no further action is necessary. In cases where intrawell and interwell exceedances are noted and no resamples are collected, the initial exceedance will be considered a confirmed statistically significant increase (SSI).

Trend tests, in addition to interwell prediction limits, are recommended for well/constituent pairs found to have an initial intrawell SSI. Trend analysis will provide for detection of long-term changes and potential facility impacts at a given well in cases where the concentrations at that well remain below the sitewide upgradient limits. Thus, the two-step approach has additional capability to detect long-term changes at downgradient wells compared to interwell methods alone. While a trend may be identified by visual inspection, a quantification of the trend and its significance is needed to identify whether concentrations are statistically significantly increasing, decreasing, or remaining stable over time. The absence of a statistically significant increasing trend indicates that an initial intrawell exceedance is short-term and may be the result of natural variation rather than facility impact to groundwater. If a facility impact has occurred, it will likely result in additional exceedances in future sampling events. When a statistically significant increasing trend is noted, additional data may be needed to demonstrate that there is reasonable evidence that the initial intrawell statistical exceedance is a result of natural variation rather than a result of impact to groundwater quality downgradient of the facility.

## **Summary of Background Screening – Conducted in October 2017**

### Outlier Analysis

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective, in proposed background data. Suspected outliers at all wells for Appendix III parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

No suspected outliers were observed in any of the data sets for Appendix III parameters. When any values are identified as outliers, they are plotted in a lighter font on the time series graph.

### Seasonality

No seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

### Trend Test Evaluation

While trends may be visual, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, earlier data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When the historical records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses showed a few statistically significant decreasing and increasing trends. All trends noted were relatively low in magnitude when compared to average concentrations; therefore, no adjustments were made to any of the data sets.

## Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified variation among upgradient well data at Plant Daniel NAMU for the majority of the Appendix III parameters. This facility is a lined unit with pre-waste data; therefore, due to variation noted among upgradient wells, intrawell prediction limits were recommended for this facility to accommodate the groundwater quality. A summary table of the ANOVA results was included with the screening.

### **Summary of Background Update – Appendix III Parameters – November 2019**

Prior to updating background data, samples were re-evaluated for Appendix III constituents at all wells using Tukey's outlier test and visual screening on all historical data through the April 2019 sample event. Only one value was noted by Tukey's as a potential outlier; however, when Tukey's outlier test detects an outlier for the most recent sample, it often will not be flagged in the event that the data precede a trend that is more representative of current concentrations. Therefore, no values for Appendix III constituents were flagged as outliers at the time of the screening. An updated summary of Tukey's test results was included with the screening.

The Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through June 2017 to the new compliance samples at each well through April 2019 to evaluate whether the groups are statistically different at the 99% confidence level for each of the Appendix III parameters. When no differences exist, background data sets may be updated to include newer data for construction of prediction limits. This results in statistical limits that are representative of present-day conditions. No statistically significant differences were found between the two groups except for the following: calcium and sulfate in well MW-15. Note that the Mann-Whitney test could not be produced due to insufficient variation in the data for boron in wells MW-14, MW-15, MW-16, MW-17, and MW-19.

Typically, when the test concludes that the medians of the two groups are significantly different, particularly in the downgradient wells, the background are not updated to include the newer data but will be reconsidered in the future. For all well/constituent pairs except for sulfate in well MW-15, due to the limited data available and the variability in data shows some of the more recent data has similar concentrations to those reported in background, these data sets were updated. In the case of calcium at well MW-15, while there is a statistically significant difference between the two medians, the magnitude of the difference is minimal, and newer data more accurately represent concentrations present in nearby wells. Therefore, the background for this well/constituent pair was updated with new data. A summary of these results was included in the 2019 Background Update report.

## **Summary of Background Update – Appendix III Parameters – March 2022**

### Outlier Analysis

Prior to updating background data, samples were re-evaluated for Appendix III constituents at all wells using Tukey's outlier test and visual screening on all historical data through the March 2022 sample event. A few values were noted by Tukey's as potential outliers; however, these values were not drastically different than concentrations within the respective wells and were not flagged as outliers. Additionally, when Tukey's outlier test detects an outlier for the most recent sample, it often will not be flagged in the event that the reported concentration precedes a trend that is more representative of current concentrations. No values for Appendix III constituents were flagged as outliers at this time. The Tukey's test results were included with the update.

### Mann-Whitney Test of Medians

The Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through April 2019 to the new compliance samples at each well through October 2021 to evaluate whether the groups are statistically different at the 99% confidence level for each of the Appendix III parameters. When no differences exist, background data sets may be updated to include newer data for construction of prediction limits. This results in statistical limits that are representative of present-day conditions. Statistically significant differences were found between the two groups except for the following:

Increase:

- Calcium: MW-19

Decrease:

- Calcium: MW-14 (upgradient)
- Chloride: MW-14 and MW-18 (both upgradient)
- Fluoride: MW-19
- Sulfate: MW-11 (upgradient) and MW-15

Typically, when the test concludes that the medians of the two groups are significantly different, particularly in the downgradient wells, the background are not updated to include the newer data but will be reconsidered in the future. For all well/constituent pairs with decreasing medians, these records were updated with more recent compliance measurements since reported concentrations are similar to those reported historically. In the case of fluoride in downgradient well MW-19, the significant difference resulted from reported trace values compared to reported non-detects in the record.

For the statistically significant increasing median identified in well MW-19, while a portion of the more recent concentrations remain below historical upgradient concentrations, the most recent compliance samples indicate an increase that would result in an elevated intrawell prediction limit. Therefore, this record was not updated at this time. This step results in construction of a statistical limit that is conservative (i.e., lower) from a regulatory perspective. A summary of the date range used for this well/constituent pair follows this report.

## **Statistical Analysis of Appendix III Parameters – October 2022**

### Intrawell Prediction Limits

Intrawell prediction limits, combined with a 1-of-2 resample strategy, were established for each of the Appendix III parameters at each well using historical data through October 2021 for comparison of the October 2022 samples (Figure D). Intrawell prediction limits use screened historical data within a given well to establish limits for parameters at the same well. The October 2022 samples from each well were compared to the prediction limits to determine whether initial exceedances are present. Note that during this event, the reporting limit for boron decreased from 0.08 mg/L to 0.0601 mg/L and the reporting limit for fluoride decreased from 0.1 mg/L to 0.026 mg/L. No exceedances occurred as a result of the lower statistical limits.

For some well/constituent pairs containing <15% non-detects in background, parametric prediction limits slightly changed compared to those established during the background update. An update was made to the Sanitas™ statistical software in October 2022 that determines the percentage of non-detects within a given background record rather than

all records evaluated for a given constituent. Simple substitution of 1/2 the reporting limit is applied when the percentage of non-detects in background is < 15% in accordance with the USEPA EPA Unified Guidance (2009). No significant changes resulted from this implementation.

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no further action is necessary. Complete graphical results of the prediction limits may be found following this letter. Exceedances were identified for the following well/constituent pairs:

- Calcium: MW-16 and MW-19
- Chloride: MW-16 and MW-19
- Sulfate: MW-18

### Two-Step Analysis

Following the two-step analysis procedure, interwell prediction limits were then constructed using pooled upgradient well data to evaluate the apparent intrawell prediction limit exceedances among downgradient wells (Figure E). No exceedances were identified. Therefore, no further research is required.

### Trend Test Evaluation

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure F). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. The existence of similar trends in both upgradient and downgradient wells is an indication of natural variability in groundwater that is unrelated to practices at the site. No statistically significant increasing or decreasing trends were noted among downgradient wells. Statistically significant trends were identified for the following upgradient well/constituent pairs which is an indication of naturally changing groundwater quality:



Increasing:

- Chloride: MW-11 (upgradient)

Decreasing:

- Calcium: MW-14 and MW-18 (both upgradient)
- Chloride: MW-18 (upgradient)
- Sulfate: MW-11 (upgradient)

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Daniel North Ash Management Unit. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew Collins  
Project Manager



Kristina L. Rayner  
Senior Statistician

# 100% Non-Detects

Analysis Run 12/9/2022 8:11 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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Boron (mg/L)  
MW-16, MW-17, MW-19

# Date Ranges

Date: 12/9/2022 8:24 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

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Calcium (mg/L)

MW-19 background:9/12/2016-4/22/2019

# Intrawell Prediction Limit - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-16	1.146	n/a	10/5/2022	1.19	Yes	18	0.8117	0.1645	0	None	No	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-19	0.8608	n/a	10/5/2022	2.16	Yes	12	0.7847	0.06412	0	None	sqrt(x)	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-16	10.07	n/a	10/5/2022	11.7	Yes	19	7.533	1.263	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-19	5.802	n/a	10/5/2022	5.94	Yes	17	706.2	208.1	5.882	None	x^4	0.00188	Param Intra 1 of 2	
Sulfate (mg/L)	MW-18	4.898	n/a	10/5/2022	6.04	Yes	17	3.696	0.585	5.882	None	No	0.00188	Param Intra 1 of 2	

# Intrawell Prediction Limit - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-11	0.103	n/a	10/4/2022	0.0601ND	No	17	n/a	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-14	0.0601	n/a	10/4/2022	0.0601ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-15	0.0601	n/a	10/4/2022	0.0601ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-18	0.0601	n/a	10/5/2022	0.0601ND	No	17	n/a	n/a	n/a	70.59	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Calcium (mg/L)	MW-11	2.125	n/a	10/4/2022	1.3	No	17	24.35	9.256	5.882	None	x^5	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-14	5.702	n/a	10/4/2022	2.56	No	17	3.406	1.117	5.882	None	No	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-15	1.597	n/a	10/4/2022	1.11	No	17	1.187	0.2	0	None	No	0.00188	Param Intra 1 of 2	
<b>Calcium (mg/L)</b>	<b>MW-16</b>	<b>1.146</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>1.19</b>	<b>Yes</b>	<b>18</b>	<b>0.8117</b>	<b>0.1645</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Calcium (mg/L)	MW-17	1.27	n/a	10/5/2022	0.755	No	17	0.01917	0.1071	0	None	ln(x)	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-18	0.9976	n/a	10/5/2022	0.285J	No	17	0.6866	0.1514	0	None	No	0.00188	Param Intra 1 of 2	
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>0.8608</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>2.16</b>	<b>Yes</b>	<b>12</b>	<b>0.7847</b>	<b>0.06412</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Chloride (mg/L)	MW-11	16.08	n/a	10/4/2022	12	No	32	12.44	1.948	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-14	12.3	n/a	10/4/2022	11.2	No	17	8.927	1.643	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-15	10.02	n/a	10/4/2022	8.22	No	17	7.922	1.023	0	None	No	0.00188	Param Intra 1 of 2	
<b>Chloride (mg/L)</b>	<b>MW-16</b>	<b>10.07</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>11.7</b>	<b>Yes</b>	<b>19</b>	<b>7.533</b>	<b>1.263</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Chloride (mg/L)	MW-17	8.234	n/a	10/5/2022	5.51	No	17	6.738	0.7281	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-18	11.16	n/a	10/5/2022	4.97	No	17	8	1.54	0	None	No	0.00188	Param Intra 1 of 2	
<b>Chloride (mg/L)</b>	<b>MW-19</b>	<b>5.802</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>5.94</b>	<b>Yes</b>	<b>17</b>	<b>706.2</b>	<b>208.1</b>	<b>5.882</b>	<b>None</b>	<b>x^4</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Fluoride (mg/L)	MW-11	0.1	n/a	10/4/2022	0.0281J	No	17	n/a	n/a	41.18	n/a	n/a	0.005914	NP Intra (normality) 1 of 2	
Fluoride (mg/L)	MW-14	0.0411	n/a	10/4/2022	0.026ND	No	17	n/a	n/a	76.47	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-15	0.0484	n/a	10/4/2022	0.026ND	No	17	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-16	0.0496	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	76.47	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-17	0.0511	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-18	0.0764	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	64.71	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-19	0.0382	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	82.35	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
pH (SU)	MW-11	4.927	4.479	10/4/2022	4.62	No	18	4.703	0.1101	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-14	5.519	4.651	10/4/2022	4.9	No	17	5.085	0.2112	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-15	5.006	4.405	10/4/2022	4.71	No	17	4.705	0.1462	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-16	4.808	4.41	10/5/2022	4.52	No	17	4.609	0.09695	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-17	5.314	4.695	10/5/2022	5	No	17	1.71	0.0172	0	None	x^(1/3)	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-18	4.833	4.445	10/5/2022	4.7	No	16	4.639	0.09337	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-19	5.525	4.715	10/5/2022	5.3	No	18	5.12	0.1992	0	None	No	0.0009398	Param Intra 1 of 2	
Sulfate (mg/L)	MW-11	10.47	n/a	10/4/2022	2.04	No	32	1.364	0.5266	15.63	Kaplan-Meier	ln(x)	0.00188	Param Intra 1 of 2	
Sulfate (mg/L)	MW-14	2.474	n/a	10/4/2022	0.756ND	No	17	2.586	1.72	29.41	Kaplan-Meier	x^2	0.00188	Param Intra 1 of 2	
Sulfate (mg/L)	MW-15	3.38	n/a	10/4/2022	0.756ND	No	17	n/a	n/a	52.94	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Sulfate (mg/L)	MW-16	5	n/a	10/5/2022	1.4	No	17	n/a	n/a	47.06	n/a	n/a	0.005914	NP Intra (normality) 1 of 2	
Sulfate (mg/L)	MW-17	3.508	n/a	10/5/2022	2.05	No	17	2.304	0.5866	11.76	None	No	0.00188	Param Intra 1 of 2	
<b>Sulfate (mg/L)</b>	<b>MW-18</b>	<b>4.898</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>6.04</b>	<b>Yes</b>	<b>17</b>	<b>3.696</b>	<b>0.585</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Sulfate (mg/L)	MW-19	5	n/a	10/5/2022	1.02	No	17	n/a	n/a	41.18	n/a	n/a	0.005914	NP Intra (normality) 1 of 2	
Total Dissolved Solids (mg/L)	MW-11	76.12	n/a	10/4/2022	53	No	17	44	15.64	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-14	67.34	n/a	10/4/2022	52	No	17	36.35	15.09	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-15	54.62	n/a	10/4/2022	42	No	18	27.33	13.43	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-16	59.48	n/a	10/5/2022	42	No	17	24.46	17.05	17.65	Kaplan-Meier	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-17	43.75	n/a	10/5/2022	35	No	17	25.75	8.766	5.882	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-18	46.41	n/a	10/5/2022	34	No	17	26.88	9.506	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-19	43.34	n/a	10/5/2022	31	No	17	22.09	10.35	5.882	None	No	0.00188	Param Intra 1 of 2	

# Appendix III Interwell Prediction Limit - Two-Step - All Results (No Significant)

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:17 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-16	4.578	n/a	10/5/2022	1.19	No	57	1.328	0.4542	3.509	None	sqrt(x)	0.00188	Param Inter 1 of 2	
Calcium (mg/L)	MW-19	4.578	n/a	10/5/2022	2.16	No	57	1.328	0.4542	3.509	None	sqrt(x)	0.00188	Param Inter 1 of 2	
Chloride (mg/L)	MW-16	15.15	n/a	10/5/2022	11.7	No	72	10.3	2.737	0	None	No	0.00188	Param Inter 1 of 2	
Chloride (mg/L)	MW-19	15.15	n/a	10/5/2022	5.94	No	72	10.3	2.737	0	None	No	0.00188	Param Inter 1 of 2	

# Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:28 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-14 (bg)	-0.393	-126	-74	Yes	19	5.263	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-18 (bg)	-0.07215	-112	-74	Yes	19	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-11 (bg)	0.2408	254	176	Yes	34	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-18 (bg)	-0.5655	-92	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-11 (bg)	-0.272	-245	-176	Yes	34	14.71	n/a	n/a	0.01	NP

# Trend Tests - Prediction Limit Exceedances - All Results

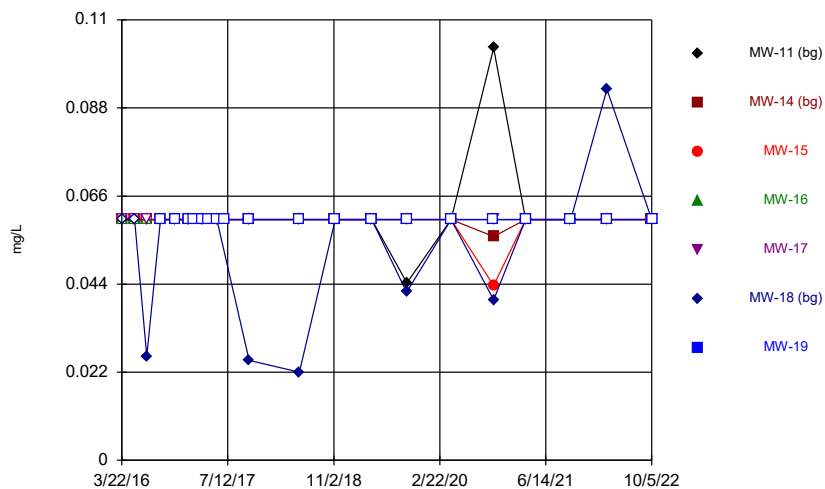
Plant Daniel    Client: Southern Company    Data: NAMU CCR    Printed 12/9/2022, 8:28 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-11 (bg)	0	4	74	No	19	5.263	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-0.393</b>	<b>-126</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>5.263</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-16	0.0336	51	81	No	20	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.07215</b>	<b>-112</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-19	0.1027	71	74	No	19	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-11 (bg)</b>	<b>0.2408</b>	<b>254</b>	<b>176</b>	<b>Yes</b>	<b>34</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-14 (bg)	-0.2395	-33	-74	No	19	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-16	0.4045	65	87	No	21	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.5655</b>	<b>-92</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-19	0.09276	39	74	No	19	5.263	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>MW-11 (bg)</b>	<b>-0.272</b>	<b>-245</b>	<b>-176</b>	<b>Yes</b>	<b>34</b>	<b>14.71</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	MW-14 (bg)	0.05084	34	74	No	19	31.58	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-18 (bg)	0.1083	33	74	No	19	5.263	n/a	n/a	0.01	NP



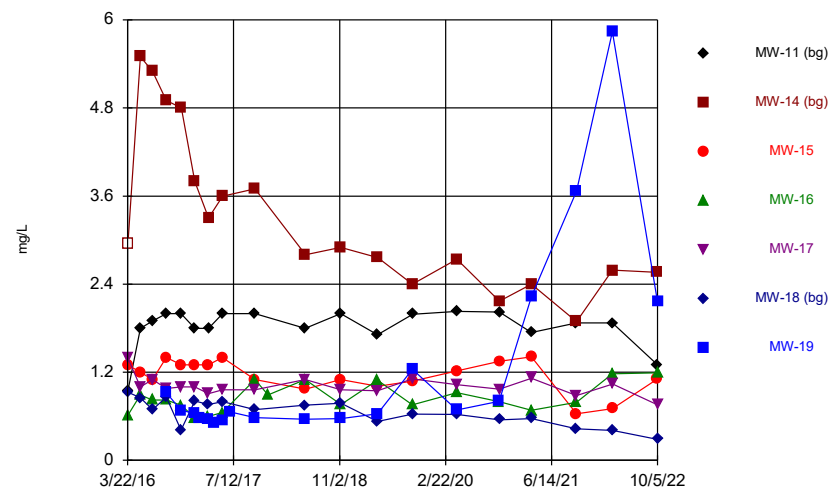
FIGURE A.

Time Series



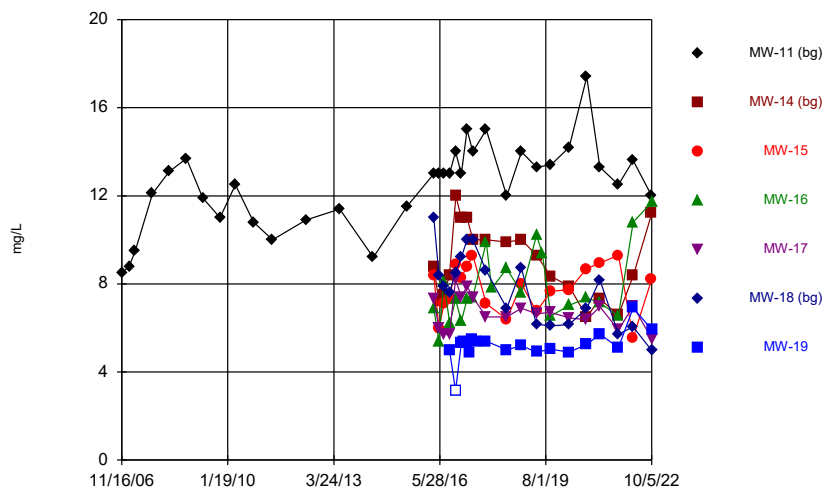
Constituent: Boron Analysis Run 12/9/2022 8:03 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



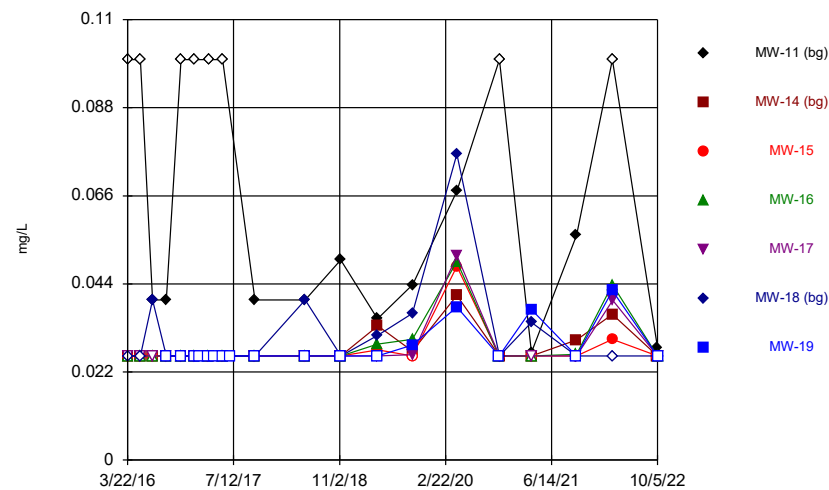
Constituent: Calcium Analysis Run 12/9/2022 8:03 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



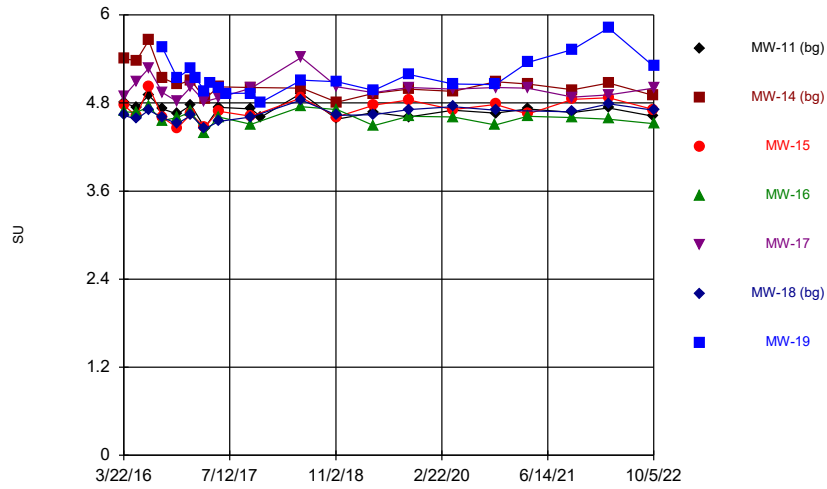
Constituent: Chloride Analysis Run 12/9/2022 8:03 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Time Series



Constituent: Fluoride Analysis Run 12/9/2022 8:03 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

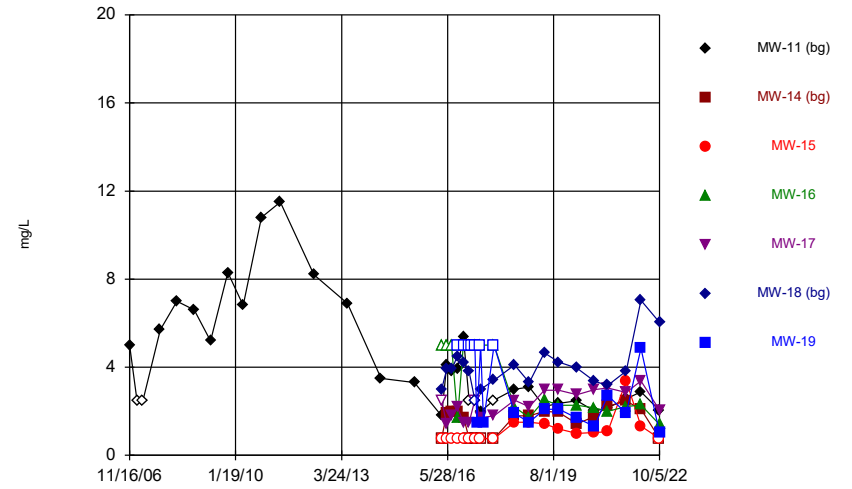
### Time Series



Constituent: pH Analysis Run 12/9/2022 8:03 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

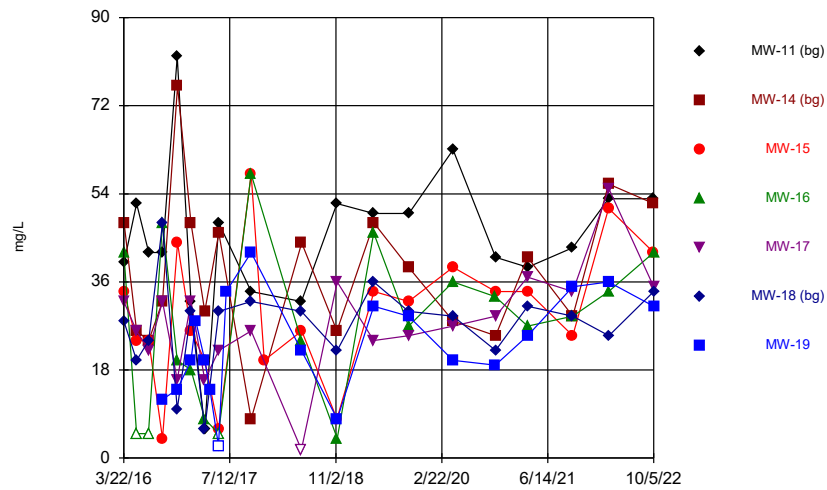
### Time Series



Constituent: Sulfate Analysis Run 12/9/2022 8:03 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

### Time Series



Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:03 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

# Time Series

Constituent: Boron (mg/L) Analysis Run 12/9/2022 8:05 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			<0.0601 (B1)	<0.0601 (B1)	<0.0601 (B1)	<0.0601 (B1)	
3/23/2016	<0.0601 (B1)	<0.0601 (B1)					
5/18/2016	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	
7/11/2016				<0.0601			
7/12/2016	<0.0601	<0.0601	<0.0601		<0.0601	0.026 (J)	
9/12/2016	<0.0601	<0.0601	<0.0601		<0.0601	<0.0601	<0.0601
9/13/2016				<0.0601			
11/17/2016				<0.0601			
11/18/2016	<0.0601				<0.0601	<0.0601	<0.0601
11/19/2016		<0.0601	<0.0601				
1/18/2017		<0.0601		<0.0601	<0.0601	<0.0601	<0.0601
1/19/2017	<0.0601		<0.0601				
2/10/2017							<0.0601
3/21/2017			<0.0601	<0.0601	<0.0601	<0.0601	<0.0601
3/22/2017	<0.0601	<0.0601					
4/14/2017							<0.0601
5/23/2017			<0.0601	<0.0601			<0.0601
5/24/2017	<0.0601	<0.0601			<0.0601	<0.0601	
6/26/2017							<0.0601
10/17/2017	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	0.025 (J)	<0.0601
5/31/2018	<0.0601			<0.0601	<0.0601	0.022 (J)	<0.0601
6/1/2018		<0.0601	<0.0601				
11/7/2018	<0.0601	<0.0601	<0.0601				
11/8/2018				<0.0601	<0.0601	<0.0601	<0.0601
4/22/2019	<0.0601			<0.0601	<0.0601	<0.0601	<0.0601
4/23/2019		<0.0601	<0.0601				
9/26/2019		<0.0601	<0.0601	<0.0601	<0.0601	0.042 (J)	<0.0601
9/27/2019	0.0443 (J)						
4/13/2020	<0.0601	<0.0601	<0.0601		<0.0601		<0.0601
4/14/2020				<0.0601		<0.0601	
10/21/2020				<0.0601			<0.0601
10/22/2020	0.103	0.0559 (J)	0.0437 (J)		<0.0601	0.0401 (J)	
3/16/2021	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601
10/5/2021	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601	<0.0601
3/15/2022	<0.0601	<0.0601	<0.0601	<0.0601			<0.0601
3/16/2022					<0.0601	0.0927	
10/4/2022	<0.0601	<0.0601	<0.0601				
10/5/2022				<0.0601	<0.0601	<0.0601	<0.0601

# Time Series

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:05 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			1.3 (B1)	0.61 (B1)	1.4 (B1)	0.93 (B1)	
3/23/2016	<1.9 (*)	<5.9 (*)					
5/18/2016	1.8	5.5	1.2	0.89	1	0.85	
7/11/2016				0.82			
7/12/2016	1.9	5.3	1.1		1.1	0.69	
9/12/2016	2	4.9	1.4		0.98	0.86	0.92
9/13/2016				0.82			
11/17/2016				0.75			
11/18/2016	2				1	0.41	0.68
11/19/2016		4.8	1.3				
1/18/2017		3.8		0.58	1	0.81	0.64
1/19/2017	1.8		1.3				
2/10/2017							0.58
3/21/2017			1.3	0.6	0.91	0.76	0.56
3/22/2017	1.8	3.3					
4/14/2017							0.51
5/23/2017			1.4	0.65			0.54
5/24/2017	2	3.6			0.96	0.8	
6/26/2017							0.66
10/17/2017	2	3.7	1.1	1.1	0.96	0.69	0.58
12/15/2017				0.89 (RS)			
5/31/2018	1.8			1.1	1.1	0.75	0.56
6/1/2018		2.8	0.97				
11/7/2018	2	2.9	1.1				
11/8/2018				0.76	0.96	0.78	0.57
4/22/2019	1.71			1.09	0.946	0.531	0.634
4/23/2019		2.76	1.01				
9/26/2019		2.4	1.08	0.758	1.11	0.631	1.24
9/27/2019	1.99						
4/13/2020	2.03	2.74	1.22		1.03		0.687
4/14/2020				0.92		0.627	
10/21/2020				0.798			0.806
10/22/2020	2.02	2.17	1.35		0.969	0.553	
3/16/2021	1.74	2.4	1.41	0.681	1.12	0.57	2.23
10/5/2021	1.87	1.89	0.632	0.793	0.883	0.43 (J)	3.67
3/15/2022	1.87	2.59	0.703	1.18			5.84
3/16/2022					1.04	0.406 (J)	
10/4/2022	1.3	2.56	1.11				
10/5/2022				1.19	0.755	0.285 (J)	2.16

# Time Series

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:05 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
11/16/2006	8.5						
2/5/2007	8.8						
4/12/2007	9.5						
10/17/2007	12.1						
4/17/2008	13.1						
10/24/2008	13.7						
4/21/2009	11.9						
10/26/2009	11						
4/12/2010	12.5						
10/30/2010	10.8						
5/25/2011	10						
5/25/2012	10.9						
5/28/2013	11.4						
5/31/2014	9.2						
5/29/2015	11.5						
3/22/2016			8.4 (B1)	6.9 (B1)	7.3 (B1)	11 (B1)	
3/23/2016	13	8.8 (B1)					
5/18/2016	13	7.2	6	5.4	6	8.4	
7/11/2016				8.1			
7/12/2016	13	7.5	7.1		5.7	7.9	
9/12/2016	13	8.4	7.3		5.7	7.6	5
9/13/2016				6.2			
11/17/2016				7.3			
11/18/2016	14				8.2	8.5	<6.3 (*)
11/19/2016		12	8.9				
1/18/2017		11		6.3	7.4	9.2	5.3
1/19/2017	13		8.3				
2/10/2017							5.4
3/21/2017			8.8	7.3	7.9	10	5.3
3/22/2017	15	11					
4/14/2017							4.9 (B)
5/23/2017			9.3	7.4			5.5
5/24/2017	14	10			7.4	10	
6/26/2017							5.4
10/17/2017	15	10	7.1	9.9	6.5	8.6	5.4
12/19/2017				7.8 (RS)			
5/31/2018	12			8.7	6.5	6.9	5
6/1/2018		9.9	6.4				
11/7/2018	14	10	8				
11/8/2018				7.6	6.9	8.7	5.2
4/22/2019	13.3			10.2	6.64	6.17	4.91
4/23/2019		9.3	6.75				
6/25/2019				9.4			
9/26/2019		8.35	7.66	6.54	6.7	6.09	5.03
9/27/2019	13.4						
4/13/2020	14.2	7.9	7.74		6.46		4.9
4/14/2020				7.03		6.15	
10/21/2020				7.36			5.25
10/22/2020	17.4	6.5	8.69		6.37	6.89	
3/16/2021	13.3	7.32	8.94	7.14	6.97	8.18	5.72
10/5/2021	12.5	6.59	9.3	6.55	5.91	5.72	5.1
3/15/2022	13.6	8.36	5.55	10.8			6.91

# Time Series

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:05 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/16/2022					7	6.05	
10/4/2022	12	11.2	8.22				
10/5/2022				11.7	5.51	4.97	5.94

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:05 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			<0.026 (B1)	<0.026 (B1)	<0.026 (B1)	<0.026 (B1)	
3/23/2016	<0.1	<0.026 (B1)					
5/18/2016	<0.1	<0.026	<0.026	<0.026	<0.026	<0.026	
7/11/2016				<0.026			
7/12/2016	0.04 (J)	<0.026	<0.026		<0.026	0.04 (J)	
9/12/2016	0.04 (J)	<0.026	<0.026		<0.026	<0.026	<0.026
9/13/2016				<0.026			
11/17/2016				<0.026			
11/18/2016	<0.1				<0.026	<0.026	<0.026
11/19/2016		<0.026	<0.026				
1/18/2017		<0.026		<0.026	<0.026	<0.026	<0.026
1/19/2017	<0.1		<0.026				
2/10/2017							<0.026
3/21/2017			<0.026	<0.026	<0.026	<0.026	<0.026
3/22/2017	<0.1	<0.026					
4/14/2017							<0.026
5/23/2017			<0.026	<0.026			<0.026
5/24/2017	<0.1	<0.026			<0.026	<0.026	
6/26/2017							<0.026
10/17/2017	0.04 (J)	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026
5/31/2018	0.04 (J)			<0.026	<0.026	0.04 (J)	<0.026
6/1/2018		<0.026	<0.026				
11/7/2018	0.05 (J)	<0.026	<0.026				
11/8/2018				<0.026	<0.026	<0.026	<0.026
4/22/2019	0.0353 (J)			0.029 (J)	<0.026	0.0311 (J)	<0.026
4/23/2019		0.0335 (J)	0.0275 (J)				
9/26/2019		0.0272 (J)	<0.026	0.0302 (J)	0.0263 (J)	0.0366 (J)	0.0287 (J)
9/27/2019	0.0438 (J)						
4/13/2020	0.0672 (J)	0.0411 (J)	0.0484 (J)		0.0511 (J)		0.0382 (J)
4/14/2020				0.0496 (J)		0.0764 (J)	
10/21/2020				<0.026			<0.026
10/22/2020	<0.1	<0.026	<0.026		<0.026	<0.026	
3/16/2021	0.0269 (J)	<0.026	<0.026	<0.026	<0.026	0.0344 (J)	0.0376 (J)
10/5/2021	0.0561 (J)	0.03 (J)	<0.026	0.0264 (J)	<0.026	<0.026	<0.026
3/15/2022	<0.1	0.0364 (J)	0.0302 (J)	0.0438 (J)			0.0423 (J)
3/16/2022					0.0399 (J)	<0.026	
10/4/2022	0.0281 (J)	<0.026	<0.026				
10/5/2022				<0.026	<0.026	<0.026	<0.026



# Time Series

Constituent: pH (SU) Analysis Run 12/9/2022 8:05 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			4.77	4.68	4.89	4.63	
3/23/2016	4.8	5.4					
5/18/2016	4.74	5.38	4.62	4.67	5.09	4.58	
7/11/2016				4.75			
7/12/2016	4.9	5.65	5.03		5.27	4.7	
9/12/2016	4.72	5.14	4.6		4.94	4.6	5.55
9/13/2016				4.56			
11/17/2016				4.6			
11/18/2016	4.65				4.82	4.52	5.14
11/19/2016		5.05	4.46				
1/18/2017		5.11		4.68	5.02	4.63	5.27
1/19/2017	4.77		4.65				
2/10/2017							5.14
3/21/2017			4.47	4.39	4.82	4.45	4.96
3/22/2017	4.46	4.86					
4/14/2017							5.07
5/23/2017			4.69	4.61			5.01
5/24/2017	4.74	5.02			4.87	4.55	
6/26/2017							4.93
10/17/2017	4.72	5.01	4.62	4.51	5	4.61	4.93
11/30/2017	4.61						4.81
5/31/2018	4.93			4.75	5.42	4.84	5.11
6/1/2018		5	4.87				
11/7/2018	4.58	4.81	4.61				
11/8/2018				4.71	5.02	4.63	5.09
4/22/2019	4.67			4.49	4.94	4.64	4.97
4/23/2019		4.93	4.77				
9/26/2019		4.99	4.84	4.62	5.01	4.71	5.19
9/27/2019	4.61						
4/13/2020	4.7	4.96	4.71		4.99		5.06
4/14/2020				4.61		4.75	
10/21/2020				4.5			5.05
10/22/2020	4.66	5.09	4.78		5.01	4.7	
3/16/2021	4.72	5.06	4.65	4.62	5		5.35
10/5/2021	4.67	4.98	4.85	4.6	4.88	4.68	5.53
3/15/2022	4.73	5.07	4.87	4.58			5.82
3/16/2022					4.91	4.79	
10/4/2022	4.62	4.9	4.71				
10/5/2022				4.52	5	4.7	5.3

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:05 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
11/16/2006	5						
2/5/2007	<5						
4/12/2007	<5						
10/17/2007	5.7						
4/17/2008	7						
10/24/2008	6.6						
4/21/2009	5.2						
10/26/2009	8.3						
4/12/2010	6.8						
10/30/2010	10.8						
5/25/2011	11.5						
5/25/2012	8.2						
5/28/2013	6.9						
5/31/2014	3.5						
5/29/2015	3.3						
3/22/2016			<0.756	<5	<5	3 (J)	
3/23/2016	1.8 (J)	<0.756					
5/18/2016	4.1	1.9	<0.756	<5	1.4	3.9 (J)	
7/11/2016				<5			
7/12/2016	3.8 (J)	2 (J)	<0.756		1.8 (J)	3.9 (J)	
9/12/2016	3.9 (J)	2 (J)	<0.756		2.2 (J)	4.5 (J)	<5
9/13/2016				1.7 (J)			
11/17/2016				<5			
11/18/2016	5.4				1.5 (J)	4.2 (J)	<5
11/19/2016		1.7 (J)	<0.756				
1/18/2017		<0.756		<5	1.5 (J)	3.8 (J)	<5
1/19/2017	<5		<0.756				
2/10/2017							<5
3/21/2017			<0.756	<5	<5	<5 (*)	<5
3/22/2017	<5	<0.756					
4/14/2017							1.5 (J)
5/23/2017			<0.756	<5			<5
5/24/2017	2 (J)	<0.756			1.7 (J)	3 (J)	
6/26/2017							1.5 (J)
10/17/2017	<5	<0.756	<0.756	<5	1.8 (J)	3.4 (J)	<5
5/31/2018	3 (J)			2.2 (J)	2.5 (J)	4.1 (J)	1.9 (J)
6/1/2018		1.8 (J)	1.5 (J)				
11/7/2018	3.1 (J)	1.8 (J)	1.5 (J)				
11/8/2018				1.7 (J)	2.2 (J)	3.3 (J)	1.5 (J)
4/22/2019	2.22			2.52	2.96	4.66	2.09
4/23/2019		1.99	1.43				
9/26/2019		1.95	1.2	2.28	2.96	4.23	2.1
9/27/2019	2.36						
4/13/2020	2.47	1.43	0.992 (J)		2.75		1.69
4/14/2020				2.27		3.96	
10/21/2020				2.15			1.31
10/22/2020	2.01	1.76	1.04		2.98	3.37	
3/16/2021	2.15	2.23	1.07	2	3.06	3.18	2.72
10/5/2021	2.57	2.46	3.38	2.22	2.85	3.83	1.91
3/15/2022	2.88	2.1	1.33	2.29			4.86
3/16/2022					3.38	7.04	
10/4/2022	2.04	<0.756	<0.756				

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:05 AM  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
10/5/2022				1.4	2.05	6.04	1.02

# Time Series

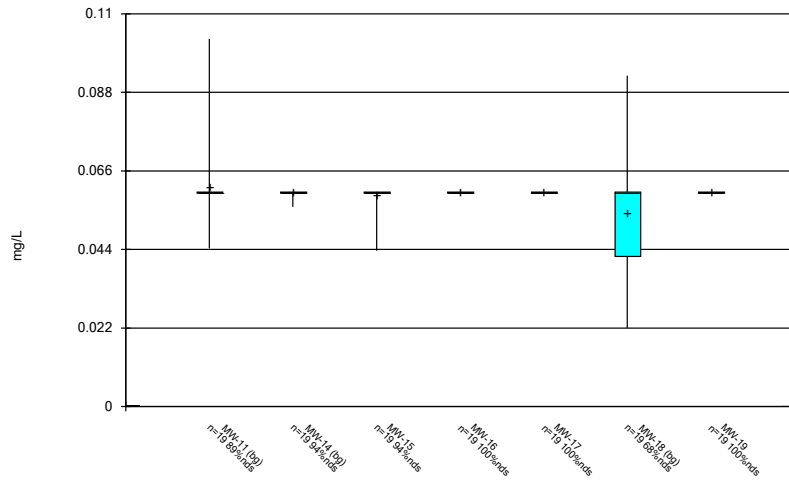
Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:05 AM

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-14 (bg)	MW-15	MW-16	MW-17	MW-18 (bg)	MW-19
3/22/2016			34 (B1)	42 (B1)	32 (B1)	28 (B1)	
3/23/2016	40	48 (B1)					
5/18/2016	52	26	24	<5	26	20	
7/11/2016				<5			
7/12/2016	42	24	24		22	24	
9/12/2016	42	32	4 (J)		32	48	12
9/13/2016				48			
11/17/2016				20			
11/18/2016	82				16	10	14
11/19/2016		76	44				
1/18/2017		48		18	32	30	20
1/19/2017	32		26				
2/10/2017							28
3/21/2017			20	8	16	6	20
3/22/2017	6	30					
4/14/2017							14
5/23/2017			6	<5			<5
5/24/2017	48	46			22	30	
6/26/2017							34
10/17/2017	34	8	58	58	26	32	42
12/15/2017			20 (RS)				
5/31/2018	32			24	<3.4	30	22
6/1/2018		44	26				
11/7/2018	52	26	8				
11/8/2018				4 (J)	36	22	8
4/22/2019	50			46	24	36	31
4/23/2019		48	34				
9/26/2019		39	32	27	25	30	29
9/27/2019	50						
4/13/2020	63	28	39		27		20
4/14/2020				36		29	
10/21/2020				33			19
10/22/2020	41	25	34		29	22	
3/16/2021	39	41	34	27	37	31	25
10/5/2021	43	29	25	29	34	29	35
3/15/2022	53	56	51	34			36
3/16/2022					55	25	
10/4/2022	53	52	42				
10/5/2022				42	35	34	31

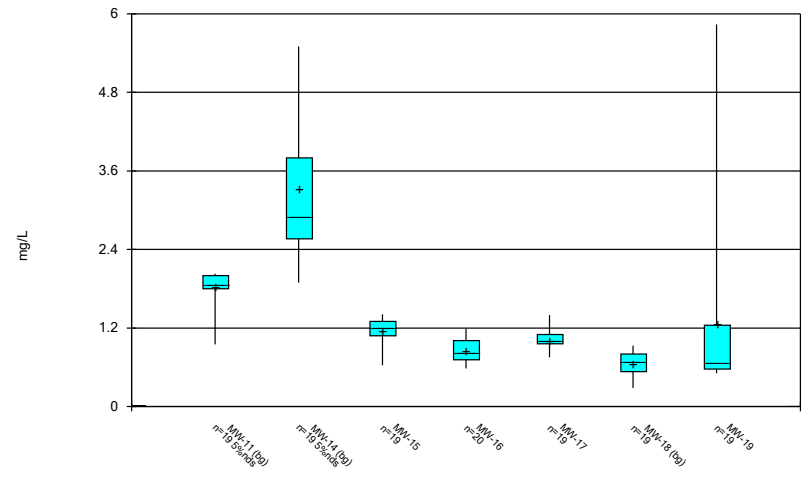
FIGURE B.

Box & Whiskers Plot



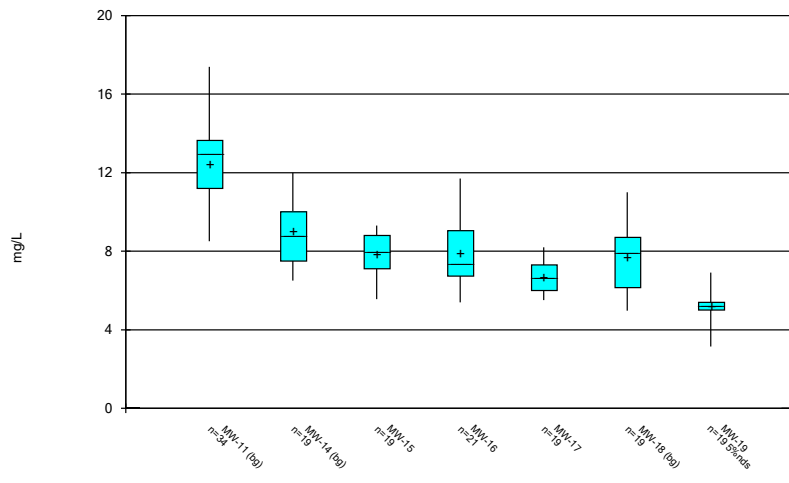
Constituent: Boron Analysis Run 12/9/2022 8:06 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Box & Whiskers Plot



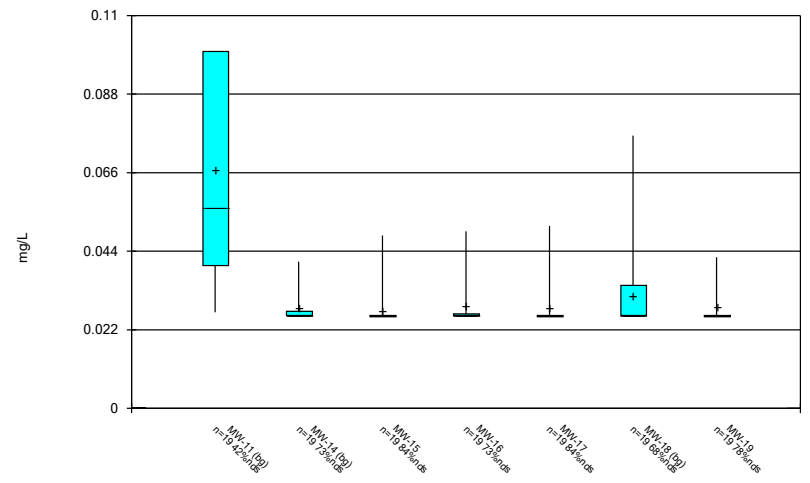
Constituent: Calcium Analysis Run 12/9/2022 8:06 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Box & Whiskers Plot



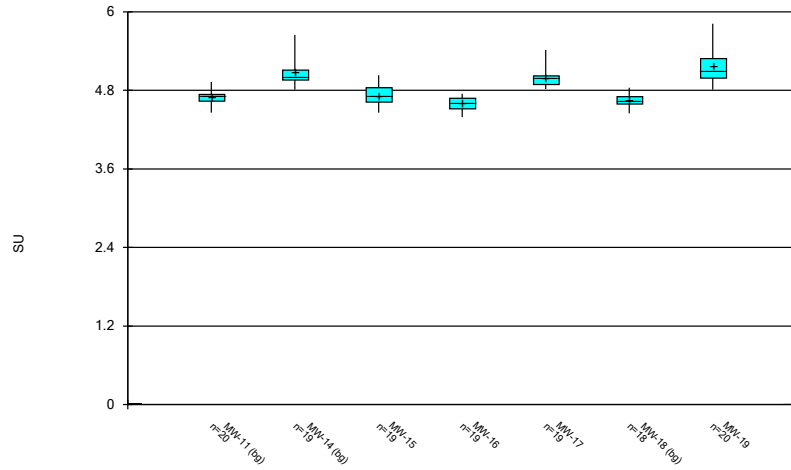
Constituent: Chloride Analysis Run 12/9/2022 8:06 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Box & Whiskers Plot



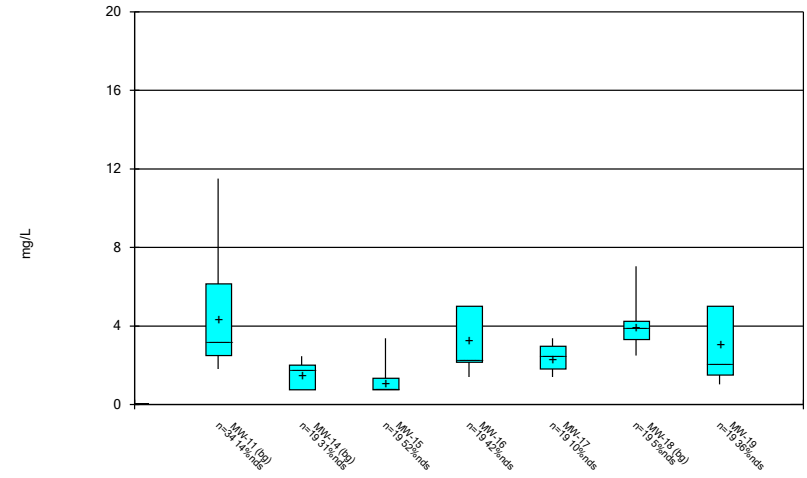
Constituent: Fluoride Analysis Run 12/9/2022 8:06 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Box & Whiskers Plot



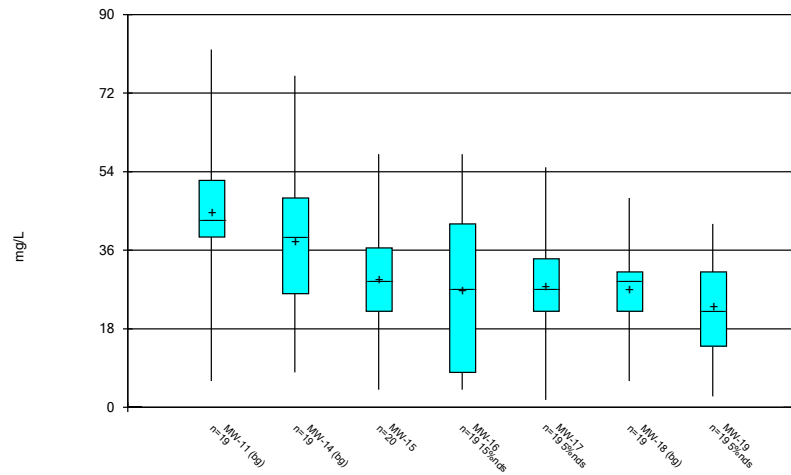
Constituent: pH Analysis Run 12/9/2022 8:06 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Box & Whiskers Plot



Constituent: Sulfate Analysis Run 12/9/2022 8:06 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:06 AM  
 Plant Daniel Client: Southern Company Data: NAMU CCR

FIGURE C.



# Outlier Summary

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:06 AM

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No values were flagged.

FIGURE D.

# Intrawell Prediction Limit - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-16	1.146	n/a	10/5/2022	1.19	Yes	18	0.8117	0.1645	0	None	No	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-19	0.8608	n/a	10/5/2022	2.16	Yes	12	0.7847	0.06412	0	None	sqrt(x)	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-16	10.07	n/a	10/5/2022	11.7	Yes	19	7.533	1.263	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-19	5.802	n/a	10/5/2022	5.94	Yes	17	706.2	208.1	5.882	None	x^4	0.00188	Param Intra 1 of 2	
Sulfate (mg/L)	MW-18	4.898	n/a	10/5/2022	6.04	Yes	17	3.696	0.585	5.882	None	No	0.00188	Param Intra 1 of 2	

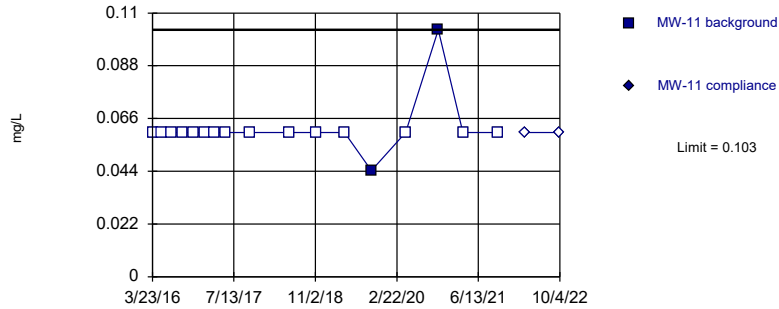
# Intrawell Prediction Limit - All Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	MW-11	0.103	n/a	10/4/2022	0.0601ND	No	17	n/a	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-14	0.0601	n/a	10/4/2022	0.0601ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-15	0.0601	n/a	10/4/2022	0.0601ND	No	17	n/a	n/a	n/a	94.12	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Boron (mg/L)	MW-18	0.0601	n/a	10/5/2022	0.0601ND	No	17	n/a	n/a	n/a	70.59	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Calcium (mg/L)	MW-11	2.125	n/a	10/4/2022	1.3	No	17	24.35	9.256	5.882	None	x^5	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-14	5.702	n/a	10/4/2022	2.56	No	17	3.406	1.117	5.882	None	No	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-15	1.597	n/a	10/4/2022	1.11	No	17	1.187	0.2	0	None	No	0.00188	Param Intra 1 of 2	
<b>Calcium (mg/L)</b>	<b>MW-16</b>	<b>1.146</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>1.19</b>	<b>Yes</b>	<b>18</b>	<b>0.8117</b>	<b>0.1645</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Calcium (mg/L)	MW-17	1.27	n/a	10/5/2022	0.755	No	17	0.01917	0.1071	0	None	ln(x)	0.00188	Param Intra 1 of 2	
Calcium (mg/L)	MW-18	0.9976	n/a	10/5/2022	0.285J	No	17	0.6866	0.1514	0	None	No	0.00188	Param Intra 1 of 2	
<b>Calcium (mg/L)</b>	<b>MW-19</b>	<b>0.8608</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>2.16</b>	<b>Yes</b>	<b>12</b>	<b>0.7847</b>	<b>0.06412</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Chloride (mg/L)	MW-11	16.08	n/a	10/4/2022	12	No	32	12.44	1.948	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-14	12.3	n/a	10/4/2022	11.2	No	17	8.927	1.643	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-15	10.02	n/a	10/4/2022	8.22	No	17	7.922	1.023	0	None	No	0.00188	Param Intra 1 of 2	
<b>Chloride (mg/L)</b>	<b>MW-16</b>	<b>10.07</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>11.7</b>	<b>Yes</b>	<b>19</b>	<b>7.533</b>	<b>1.263</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Chloride (mg/L)	MW-17	8.234	n/a	10/5/2022	5.51	No	17	6.738	0.7281	0	None	No	0.00188	Param Intra 1 of 2	
Chloride (mg/L)	MW-18	11.16	n/a	10/5/2022	4.97	No	17	8	1.54	0	None	No	0.00188	Param Intra 1 of 2	
<b>Chloride (mg/L)</b>	<b>MW-19</b>	<b>5.802</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>5.94</b>	<b>Yes</b>	<b>17</b>	<b>706.2</b>	<b>208.1</b>	<b>5.882</b>	<b>None</b>	<b>x^4</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Fluoride (mg/L)	MW-11	0.1	n/a	10/4/2022	0.0281J	No	17	n/a	n/a	41.18	n/a	n/a	0.005914	NP Intra (normality) 1 of 2	
Fluoride (mg/L)	MW-14	0.0411	n/a	10/4/2022	0.026ND	No	17	n/a	n/a	76.47	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-15	0.0484	n/a	10/4/2022	0.026ND	No	17	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-16	0.0496	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	76.47	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-17	0.0511	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-18	0.0764	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	64.71	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Fluoride (mg/L)	MW-19	0.0382	n/a	10/5/2022	0.026ND	No	17	n/a	n/a	82.35	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
pH (SU)	MW-11	4.927	4.479	10/4/2022	4.62	No	18	4.703	0.1101	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-14	5.519	4.651	10/4/2022	4.9	No	17	5.085	0.2112	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-15	5.006	4.405	10/4/2022	4.71	No	17	4.705	0.1462	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-16	4.808	4.41	10/5/2022	4.52	No	17	4.609	0.09695	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-17	5.314	4.695	10/5/2022	5	No	17	1.71	0.0172	0	None	x^(1/3)	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-18	4.833	4.445	10/5/2022	4.7	No	16	4.639	0.09337	0	None	No	0.0009398	Param Intra 1 of 2	
pH (SU)	MW-19	5.525	4.715	10/5/2022	5.3	No	18	5.12	0.1992	0	None	No	0.0009398	Param Intra 1 of 2	
Sulfate (mg/L)	MW-11	10.47	n/a	10/4/2022	2.04	No	32	1.364	0.5266	15.63	Kaplan-Meier	ln(x)	0.00188	Param Intra 1 of 2	
Sulfate (mg/L)	MW-14	2.474	n/a	10/4/2022	0.756ND	No	17	2.586	1.72	29.41	Kaplan-Meier	x^2	0.00188	Param Intra 1 of 2	
Sulfate (mg/L)	MW-15	3.38	n/a	10/4/2022	0.756ND	No	17	n/a	n/a	52.94	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2	
Sulfate (mg/L)	MW-16	5	n/a	10/5/2022	1.4	No	17	n/a	n/a	47.06	n/a	n/a	0.005914	NP Intra (normality) 1 of 2	
Sulfate (mg/L)	MW-17	3.508	n/a	10/5/2022	2.05	No	17	2.304	0.5866	11.76	None	No	0.00188	Param Intra 1 of 2	
<b>Sulfate (mg/L)</b>	<b>MW-18</b>	<b>4.898</b>	<b>n/a</b>	<b>10/5/2022</b>	<b>6.04</b>	<b>Yes</b>	<b>17</b>	<b>3.696</b>	<b>0.585</b>	<b>5.882</b>	<b>None</b>	<b>No</b>	<b>0.00188</b>	<b>Param Intra 1 of 2</b>	
Sulfate (mg/L)	MW-19	5	n/a	10/5/2022	1.02	No	17	n/a	n/a	41.18	n/a	n/a	0.005914	NP Intra (normality) 1 of 2	
Total Dissolved Solids (mg/L)	MW-11	76.12	n/a	10/4/2022	53	No	17	44	15.64	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-14	67.34	n/a	10/4/2022	52	No	17	36.35	15.09	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-15	54.62	n/a	10/4/2022	42	No	18	27.33	13.43	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-16	59.48	n/a	10/5/2022	42	No	17	24.46	17.05	17.65	Kaplan-Meier	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-17	43.75	n/a	10/5/2022	35	No	17	25.75	8.766	5.882	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-18	46.41	n/a	10/5/2022	34	No	17	26.88	9.506	0	None	No	0.00188	Param Intra 1 of 2	
Total Dissolved Solids (mg/L)	MW-19	43.34	n/a	10/5/2022	31	No	17	22.09	10.35	5.882	None	No	0.00188	Param Intra 1 of 2	

Within Limit

Prediction Limit  
Intrawell Non-parametric

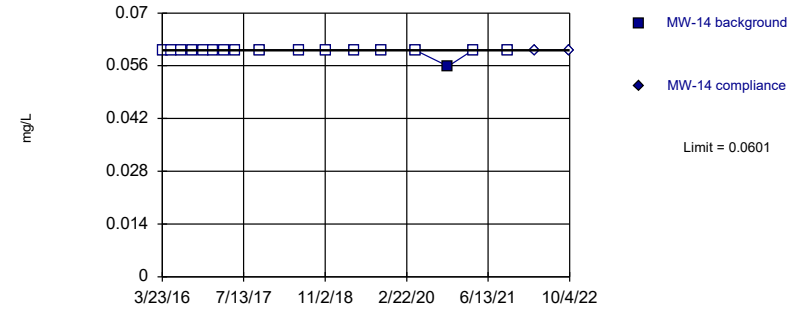


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

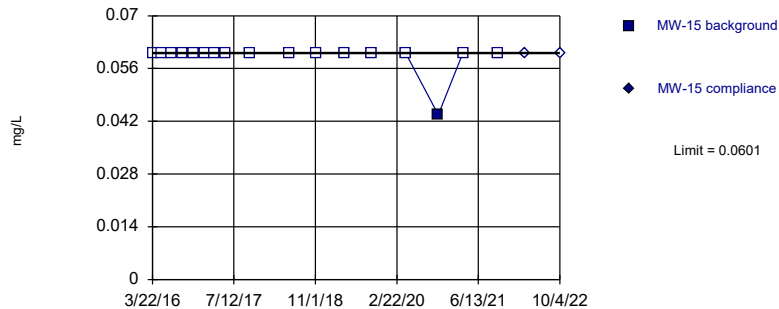


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

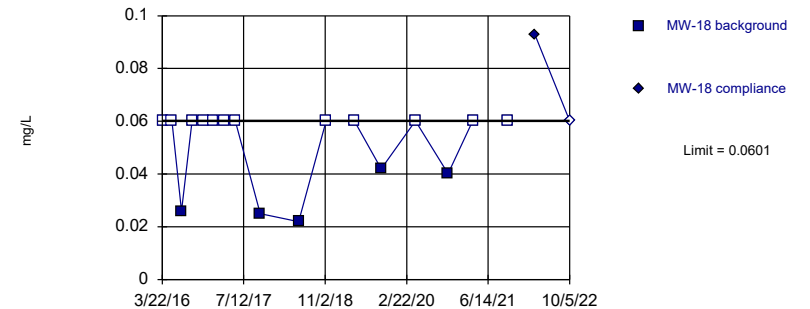


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric



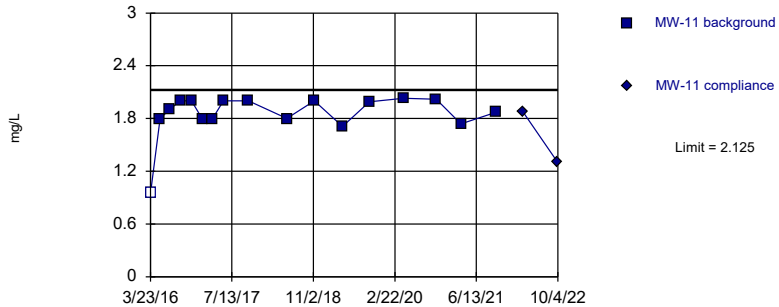
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 70.59% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Boron Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

### Prediction Limit

Intrawell Parametric



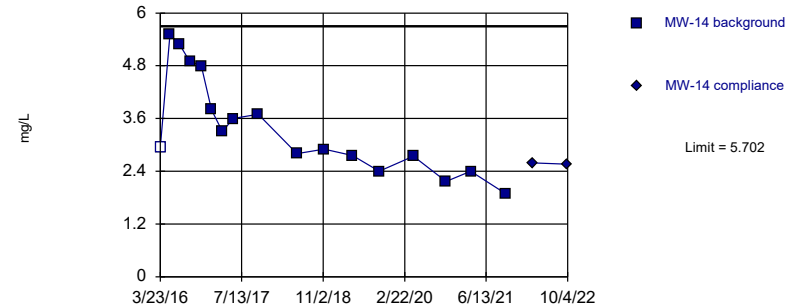
Background Data Summary (based on x<sup>5</sup> transformation): Mean=24.35, Std. Dev.=9.256, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8606, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

### Prediction Limit

Intrawell Parametric



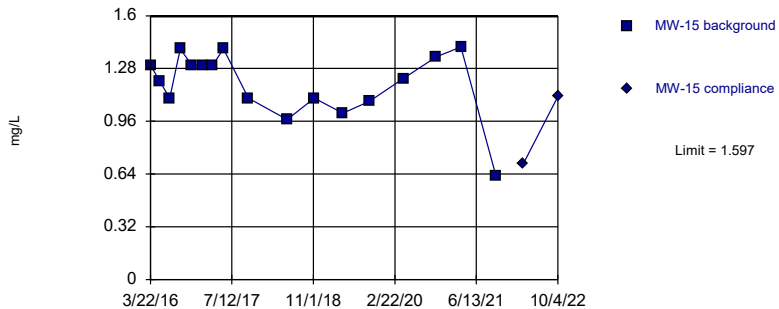
Background Data Summary: Mean=3.406, Std. Dev.=1.117, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9118, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

### Prediction Limit

Intrawell Parametric



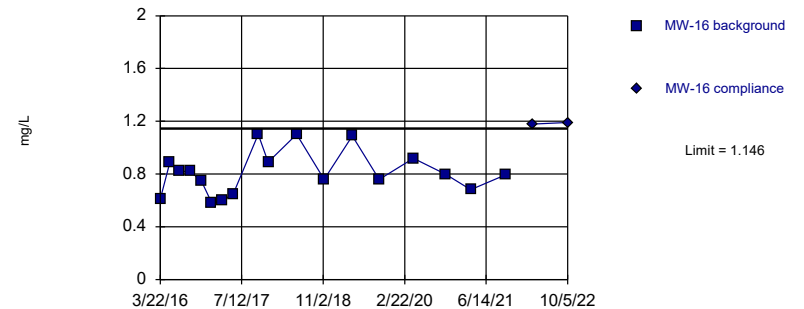
Background Data Summary: Mean=1.187, Std. Dev.=0.2, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8807, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

### Prediction Limit

Intrawell Parametric



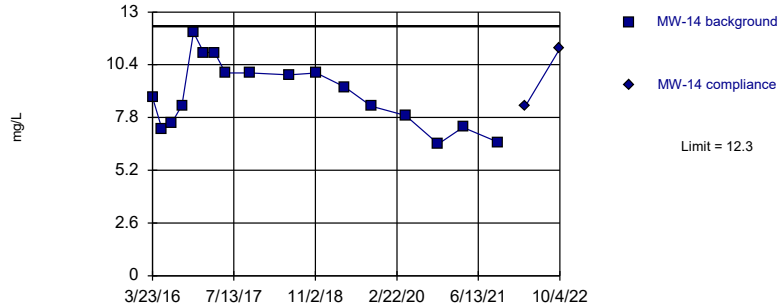
Background Data Summary: Mean=0.8117, Std. Dev.=0.1645, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9244, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Calcium Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR



Within Limit

### Prediction Limit Intrawell Parametric

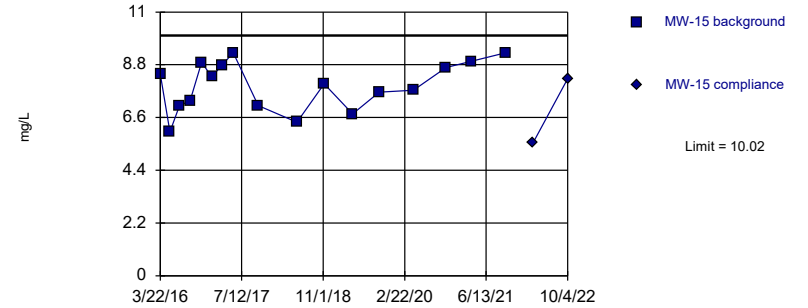


Background Data Summary: Mean=8.927, Std. Dev.=1.643, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9575, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

### Prediction Limit Intrawell Parametric

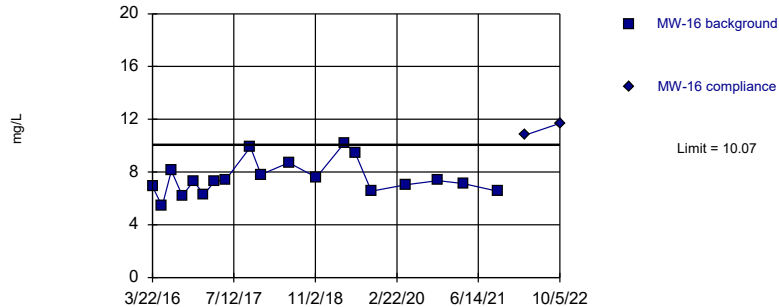


Background Data Summary: Mean=7.922, Std. Dev.=1.023, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9501, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

### Prediction Limit Intrawell Parametric

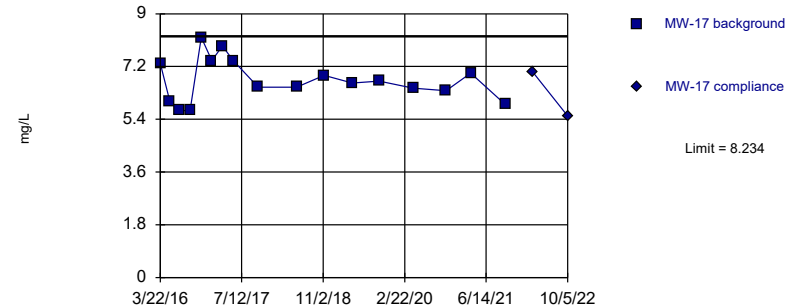


Background Data Summary: Mean=7.533, Std. Dev.=1.263, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9348, critical = 0.863. Kappa = 2.01 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

### Prediction Limit Intrawell Parametric



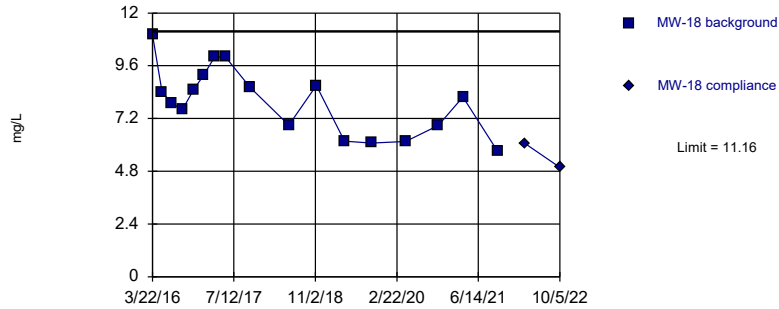
Background Data Summary: Mean=6.738, Std. Dev.=0.7281, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9598, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR



Within Limit

Prediction Limit  
Intrawell Parametric

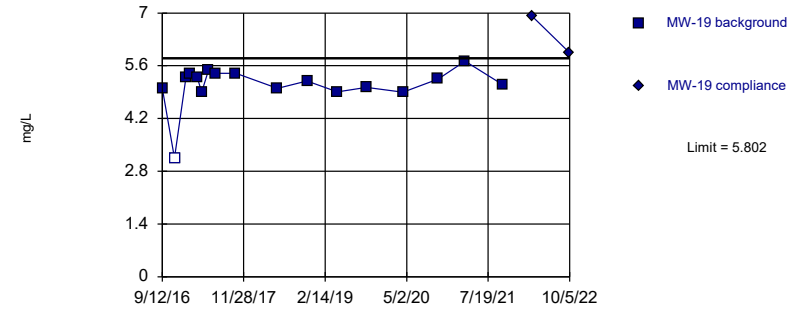


Background Data Summary: Mean=8, Std. Dev.=1.54, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.958, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit  
Intrawell Parametric

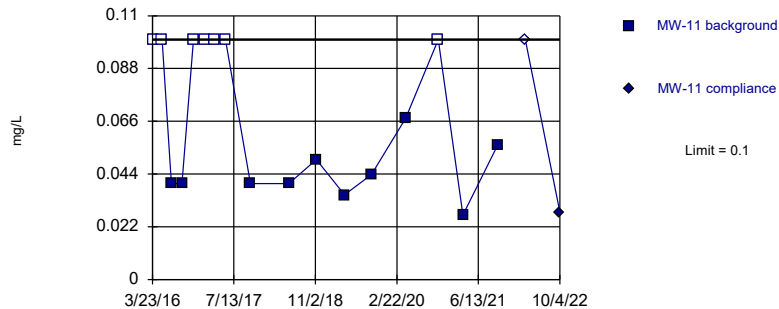


Background Data Summary (based on x^4 transformation): Mean=706.2, Std. Dev.=208.1, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.885, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Chloride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

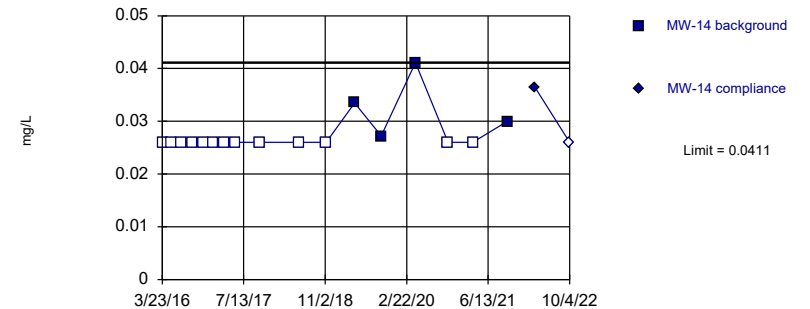


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 41.18% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

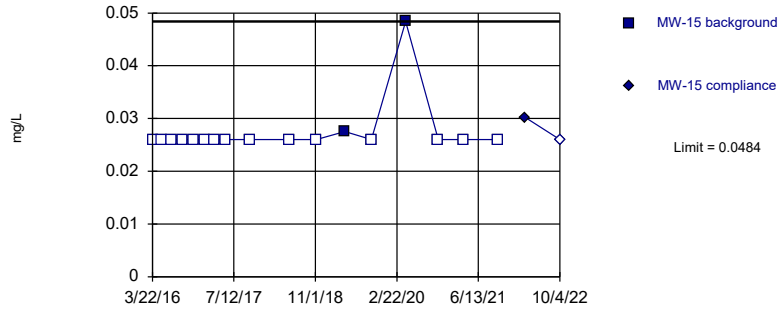


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

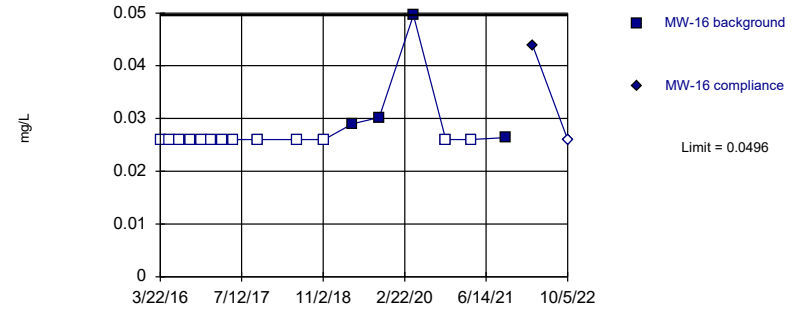


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

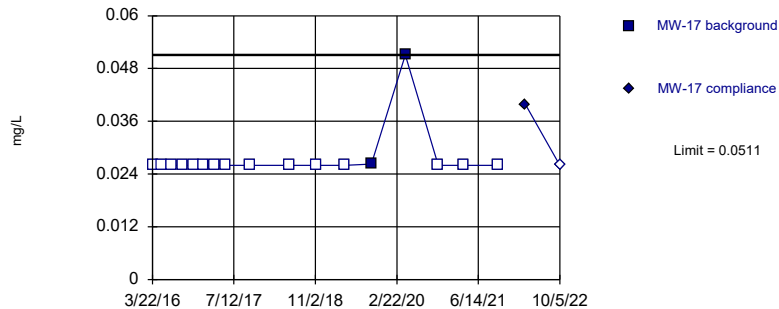


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

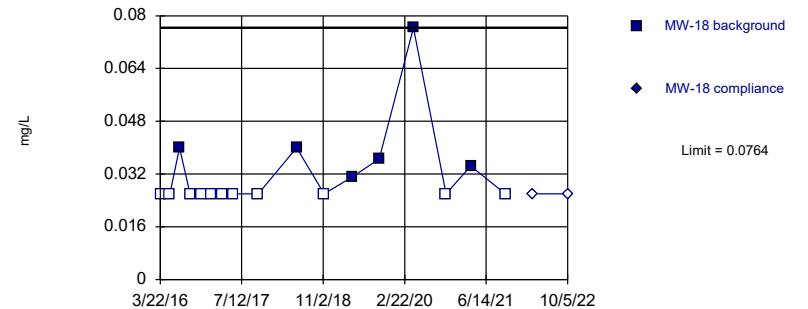


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

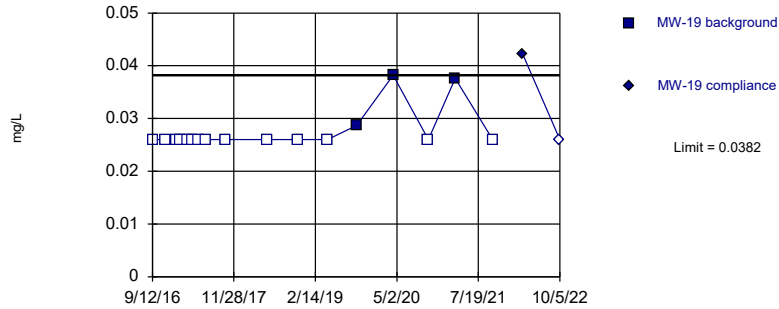
Within Limit

Prediction Limit  
Intrawell Non-parametric



Within Limit

Prediction Limit  
 Intrawell Non-parametric

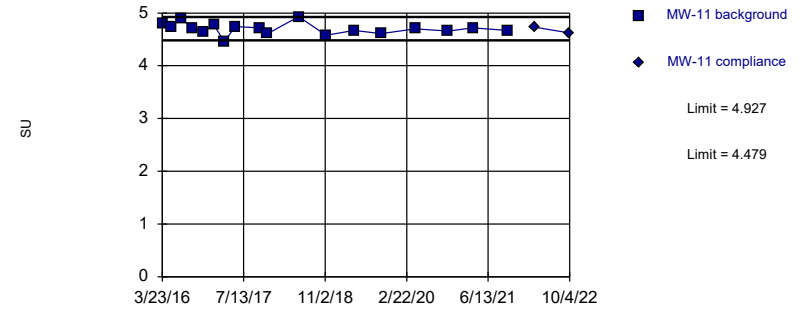


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 82.35% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

Prediction Limit  
 Intrawell Parametric

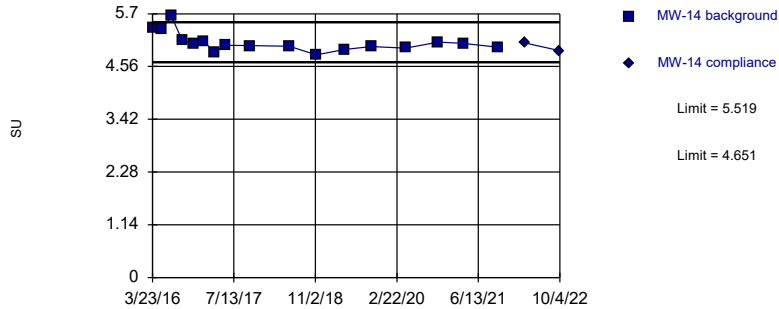


Background Data Summary: Mean=4.703, Std. Dev.=0.1101, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9628, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

Prediction Limit  
 Intrawell Parametric

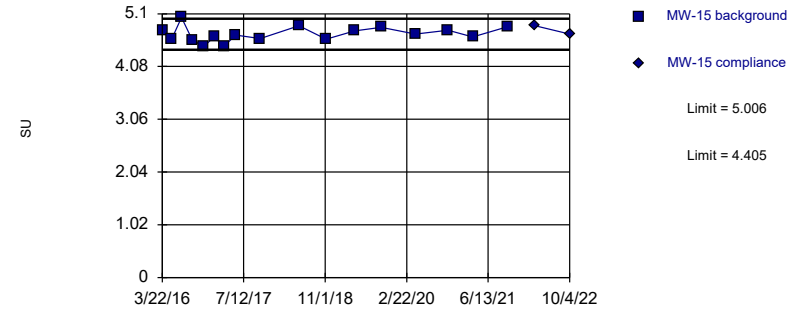


Background Data Summary: Mean=5.085, Std. Dev.=0.2112, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8539, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

Prediction Limit  
 Intrawell Parametric

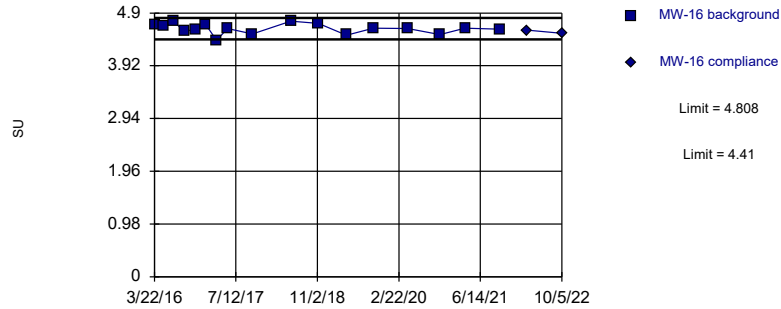


Background Data Summary: Mean=4.705, Std. Dev.=0.1462, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9668, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 12/9/2022 8:12 AM View: Intrawell  
 Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

### Prediction Limit Intrawell Parametric

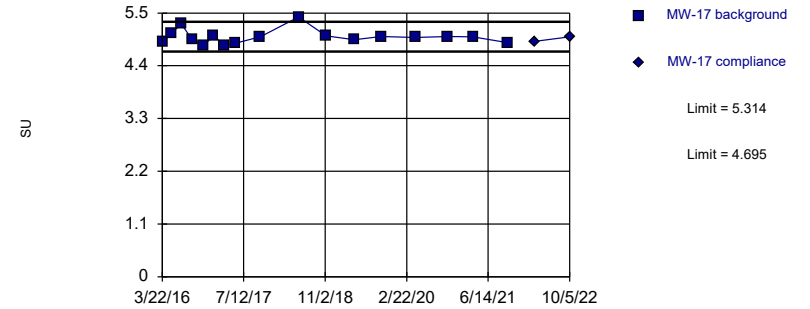


Background Data Summary: Mean=4.609, Std. Dev.=0.09695, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9549, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

### Prediction Limit Intrawell Parametric

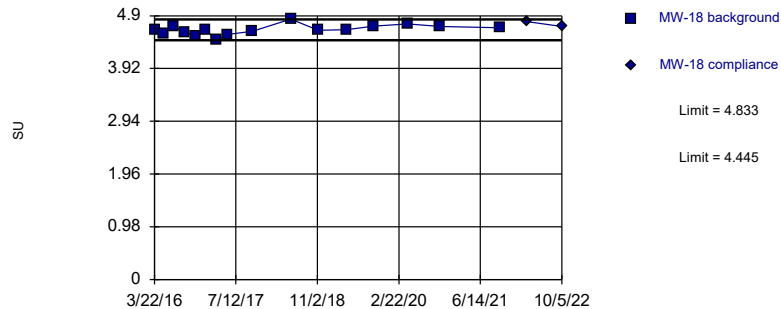


Background Data Summary (based on cube root transformation): Mean=1.71, Std. Dev.=0.0172, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8526, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

### Prediction Limit Intrawell Parametric

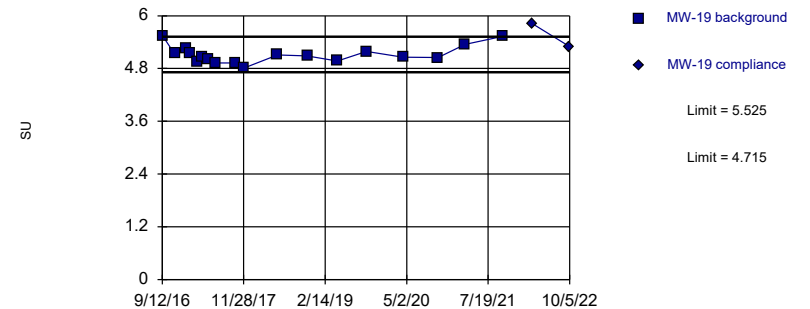


Background Data Summary: Mean=4.639, Std. Dev.=0.09337, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9831, critical = 0.844. Kappa = 2.076 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limits

### Prediction Limit Intrawell Parametric



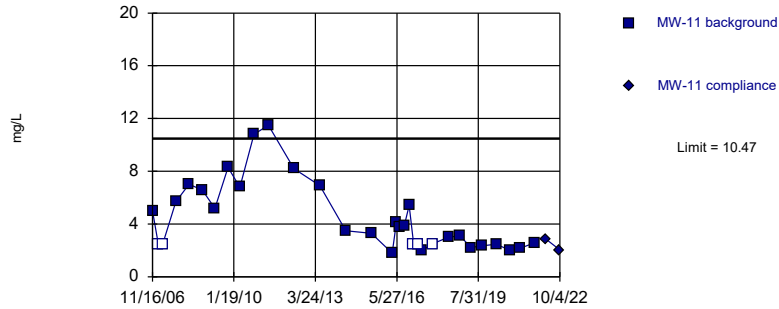
Background Data Summary: Mean=5.12, Std. Dev.=0.1992, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9196, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: pH Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit

Intrawell Parametric



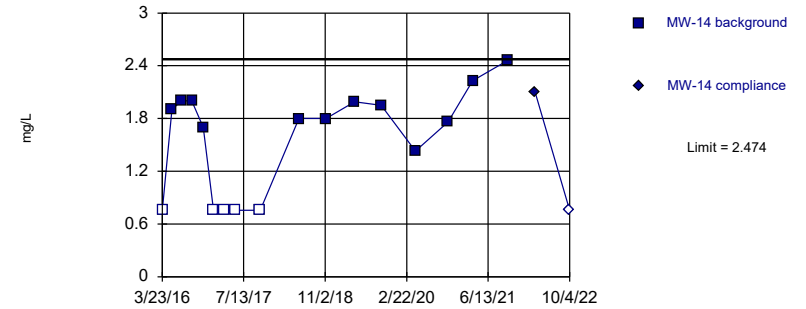
Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=1.364, Std. Dev.=0.5266, n=32, 15.63% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9191, critical = 0.904. Kappa = 1.87 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit

Intrawell Parametric



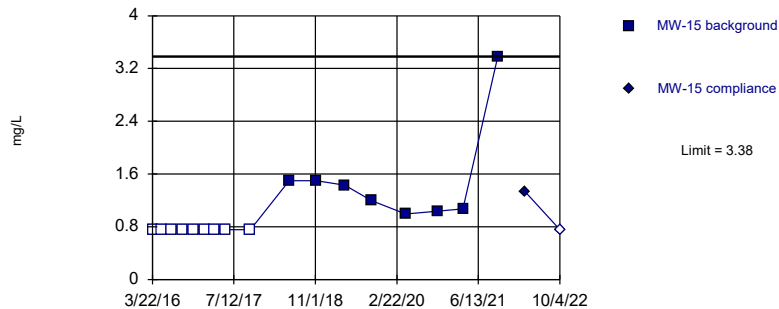
Background Data Summary (based on square transformation) (after Kaplan-Meier Adjustment): Mean=2.586, Std. Dev.=1.72, n=17, 29.41% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8933, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit

Intrawell Non-parametric



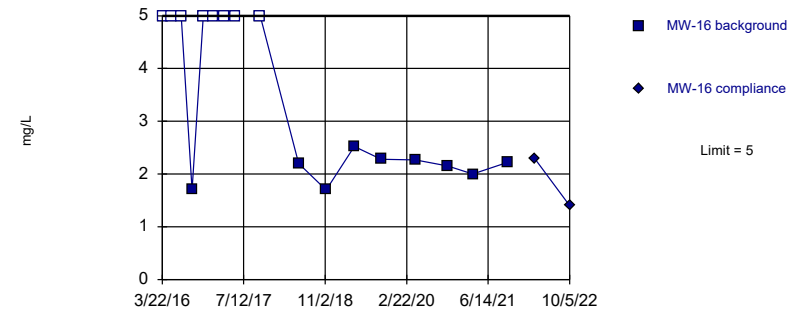
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 52.94% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Sulfate Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit

Intrawell Non-parametric



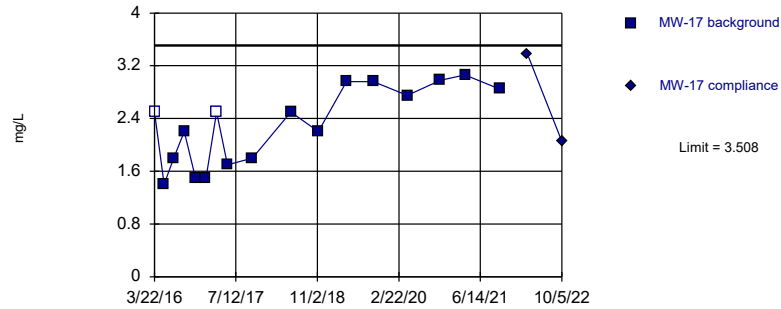
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 47.06% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Sulfate Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit

Intrawell Parametric



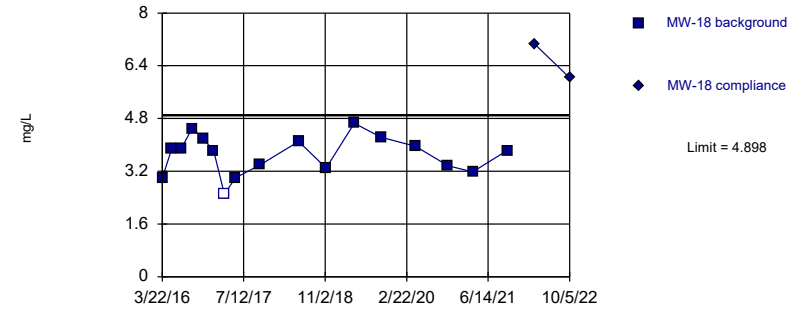
Background Data Summary: Mean=2.304, Std. Dev.=0.5866, n=17, 11.76% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9018, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Exceeds Limit

Prediction Limit

Intrawell Parametric



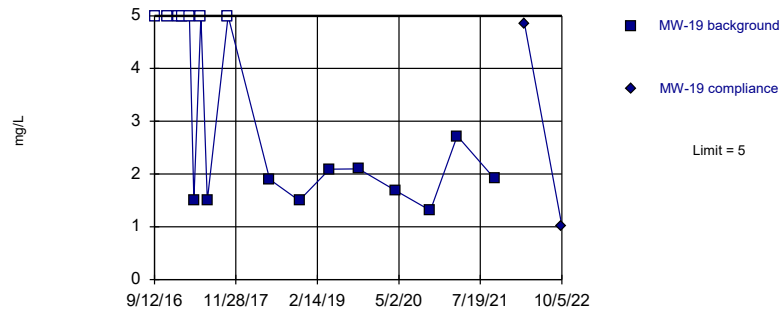
Background Data Summary: Mean=3.696, Std. Dev.=0.585, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9714, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Sulfate Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit

Intrawell Non-parametric



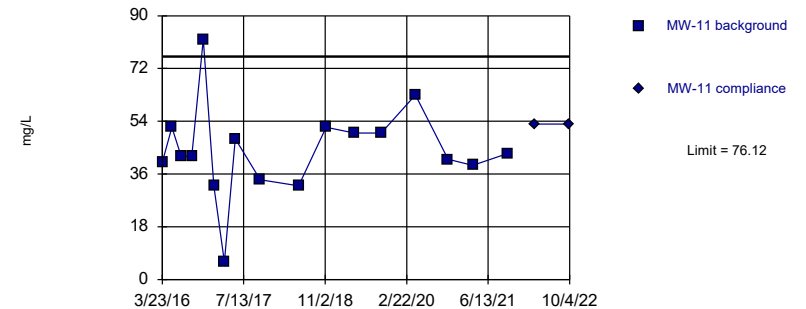
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 17 background values. 41.18% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Sulfate Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit

Intrawell Parametric

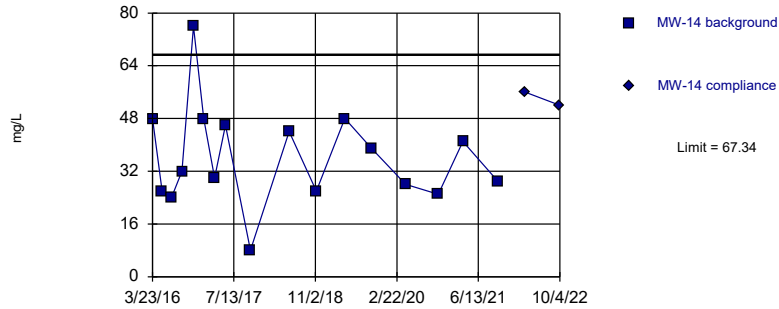


Background Data Summary: Mean=44, Std. Dev.=15.64, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9169, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

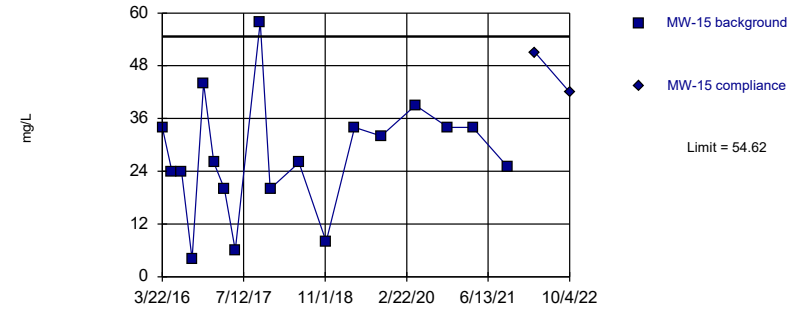


Background Data Summary: Mean=36.35, Std. Dev.=15.09, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9195, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

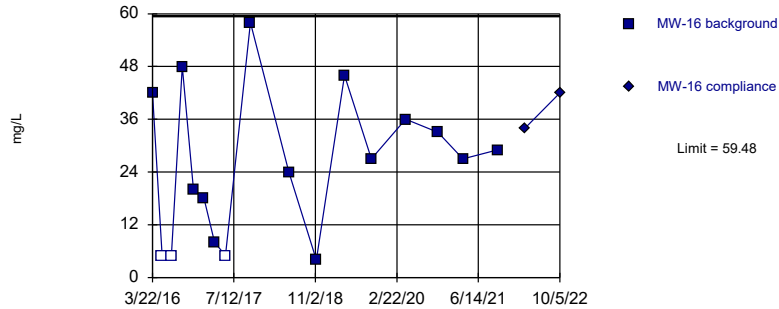


Background Data Summary: Mean=27.33, Std. Dev.=13.43, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9546, critical = 0.858. Kappa = 2.032 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

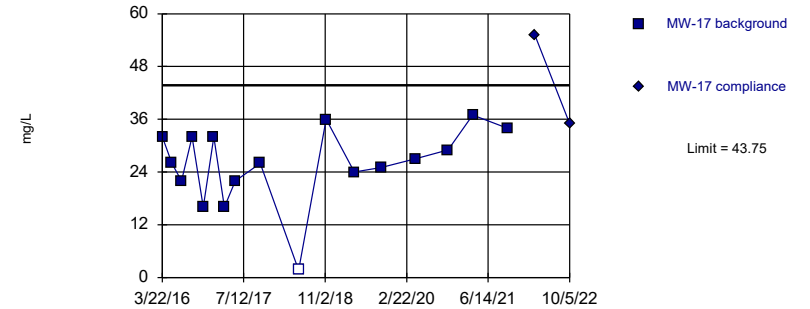


Background Data Summary (after Kaplan-Meier Adjustment): Mean=24.46, Std. Dev.=17.05, n=17, 17.65% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9377, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric

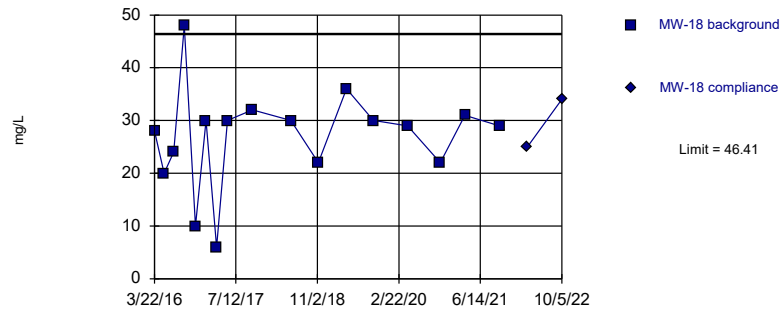


Background Data Summary: Mean=25.75, Std. Dev.=8.766, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9063, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Intrawell Parametric



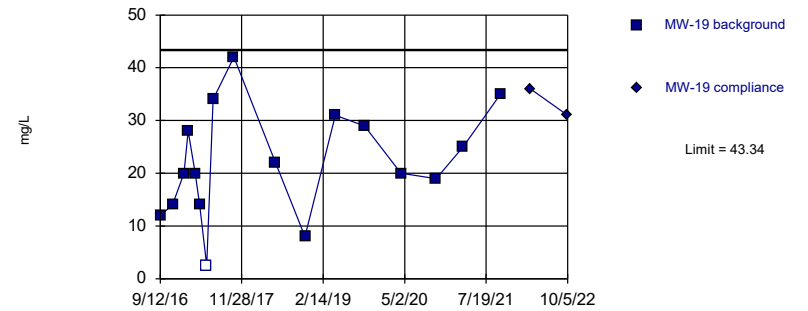
Background Data Summary: Mean=26.88, Std. Dev.=9.506, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9103, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

Within Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=22.09, Std. Dev.=10.35, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9883, critical = 0.851. Kappa = 2.054 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.00188.

Constituent: Total Dissolved Solids Analysis Run 12/9/2022 8:12 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR



# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	<0.0601 (B1)	
5/18/2016	<0.0601	
7/12/2016	<0.0601	
9/12/2016	<0.0601	
11/18/2016	<0.0601	
1/19/2017	<0.0601	
3/22/2017	<0.0601	
5/24/2017	<0.0601	
10/17/2017	<0.0601	
5/31/2018	<0.0601	
11/7/2018	<0.0601	
4/22/2019	<0.0601	
9/27/2019	0.0443 (J)	
4/13/2020	<0.0601	
10/22/2020	0.103	
3/16/2021	<0.0601	
10/5/2021	<0.0601	
3/15/2022		<0.0601
10/4/2022		<0.0601

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-14	MW-14
3/23/2016	<0.0601 (B1)	
5/18/2016	<0.0601	
7/12/2016	<0.0601	
9/12/2016	<0.0601	
11/19/2016	<0.0601	
1/18/2017	<0.0601	
3/22/2017	<0.0601	
5/24/2017	<0.0601	
10/17/2017	<0.0601	
6/1/2018	<0.0601	
11/7/2018	<0.0601	
4/23/2019	<0.0601	
9/26/2019	<0.0601	
4/13/2020	<0.0601	
10/22/2020	0.0559 (J)	
3/16/2021	<0.0601	
10/5/2021	<0.0601	
3/15/2022		<0.0601
10/4/2022		<0.0601

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	<0.0601 (B1)	
5/18/2016	<0.0601	
7/12/2016	<0.0601	
9/12/2016	<0.0601	
11/19/2016	<0.0601	
1/19/2017	<0.0601	
3/21/2017	<0.0601	
5/23/2017	<0.0601	
10/17/2017	<0.0601	
6/1/2018	<0.0601	
11/7/2018	<0.0601	
4/23/2019	<0.0601	
9/26/2019	<0.0601	
4/13/2020	<0.0601	
10/22/2020	0.0437 (J)	
3/16/2021	<0.0601	
10/5/2021	<0.0601	
3/15/2022		<0.0601
10/4/2022		<0.0601

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-18	MW-18
3/22/2016	<0.0601 (B1)	
5/18/2016	<0.0601	
7/12/2016	0.026 (J)	
9/12/2016	<0.0601	
11/18/2016	<0.0601	
1/18/2017	<0.0601	
3/21/2017	<0.0601	
5/24/2017	<0.0601	
10/17/2017	0.025 (J)	
5/31/2018	0.022 (J)	
11/8/2018	<0.0601	
4/22/2019	<0.0601	
9/26/2019	0.042 (J)	
4/14/2020	<0.0601	
10/22/2020	0.0401 (J)	
3/16/2021	<0.0601	
10/5/2021	<0.0601	
3/16/2022		0.0927
10/5/2022		<0.0601

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11	MW-11
3/23/2016	<1.9 (*)	
5/18/2016	1.8	
7/12/2016	1.9	
9/12/2016	2	
11/18/2016	2	
1/19/2017	1.8	
3/22/2017	1.8	
5/24/2017	2	
10/17/2017	2	
5/31/2018	1.8	
11/7/2018	2	
4/22/2019	1.71	
9/27/2019	1.99	
4/13/2020	2.03	
10/22/2020	2.02	
3/16/2021	1.74	
10/5/2021	1.87	
3/15/2022		1.87
10/4/2022		1.3

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<5.9 (*)	
5/18/2016	5.5	
7/12/2016	5.3	
9/12/2016	4.9	
11/19/2016	4.8	
1/18/2017	3.8	
3/22/2017	3.3	
5/24/2017	3.6	
10/17/2017	3.7	
6/1/2018	2.8	
11/7/2018	2.9	
4/23/2019	2.76	
9/26/2019	2.4	
4/13/2020	2.74	
10/22/2020	2.17	
3/16/2021	2.4	
10/5/2021	1.89	
3/15/2022		2.59
10/4/2022		2.56

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	1.3 (B1)	
5/18/2016	1.2	
7/12/2016	1.1	
9/12/2016	1.4	
11/19/2016	1.3	
1/19/2017	1.3	
3/21/2017	1.3	
5/23/2017	1.4	
10/17/2017	1.1	
6/1/2018	0.97	
11/7/2018	1.1	
4/23/2019	1.01	
9/26/2019	1.08	
4/13/2020	1.22	
10/22/2020	1.35	
3/16/2021	1.41	
10/5/2021	0.632	
3/15/2022		0.703
10/4/2022		1.11

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	0.61 (B1)	
5/18/2016	0.89	
7/11/2016	0.82	
9/13/2016	0.82	
11/17/2016	0.75	
1/18/2017	0.58	
3/21/2017	0.6	
5/23/2017	0.65	
10/17/2017	1.1	
12/15/2017	0.89 (RS)	
5/31/2018	1.1	
11/8/2018	0.76	
4/22/2019	1.09	
9/26/2019	0.758	
4/14/2020	0.92	
10/21/2020	0.798	
3/16/2021	0.681	
10/5/2021	0.793	
3/15/2022		1.18
10/5/2022		1.19



# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	1.4 (B1)	
5/18/2016	1	
7/12/2016	1.1	
9/12/2016	0.98	
11/18/2016	1	
1/18/2017	1	
3/21/2017	0.91	
5/24/2017	0.96	
10/17/2017	0.96	
5/31/2018	1.1	
11/8/2018	0.96	
4/22/2019	0.946	
9/26/2019	1.11	
4/13/2020	1.03	
10/22/2020	0.969	
3/16/2021	1.12	
10/5/2021	0.883	
3/16/2022		1.04
10/5/2022		0.755

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	0.93 (B1)	
5/18/2016	0.85	
7/12/2016	0.69	
9/12/2016	0.86	
11/18/2016	0.41	
1/18/2017	0.81	
3/21/2017	0.76	
5/24/2017	0.8	
10/17/2017	0.69	
5/31/2018	0.75	
11/8/2018	0.78	
4/22/2019	0.531	
9/26/2019	0.631	
4/14/2020	0.627	
10/22/2020	0.553	
3/16/2021	0.57	
10/5/2021	0.43 (J)	
3/16/2022		0.406 (J)
10/5/2022		0.285 (J)

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	0.92	
11/18/2016	0.68	
1/18/2017	0.64	
2/10/2017	0.58	
3/21/2017	0.56	
4/14/2017	0.51	
5/23/2017	0.54	
6/26/2017	0.66	
10/17/2017	0.58	
5/31/2018	0.56	
11/8/2018	0.57	
4/22/2019	0.634	
9/26/2019		1.24
4/13/2020		0.687
10/21/2020		0.806
3/16/2021		2.23
10/5/2021		3.67
3/15/2022		5.84
10/5/2022		2.16

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
11/16/2006	8.5	
2/5/2007	8.8	
4/12/2007	9.5	
10/17/2007	12.1	
4/17/2008	13.1	
10/24/2008	13.7	
4/21/2009	11.9	
10/26/2009	11	
4/12/2010	12.5	
10/30/2010	10.8	
5/25/2011	10	
5/25/2012	10.9	
5/28/2013	11.4	
5/31/2014	9.2	
5/29/2015	11.5	
3/23/2016	13	
5/18/2016	13	
7/12/2016	13	
9/12/2016	13	
11/18/2016	14	
1/19/2017	13	
3/22/2017	15	
5/24/2017	14	
10/17/2017	15	
5/31/2018	12	
11/7/2018	14	
4/22/2019	13.3	
9/27/2019	13.4	
4/13/2020	14.2	
10/22/2020	17.4	
3/16/2021	13.3	
10/5/2021	12.5	
3/15/2022		13.6
10/4/2022		12

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	8.8 (B1)	
5/18/2016	7.2	
7/12/2016	7.5	
9/12/2016	8.4	
11/19/2016	12	
1/18/2017	11	
3/22/2017	11	
5/24/2017	10	
10/17/2017	10	
6/1/2018	9.9	
11/7/2018	10	
4/23/2019	9.3	
9/26/2019	8.35	
4/13/2020	7.9	
10/22/2020	6.5	
3/16/2021	7.32	
10/5/2021	6.59	
3/15/2022		8.36
10/4/2022		11.2

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	8.4 (B1)	
5/18/2016	6	
7/12/2016	7.1	
9/12/2016	7.3	
11/19/2016	8.9	
1/19/2017	8.3	
3/21/2017	8.8	
5/23/2017	9.3	
10/17/2017	7.1	
6/1/2018	6.4	
11/7/2018	8	
4/23/2019	6.75	
9/26/2019	7.66	
4/13/2020	7.74	
10/22/2020	8.69	
3/16/2021	8.94	
10/5/2021	9.3	
3/15/2022		5.55
10/4/2022		8.22

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	6.9 (B1)	
5/18/2016	5.4	
7/11/2016	8.1	
9/13/2016	6.2	
11/17/2016	7.3	
1/18/2017	6.3	
3/21/2017	7.3	
5/23/2017	7.4	
10/17/2017	9.9	
12/19/2017	7.8 (RS)	
5/31/2018	8.7	
11/8/2018	7.6	
4/22/2019	10.2	
6/25/2019	9.4	
9/26/2019	6.54	
4/14/2020	7.03	
10/21/2020	7.36	
3/16/2021	7.14	
10/5/2021	6.55	
3/15/2022		10.8
10/5/2022		11.7

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	7.3 (B1)	
5/18/2016	6	
7/12/2016	5.7	
9/12/2016	5.7	
11/18/2016	8.2	
1/18/2017	7.4	
3/21/2017	7.9	
5/24/2017	7.4	
10/17/2017	6.5	
5/31/2018	6.5	
11/8/2018	6.9	
4/22/2019	6.64	
9/26/2019	6.7	
4/13/2020	6.46	
10/22/2020	6.37	
3/16/2021	6.97	
10/5/2021	5.91	
3/16/2022		7
10/5/2022		5.51



# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	11 (B1)	
5/18/2016	8.4	
7/12/2016	7.9	
9/12/2016	7.6	
11/18/2016	8.5	
1/18/2017	9.2	
3/21/2017	10	
5/24/2017	10	
10/17/2017	8.6	
5/31/2018	6.9	
11/8/2018	8.7	
4/22/2019	6.17	
9/26/2019	6.09	
4/14/2020	6.15	
10/22/2020	6.89	
3/16/2021	8.18	
10/5/2021	5.72	
3/16/2022		6.05
10/5/2022		4.97

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-19	MW-19
9/12/2016	5	
11/18/2016	<6.3 (*)	
1/18/2017	5.3	
2/10/2017	5.4	
3/21/2017	5.3	
4/14/2017	4.9 (B)	
5/23/2017	5.5	
6/26/2017	5.4	
10/17/2017	5.4	
5/31/2018	5	
11/8/2018	5.2	
4/22/2019	4.91	
9/26/2019	5.03	
4/13/2020	4.9	
10/21/2020	5.25	
3/16/2021	5.72	
10/5/2021	5.1	
3/15/2022		6.91
10/5/2022		5.94

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11	MW-11
3/23/2016	<0.1	
5/18/2016	<0.1	
7/12/2016	0.04 (J)	
9/12/2016	0.04 (J)	
11/18/2016	<0.1	
1/19/2017	<0.1	
3/22/2017	<0.1	
5/24/2017	<0.1	
10/17/2017	0.04 (J)	
5/31/2018	0.04 (J)	
11/7/2018	0.05 (J)	
4/22/2019	0.0353 (J)	
9/27/2019	0.0438 (J)	
4/13/2020	0.0672 (J)	
10/22/2020	<0.1	
3/16/2021	0.0269 (J)	
10/5/2021	0.0561 (J)	
3/15/2022		<0.1
10/4/2022		0.0281 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-14	MW-14
3/23/2016	<0.026 (B1)	
5/18/2016	<0.026	
7/12/2016	<0.026	
9/12/2016	<0.026	
11/19/2016	<0.026	
1/18/2017	<0.026	
3/22/2017	<0.026	
5/24/2017	<0.026	
10/17/2017	<0.026	
6/1/2018	<0.026	
11/7/2018	<0.026	
4/23/2019	0.0335 (J)	
9/26/2019	0.0272 (J)	
4/13/2020	0.0411 (J)	
10/22/2020	<0.026	
3/16/2021	<0.026	
10/5/2021	0.03 (J)	
3/15/2022		0.0364 (J)
10/4/2022		<0.026

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-15	MW-15
3/22/2016	<0.026 (B1)	
5/18/2016	<0.026	
7/12/2016	<0.026	
9/12/2016	<0.026	
11/19/2016	<0.026	
1/19/2017	<0.026	
3/21/2017	<0.026	
5/23/2017	<0.026	
10/17/2017	<0.026	
6/1/2018	<0.026	
11/7/2018	<0.026	
4/23/2019	0.0275 (J)	
9/26/2019	<0.026	
4/13/2020	0.0484 (J)	
10/22/2020	<0.026	
3/16/2021	<0.026	
10/5/2021	<0.026	
3/15/2022		0.0302 (J)
10/4/2022		<0.026

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-16	MW-16
3/22/2016	<0.026 (B1)	
5/18/2016	<0.026	
7/11/2016	<0.026	
9/13/2016	<0.026	
11/17/2016	<0.026	
1/18/2017	<0.026	
3/21/2017	<0.026	
5/23/2017	<0.026	
10/17/2017	<0.026	
5/31/2018	<0.026	
11/8/2018	<0.026	
4/22/2019	0.029 (J)	
9/26/2019	0.0302 (J)	
4/14/2020	0.0496 (J)	
10/21/2020	<0.026	
3/16/2021	<0.026	
10/5/2021	0.0264 (J)	
3/15/2022		0.0438 (J)
10/5/2022		<0.026

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	<0.026 (B1)	
5/18/2016	<0.026	
7/12/2016	<0.026	
9/12/2016	<0.026	
11/18/2016	<0.026	
1/18/2017	<0.026	
3/21/2017	<0.026	
5/24/2017	<0.026	
10/17/2017	<0.026	
5/31/2018	<0.026	
11/8/2018	<0.026	
4/22/2019	<0.026	
9/26/2019	0.0263 (J)	
4/13/2020	0.0511 (J)	
10/22/2020	<0.026	
3/16/2021	<0.026	
10/5/2021	<0.026	
3/16/2022		0.0399 (J)
10/5/2022		<0.026

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-18	MW-18
3/22/2016	<0.026 (B1)	
5/18/2016	<0.026	
7/12/2016	0.04 (J)	
9/12/2016	<0.026	
11/18/2016	<0.026	
1/18/2017	<0.026	
3/21/2017	<0.026	
5/24/2017	<0.026	
10/17/2017	<0.026	
5/31/2018	0.04 (J)	
11/8/2018	<0.026	
4/22/2019	0.0311 (J)	
9/26/2019	0.0366 (J)	
4/14/2020	0.0764 (J)	
10/22/2020	<0.026	
3/16/2021	0.0344 (J)	
10/5/2021	<0.026	
3/16/2022		<0.026
10/5/2022		<0.026



# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-19	MW-19
9/12/2016	<0.026	
11/18/2016	<0.026	
1/18/2017	<0.026	
2/10/2017	<0.026	
3/21/2017	<0.026	
4/14/2017	<0.026	
5/23/2017	<0.026	
6/26/2017	<0.026	
10/17/2017	<0.026	
5/31/2018	<0.026	
11/8/2018	<0.026	
4/22/2019	<0.026	
9/26/2019	0.0287 (J)	
4/13/2020	0.0382 (J)	
10/21/2020	<0.026	
3/16/2021	0.0376 (J)	
10/5/2021	<0.026	
3/15/2022		0.0423 (J)
10/5/2022		<0.026

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11	MW-11
3/23/2016	4.8	
5/18/2016	4.74	
7/12/2016	4.9	
9/12/2016	4.72	
11/18/2016	4.65	
1/19/2017	4.77	
3/22/2017	4.46	
5/24/2017	4.74	
10/17/2017	4.72	
11/30/2017	4.61	
5/31/2018	4.93	
11/7/2018	4.58	
4/22/2019	4.67	
9/27/2019	4.61	
4/13/2020	4.7	
10/22/2020	4.66	
3/16/2021	4.72	
10/5/2021	4.67	
3/15/2022		4.73
10/4/2022		4.62

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	5.4	
5/18/2016	5.38	
7/12/2016	5.65	
9/12/2016	5.14	
11/19/2016	5.05	
1/18/2017	5.11	
3/22/2017	4.86	
5/24/2017	5.02	
10/17/2017	5.01	
6/1/2018	5	
11/7/2018	4.81	
4/23/2019	4.93	
9/26/2019	4.99	
4/13/2020	4.96	
10/22/2020	5.09	
3/16/2021	5.06	
10/5/2021	4.98	
3/15/2022		5.07
10/4/2022		4.9

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	4.77	
5/18/2016	4.62	
7/12/2016	5.03	
9/12/2016	4.6	
11/19/2016	4.46	
1/19/2017	4.65	
3/21/2017	4.47	
5/23/2017	4.69	
10/17/2017	4.62	
6/1/2018	4.87	
11/7/2018	4.61	
4/23/2019	4.77	
9/26/2019	4.84	
4/13/2020	4.71	
10/22/2020	4.78	
3/16/2021	4.65	
10/5/2021	4.85	
3/15/2022		4.87
10/4/2022		4.71

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-16	MW-16
3/22/2016	4.68	
5/18/2016	4.67	
7/11/2016	4.75	
9/13/2016	4.56	
11/17/2016	4.6	
1/18/2017	4.68	
3/21/2017	4.39	
5/23/2017	4.61	
10/17/2017	4.51	
5/31/2018	4.75	
11/8/2018	4.71	
4/22/2019	4.49	
9/26/2019	4.62	
4/14/2020	4.61	
10/21/2020	4.5	
3/16/2021	4.62	
10/5/2021	4.6	
3/15/2022		4.58
10/5/2022		4.52

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-17	MW-17
3/22/2016	4.89	
5/18/2016	5.09	
7/12/2016	5.27	
9/12/2016	4.94	
11/18/2016	4.82	
1/18/2017	5.02	
3/21/2017	4.82	
5/24/2017	4.87	
10/17/2017	5	
5/31/2018	5.42	
11/8/2018	5.02	
4/22/2019	4.94	
9/26/2019	5.01	
4/13/2020	4.99	
10/22/2020	5.01	
3/16/2021	5	
10/5/2021	4.88	
3/16/2022		4.91
10/5/2022		5

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-18	MW-18
3/22/2016	4.63	
5/18/2016	4.58	
7/12/2016	4.7	
9/12/2016	4.6	
11/18/2016	4.52	
1/18/2017	4.63	
3/21/2017	4.45	
5/24/2017	4.55	
10/17/2017	4.61	
5/31/2018	4.84	
11/8/2018	4.63	
4/22/2019	4.64	
9/26/2019	4.71	
4/14/2020	4.75	
10/22/2020	4.7	
10/5/2021	4.68	
3/16/2022		4.79
10/5/2022		4.7

# Prediction Limit

Constituent: pH (SU) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-19	MW-19
9/12/2016	5.55	
11/18/2016	5.14	
1/18/2017	5.27	
2/10/2017	5.14	
3/21/2017	4.96	
4/14/2017	5.07	
5/23/2017	5.01	
6/26/2017	4.93	
10/17/2017	4.93	
11/30/2017	4.81	
5/31/2018	5.11	
11/8/2018	5.09	
4/22/2019	4.97	
9/26/2019	5.19	
4/13/2020	5.06	
10/21/2020	5.05	
3/16/2021	5.35	
10/5/2021	5.53	
3/15/2022		5.82
10/5/2022		5.3



# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11	MW-11
11/16/2006	5	
2/5/2007	<5	
4/12/2007	<5	
10/17/2007	5.7	
4/17/2008	7	
10/24/2008	6.6	
4/21/2009	5.2	
10/26/2009	8.3	
4/12/2010	6.8	
10/30/2010	10.8	
5/25/2011	11.5	
5/25/2012	8.2	
5/28/2013	6.9	
5/31/2014	3.5	
5/29/2015	3.3	
3/23/2016	1.8 (J)	
5/18/2016	4.1	
7/12/2016	3.8 (J)	
9/12/2016	3.9 (J)	
11/18/2016	5.4	
1/19/2017	<5	
3/22/2017	<5	
5/24/2017	2 (J)	
10/17/2017	<5	
5/31/2018	3 (J)	
11/7/2018	3.1 (J)	
4/22/2019	2.22	
9/27/2019	2.36	
4/13/2020	2.47	
10/22/2020	2.01	
3/16/2021	2.15	
10/5/2021	2.57	
3/15/2022		2.88
10/4/2022		2.04

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	<0.756	
5/18/2016	1.9	
7/12/2016	2 (J)	
9/12/2016	2 (J)	
11/19/2016	1.7 (J)	
1/18/2017	<0.756	
3/22/2017	<0.756	
5/24/2017	<0.756	
10/17/2017	<0.756	
6/1/2018	1.8 (J)	
11/7/2018	1.8 (J)	
4/23/2019	1.99	
9/26/2019	1.95	
4/13/2020	1.43	
10/22/2020	1.76	
3/16/2021	2.23	
10/5/2021	2.46	
3/15/2022		2.1
10/4/2022		<0.756

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-15	MW-15
3/22/2016	<0.756	
5/18/2016	<0.756	
7/12/2016	<0.756	
9/12/2016	<0.756	
11/19/2016	<0.756	
1/19/2017	<0.756	
3/21/2017	<0.756	
5/23/2017	<0.756	
10/17/2017	<0.756	
6/1/2018	1.5 (J)	
11/7/2018	1.5 (J)	
4/23/2019	1.43	
9/26/2019	1.2	
4/13/2020	0.992 (J)	
10/22/2020	1.04	
3/16/2021	1.07	
10/5/2021	3.38	
3/15/2022		1.33
10/4/2022		<0.756

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-16	MW-16
3/22/2016	<5	
5/18/2016	<5	
7/11/2016	<5	
9/13/2016	1.7 (J)	
11/17/2016	<5	
1/18/2017	<5	
3/21/2017	<5	
5/23/2017	<5	
10/17/2017	<5	
5/31/2018	2.2 (J)	
11/8/2018	1.7 (J)	
4/22/2019	2.52	
9/26/2019	2.28	
4/14/2020	2.27	
10/21/2020	2.15	
3/16/2021	2	
10/5/2021	2.22	
3/15/2022		2.29
10/5/2022		1.4

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-17	MW-17
3/22/2016	<5	
5/18/2016	1.4	
7/12/2016	1.8 (J)	
9/12/2016	2.2 (J)	
11/18/2016	1.5 (J)	
1/18/2017	1.5 (J)	
3/21/2017	<5	
5/24/2017	1.7 (J)	
10/17/2017	1.8 (J)	
5/31/2018	2.5 (J)	
11/8/2018	2.2 (J)	
4/22/2019	2.96	
9/26/2019	2.96	
4/13/2020	2.75	
10/22/2020	2.98	
3/16/2021	3.06	
10/5/2021	2.85	
3/16/2022		3.38
10/5/2022		2.05

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-18	MW-18
3/22/2016	3 (J)	
5/18/2016	3.9 (J)	
7/12/2016	3.9 (J)	
9/12/2016	4.5 (J)	
11/18/2016	4.2 (J)	
1/18/2017	3.8 (J)	
3/21/2017	<5 (*)	
5/24/2017	3 (J)	
10/17/2017	3.4 (J)	
5/31/2018	4.1 (J)	
11/8/2018	3.3 (J)	
4/22/2019	4.66	
9/26/2019	4.23	
4/14/2020	3.96	
10/22/2020	3.37	
3/16/2021	3.18	
10/5/2021	3.83	
3/16/2022		7.04
10/5/2022		6.04

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-19	MW-19
9/12/2016	<5	
11/18/2016	<5	
1/18/2017	<5	
2/10/2017	<5	
3/21/2017	<5	
4/14/2017	1.5 (J)	
5/23/2017	<5	
6/26/2017	1.5 (J)	
10/17/2017	<5	
5/31/2018	1.9 (J)	
11/8/2018	1.5 (J)	
4/22/2019	2.09	
9/26/2019	2.1	
4/13/2020	1.69	
10/21/2020	1.31	
3/16/2021	2.72	
10/5/2021	1.91	
3/15/2022		4.86
10/5/2022		1.02

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-11	MW-11
3/23/2016	40	
5/18/2016	52	
7/12/2016	42	
9/12/2016	42	
11/18/2016	82	
1/19/2017	32	
3/22/2017	6	
5/24/2017	48	
10/17/2017	34	
5/31/2018	32	
11/7/2018	52	
4/22/2019	50	
9/27/2019	50	
4/13/2020	63	
10/22/2020	41	
3/16/2021	39	
10/5/2021	43	
3/15/2022		53
10/4/2022		53



# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-14	MW-14
3/23/2016	48 (B1)	
5/18/2016	26	
7/12/2016	24	
9/12/2016	32	
11/19/2016	76	
1/18/2017	48	
3/22/2017	30	
5/24/2017	46	
10/17/2017	8	
6/1/2018	44	
11/7/2018	26	
4/23/2019	48	
9/26/2019	39	
4/13/2020	28	
10/22/2020	25	
3/16/2021	41	
10/5/2021	29	
3/15/2022		56
10/4/2022		52

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-15	MW-15
3/22/2016	34 (B1)	
5/18/2016	24	
7/12/2016	24	
9/12/2016	4 (J)	
11/19/2016	44	
1/19/2017	26	
3/21/2017	20	
5/23/2017	6	
10/17/2017	58	
12/15/2017	20 (RS)	
6/1/2018	26	
11/7/2018	8	
4/23/2019	34	
9/26/2019	32	
4/13/2020	39	
10/22/2020	34	
3/16/2021	34	
10/5/2021	25	
3/15/2022		51
10/4/2022		42

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-16	MW-16
3/22/2016	42 (B1)	
5/18/2016	<5	
7/11/2016	<5	
9/13/2016	48	
11/17/2016	20	
1/18/2017	18	
3/21/2017	8	
5/23/2017	<5	
10/17/2017	58	
5/31/2018	24	
11/8/2018	4 (J)	
4/22/2019	46	
9/26/2019	27	
4/14/2020	36	
10/21/2020	33	
3/16/2021	27	
10/5/2021	29	
3/15/2022		34
10/5/2022		42

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-17	MW-17
3/22/2016	32 (B1)	
5/18/2016	26	
7/12/2016	22	
9/12/2016	32	
11/18/2016	16	
1/18/2017	32	
3/21/2017	16	
5/24/2017	22	
10/17/2017	26	
5/31/2018	<3.4	
11/8/2018	36	
4/22/2019	24	
9/26/2019	25	
4/13/2020	27	
10/22/2020	29	
3/16/2021	37	
10/5/2021	34	
3/16/2022		55
10/5/2022		35

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:13 AM View: IntraWell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-18	MW-18
3/22/2016	28 (B1)	
5/18/2016	20	
7/12/2016	24	
9/12/2016	48	
11/18/2016	10	
1/18/2017	30	
3/21/2017	6	
5/24/2017	30	
10/17/2017	32	
5/31/2018	30	
11/8/2018	22	
4/22/2019	36	
9/26/2019	30	
4/14/2020	29	
10/22/2020	22	
3/16/2021	31	
10/5/2021	29	
3/16/2022		25
10/5/2022		34

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/9/2022 8:13 AM View: Intrawell  
Plant Daniel Client: Southern Company Data: NAMU CCR

---

	MW-19	MW-19
9/12/2016	12	
11/18/2016	14	
1/18/2017	20	
2/10/2017	28	
3/21/2017	20	
4/14/2017	14	
5/23/2017	<5	
6/26/2017	34	
10/17/2017	42	
5/31/2018	22	
11/8/2018	8	
4/22/2019	31	
9/26/2019	29	
4/13/2020	20	
10/21/2020	19	
3/16/2021	25	
10/5/2021	35	
3/15/2022		36
10/5/2022		31

FIGURE E.

# Appendix III Interwell Prediction Limit - Two-Step - All Results (No Significant)

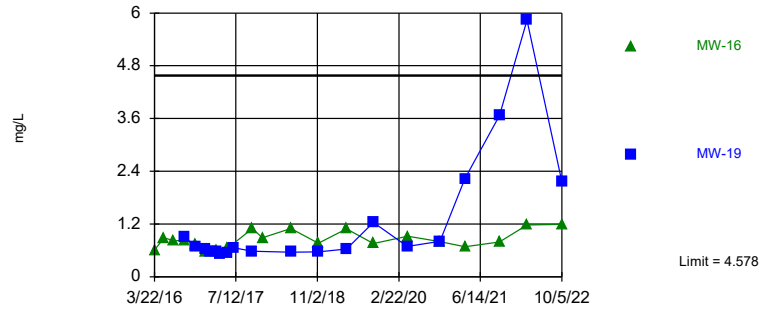
Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:17 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Calcium (mg/L)	MW-16	4.578	n/a	10/5/2022	1.19	No	57	1.328	0.4542	3.509	None	sqrt(x)	0.00188	Param Inter 1 of 2	
Calcium (mg/L)	MW-19	4.578	n/a	10/5/2022	2.16	No	57	1.328	0.4542	3.509	None	sqrt(x)	0.00188	Param Inter 1 of 2	
Chloride (mg/L)	MW-16	15.15	n/a	10/5/2022	11.7	No	72	10.3	2.737	0	None	No	0.00188	Param Inter 1 of 2	
Chloride (mg/L)	MW-19	15.15	n/a	10/5/2022	5.94	No	72	10.3	2.737	0	None	No	0.00188	Param Inter 1 of 2	



Within Limit

Prediction Limit  
Interwell Parametric

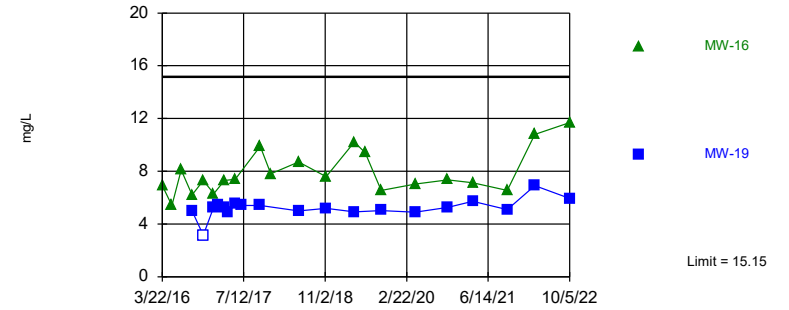


Background Data Summary (based on square root transformation): Mean=1.328, Std. Dev.=0.4542, n=57, 3.509% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9625, critical = 0.944. Kappa = 1.788 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 2 points to limit. Assumes 2 future values.

Constituent: Calcium Analysis Run 12/9/2022 8:16 AM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

Within Limit

Prediction Limit  
Interwell Parametric



Background Data Summary: Mean=10.3, Std. Dev.=2.737, n=72. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9818, critical = 0.954. Kappa = 1.77 (c=7, w=4, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.00188. Comparing 2 points to limit. Assumes 2 future values.

Constituent: Chloride Analysis Run 12/9/2022 8:16 AM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/9/2022 8:17 AM View: Interwell

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-16	MW-18 (bg)	MW-11 (bg)	MW-14 (bg)	MW-19
3/22/2016	0.61 (B1)	0.93 (B1)			
3/23/2016			<5.9 (*)	<5.9 (*)	
5/18/2016	0.89	0.85	1.8	5.5	
7/11/2016	0.82				
7/12/2016		0.69	1.9	5.3	
9/12/2016		0.86	2	4.9	0.92
9/13/2016	0.82				
11/17/2016	0.75				
11/18/2016		0.41	2		0.68
11/19/2016				4.8	
1/18/2017	0.58	0.81		3.8	0.64
1/19/2017			1.8		
2/10/2017					0.58
3/21/2017	0.6	0.76			0.56
3/22/2017			1.8	3.3	
4/14/2017					0.51
5/23/2017	0.65				0.54
5/24/2017		0.8	2	3.6	
6/26/2017					0.66
10/17/2017	1.1	0.69	2	3.7	0.58
12/15/2017	0.89 (RS)				
5/31/2018	1.1	0.75	1.8		0.56
6/1/2018				2.8	
11/7/2018			2	2.9	
11/8/2018	0.76	0.78			0.57
4/22/2019	1.09	0.531	1.71		0.634
4/23/2019				2.76	
9/26/2019	0.758	0.631		2.4	1.24
9/27/2019			1.99		
4/13/2020			2.03	2.74	0.687
4/14/2020	0.92	0.627			
10/21/2020	0.798				0.806
10/22/2020		0.553	2.02	2.17	
3/16/2021	0.681	0.57	1.74	2.4	2.23
10/5/2021	0.793	0.43 (J)	1.87	1.89	3.67
3/15/2022	1.18		1.87	2.59	5.84
3/16/2022		0.406 (J)			
10/4/2022			1.3	2.56	
10/5/2022	1.19	0.285 (J)			2.16

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:17 AM View: Interwell

Plant Daniel Client: Southern Company Data: NAMU CCR

	MW-11 (bg)	MW-18 (bg)	MW-16	MW-14 (bg)	MW-19
11/16/2006	8.5				
2/5/2007	8.8				
4/12/2007	9.5				
10/17/2007	12.1				
4/17/2008	13.1				
10/24/2008	13.7				
4/21/2009	11.9				
10/26/2009	11				
4/12/2010	12.5				
10/30/2010	10.8				
5/25/2011	10				
5/25/2012	10.9				
5/28/2013	11.4				
5/31/2014	9.2				
5/29/2015	11.5				
3/22/2016		11 (B1)	6.9 (B1)		
3/23/2016	13			8.8 (B1)	
5/18/2016	13	8.4	5.4	7.2	
7/11/2016			8.1		
7/12/2016	13	7.9		7.5	
9/12/2016	13	7.6		8.4	5
9/13/2016			6.2		
11/17/2016			7.3		
11/18/2016	14	8.5			<6.3 (*)
11/19/2016				12	
1/18/2017		9.2	6.3	11	5.3
1/19/2017	13				
2/10/2017					5.4
3/21/2017		10	7.3		5.3
3/22/2017	15			11	
4/14/2017					4.9 (B)
5/23/2017			7.4		5.5
5/24/2017	14	10		10	
6/26/2017					5.4
10/17/2017	15	8.6	9.9	10	5.4
12/19/2017			7.8 (RS)		
5/31/2018	12	6.9	8.7		5
6/1/2018				9.9	
11/7/2018	14			10	
11/8/2018		8.7	7.6		5.2
4/22/2019	13.3	6.17	10.2		4.91
4/23/2019				9.3	
6/25/2019			9.4		
9/26/2019		6.09	6.54	8.35	5.03
9/27/2019	13.4				
4/13/2020	14.2			7.9	4.9
4/14/2020		6.15	7.03		
10/21/2020			7.36		5.25
10/22/2020	17.4	6.89		6.5	
3/16/2021	13.3	8.18	7.14	7.32	5.72
10/5/2021	12.5	5.72	6.55	6.59	5.1
3/15/2022	13.6		10.8	8.36	6.91

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/9/2022 8:17 AM View: Interwell  
Plant Daniel Client: Southern Company Data: NAMU CCR

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	MW-11 (bg)	MW-18 (bg)	MW-16	MW-14 (bg)	MW-19
3/16/2022		6.05			
10/4/2022	12			11.2	
10/5/2022		4.97	11.7		5.94

FIGURE F.

# Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Daniel Client: Southern Company Data: NAMU CCR Printed 12/9/2022, 8:28 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-14 (bg)	-0.393	-126	-74	Yes	19	5.263	n/a	n/a	0.01	NP
Calcium (mg/L)	MW-18 (bg)	-0.07215	-112	-74	Yes	19	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-11 (bg)	0.2408	254	176	Yes	34	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-18 (bg)	-0.5655	-92	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-11 (bg)	-0.272	-245	-176	Yes	34	14.71	n/a	n/a	0.01	NP

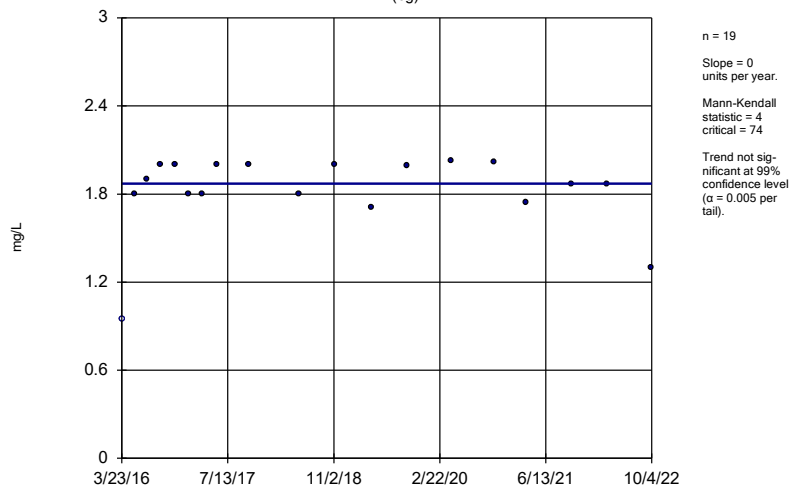
# Trend Tests - Prediction Limit Exceedances - All Results

Plant Daniel    Client: Southern Company    Data: NAMU CCR    Printed 12/9/2022, 8:28 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MW-11 (bg)	0	4	74	No	19	5.263	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-14 (bg)</b>	<b>-0.393</b>	<b>-126</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>5.263</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-16	0.0336	51	81	No	20	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.07215</b>	<b>-112</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	MW-19	0.1027	71	74	No	19	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-11 (bg)</b>	<b>0.2408</b>	<b>254</b>	<b>176</b>	<b>Yes</b>	<b>34</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-14 (bg)	-0.2395	-33	-74	No	19	0	n/a	n/a	0.01	NP
Chloride (mg/L)	MW-16	0.4045	65	87	No	21	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>MW-18 (bg)</b>	<b>-0.5655</b>	<b>-92</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	MW-19	0.09276	39	74	No	19	5.263	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>MW-11 (bg)</b>	<b>-0.272</b>	<b>-245</b>	<b>-176</b>	<b>Yes</b>	<b>34</b>	<b>14.71</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	MW-14 (bg)	0.05084	34	74	No	19	31.58	n/a	n/a	0.01	NP
Sulfate (mg/L)	MW-18 (bg)	0.1083	33	74	No	19	5.263	n/a	n/a	0.01	NP

### Sen's Slope Estimator

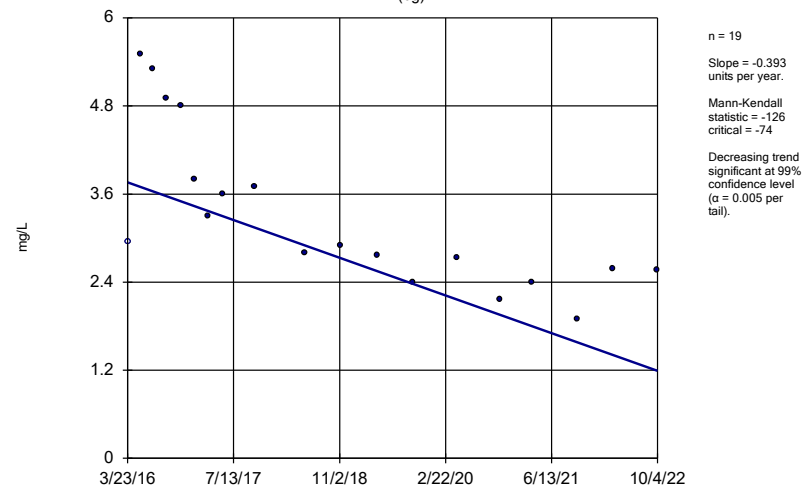
MW-11 (bg)



Constituent: Calcium Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

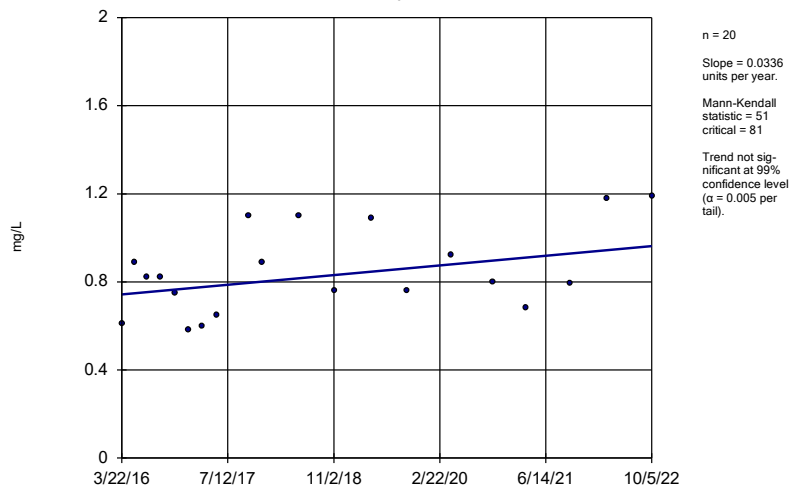
MW-14 (bg)



Constituent: Calcium Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

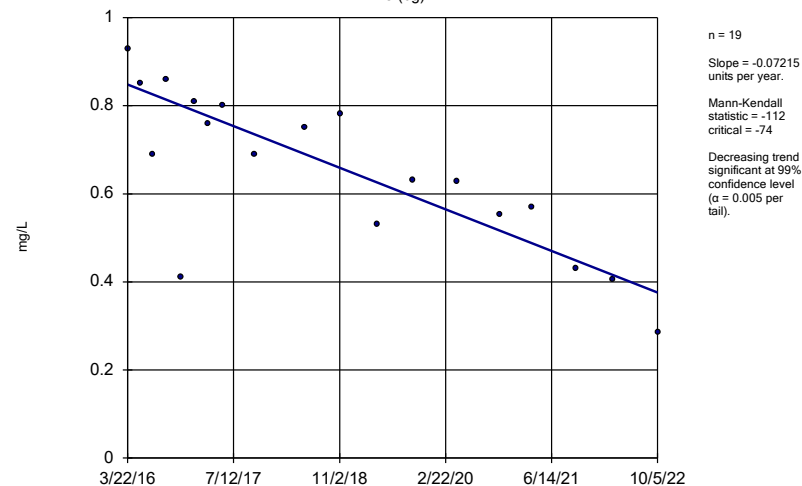
MW-16



Constituent: Calcium Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

MW-18 (bg)

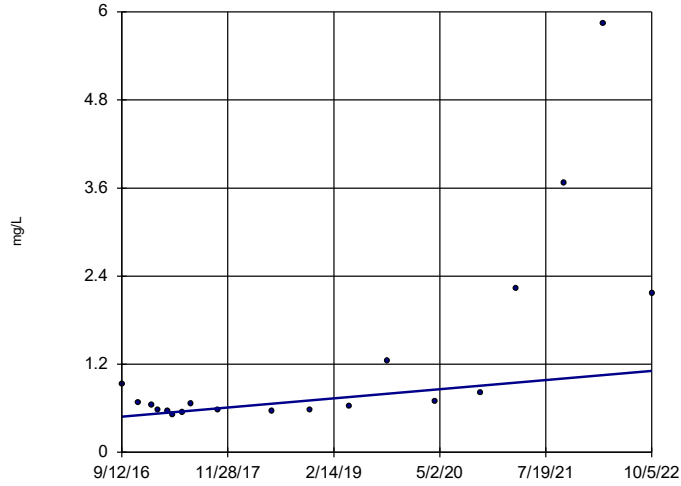


Constituent: Calcium Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR



### Sen's Slope Estimator

MW-19

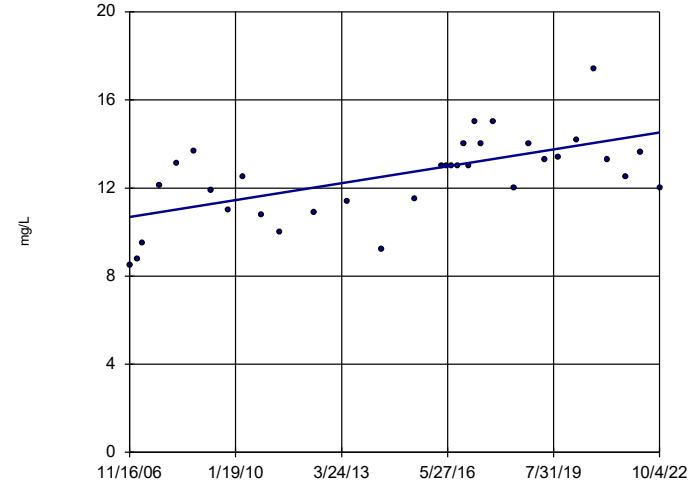


n = 19  
 Slope = 0.1027  
 units per year.  
 Mann-Kendall  
 statistic = 71  
 critical = 74  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Calcium Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

MW-11 (bg)

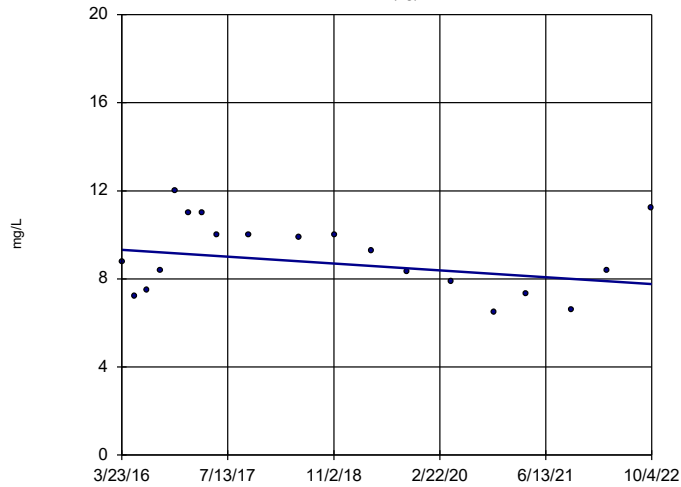


n = 34  
 Slope = 0.2408  
 units per year.  
 Mann-Kendall  
 statistic = 254  
 critical = 176  
 Increasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

MW-14 (bg)

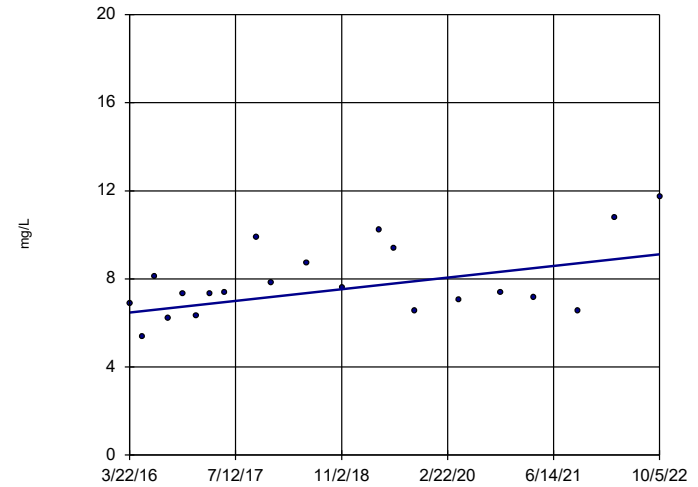


n = 19  
 Slope = -0.2395  
 units per year.  
 Mann-Kendall  
 statistic = -33  
 critical = -74  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

MW-16

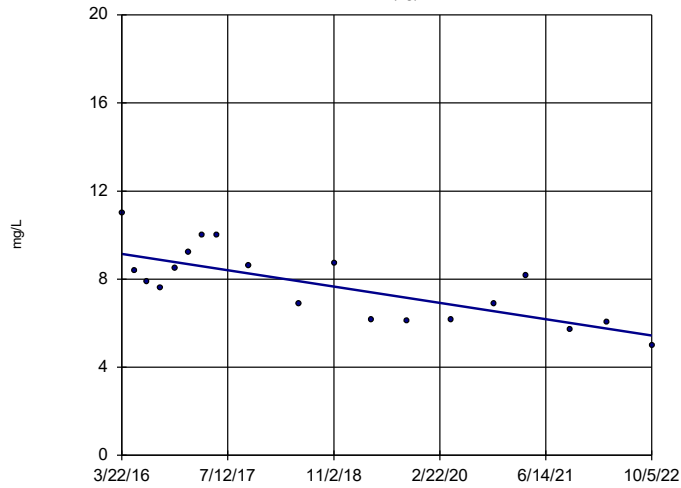


n = 21  
 Slope = 0.4045  
 units per year.  
 Mann-Kendall  
 statistic = 65  
 critical = 87  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
 Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

MW-18 (bg)

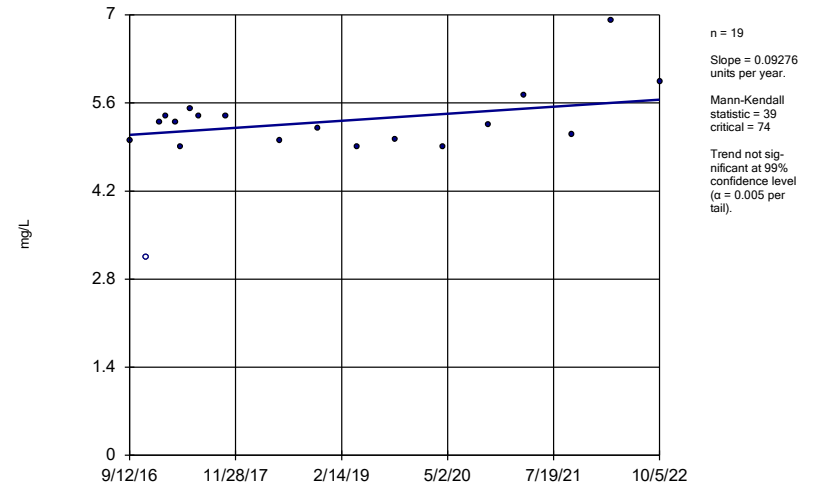


Constituent: Chloride Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

### Sen's Slope Estimator

MW-19

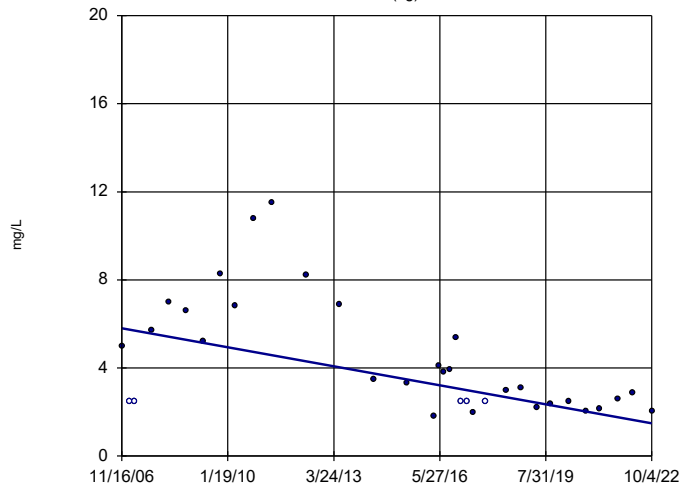


Constituent: Chloride Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

### Sen's Slope Estimator

MW-11 (bg)

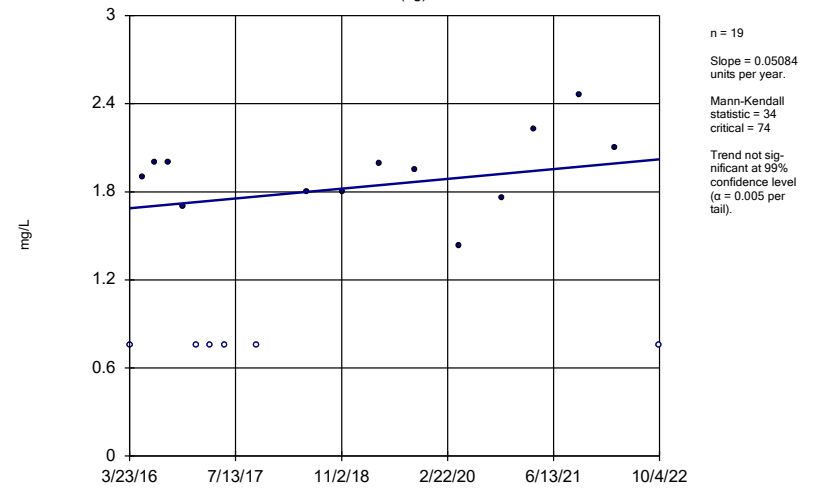


Constituent: Sulfate Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

Hollow symbols indicate censored values.

### Sen's Slope Estimator

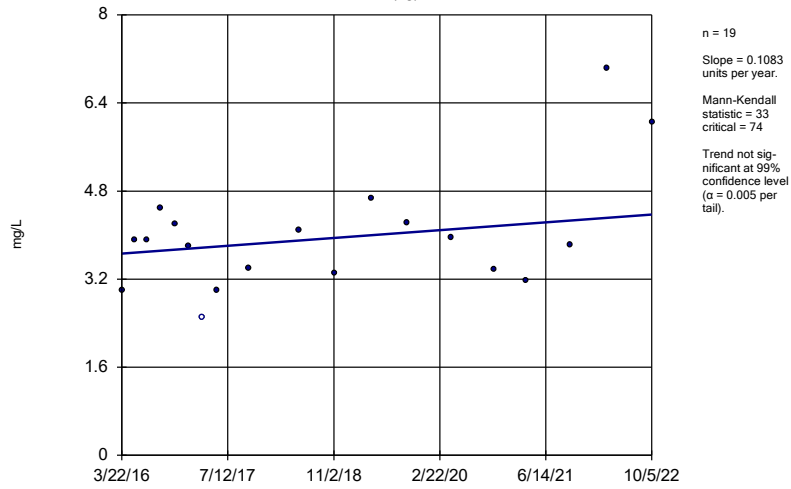
MW-14 (bg)



Constituent: Sulfate Analysis Run 12/9/2022 8:27 AM View: Trend Tests  
Plant Daniel Client: Southern Company Data: NAMU CCR

### Sen's Slope Estimator

MW-18 (bg)



Constituent: Sulfate    Analysis Run 12/9/2022 8:27 AM    View: Trend Tests  
Plant Daniel    Client: Southern Company    Data: NAMU CCR