Chemical Analysis Report

CEN-DIST-2022-10-27-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Unnamed Branch Retrieval and Groover Branch**
Request ID: **RQ-2022-10-24-23**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 18-NOV-2022 10:27

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Unnamed Branch @ 750m US of confluence w/ Tomoka River **Collection Date/Time: 10/26/2022 10:55**

Field ID: G5CE0017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365629	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P421567	
	SM 2320 B-2011	Total Alkalinity	17		mg CaCO3/L	P422004	
	SM 2540 D-2015	TSS	2	U	mg/L	P421784	
	SM 4500-F- C-2011	Fluoride	0.029	I	mg F/L	P422018	
2365630	EPA 350.1 Rev. 2.0	Ammonia-N	0.071		mg N/L	P421958	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P421701	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P421836	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P421772	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P421887	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Groover Branch at Airport Road Bridge **Collection Date/Time: 10/26/2022 11:40**

Field ID: G5CE0040 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2365627	DEP SOP: NU-094-1	Color (true)	380		PCU	P421559	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P421566	
	EPA 300.0 Rev. 2.1	Chloride	280		mg Cl/L	P422460	
		Sulfate	25		mg SO4/L	P422167	
	SM 2320 B-2011	Total Alkalinity	111		mg CaCO3/L	P421670	
	SM 2540 C-2015	TDS	635	A	mg/L	P422070	
	SM 2540 D-2015	TSS	3	I A	mg/L	P421783	
	SM 4500-F- C-2011	Fluoride	0.084	I	mg F/L	P421673	
2365628	EPA 350.1 Rev. 2.0	Ammonia-N	0.083		mg N/L	P421958	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P421701	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.031		mg N/L	P421836	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P421772	
	SM 5310 B-2011	Organic Carbon	30		mg C/L	P421887	

Ref. Method and Comment:
DEP SOP: NU-094-1: Batch relative percent difference is unavailable because of analytical difficulties.
SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 1193 µmhos/cm.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P421559

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421566

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421567

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422167

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422460

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421958

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421701

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421836

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421772

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P421670

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2320 B-2011
Batch ID: P422004

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 C-2015
Batch ID: P422070

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P421783

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P421784

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P421673

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422018

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P421887

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P421559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	91.0		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421566

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.4		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421567

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422167

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421958

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421701

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	101		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	104		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P421670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.1		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P422004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.6		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P422070

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.2		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P421783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.8		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P421784

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.5		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P421673

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P422018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P421887

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365359	Sulfate	103		P	90 - 110
2365627	Sulfate	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2366091	Chloride	100		P	90 - 110
2366215	Chloride	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365496	Ammonia-N	97.8	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365657	Kjeldahl Nitrogen	94.7	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365574	NO2NO3-N	95.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365657	Total-P	108	105	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P422018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367172	Fluoride	102	102	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P421887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2366054	Organic Carbon	103		P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365493	Turbidity	5.83	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365809	Turbidity	8.46	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365359	Sulfate	1.56	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2366091	Chloride	0.535	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365496	Ammonia-N	0.408	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365657	Kjeldahl Nitrogen	4.38	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365574	NO2NO3-N	0.483	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365657	Total-P	2.46	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P421670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365524	Total Alkalinity	0.150	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P422004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367172	Total Alkalinity	1.12	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P422070

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365627	TDS	2.83	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P421673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365524	Fluoride	0.490	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P422018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367172	Fluoride	0.463	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P421887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2366054	Organic Carbon	0.0113	Sample	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A115576
Included Lab Sample IDs: 2365627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	94.4	94.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A115579
Included Lab Sample IDs: 2365627, 2365629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.0	P/P	95 - 105
Turbidity	98.5	98.0	P/P	95 - 105

Reference Method: SM 2320 B-2011
Run ID: A115628
Included Lab Sample IDs: 2365627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	94.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A115628
Included Lab Sample IDs: 2365627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A115713
Included Lab Sample IDs: 2365628, 2365630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A115715
Included Lab Sample IDs: 2365628

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.4	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A115721
Included Lab Sample IDs: 2365630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A115722
Included Lab Sample IDs: 2365628, 2365630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7	96.7	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-2011
Run ID: A115735
Included Lab Sample IDs: 2365628, 2365630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A115748
Included Lab Sample IDs: 2365628, 2365630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	99.3	P/P	90 - 110
Ammonia-N	99.4	99.9	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A115774
Included Lab Sample IDs: 2365629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	95.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A115774
Included Lab Sample IDs: 2365629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A115800
Included Lab Sample IDs: 2365627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	98.7	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A115939
Included Lab Sample IDs: 2365627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.9	99.1	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	91.0					
EPA 180.1 Rev. 2.0	Turbidity	99.4				5.83	
	Turbidity	100				8.46	
EPA 300.0 Rev. 2.1	Chloride	96.4	100	99.5		0.535	
	Sulfate	107	103	107		1.56	
EPA 350.1 Rev. 2.0	Ammonia-N	96.0	97.8	98.2			0.408
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	94.7	102			4.38
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	95.5				0.483
EPA 365.1 Rev. 2.0	Total-P	104	108	105			2.46
SM 2320 B-2011	Total Alkalinity	99.1				0.150	
	Total Alkalinity	97.6				1.12	
SM 2540 C-2015	TDS	97.2				2.83	
SM 2540 D-2015	TSS	94.8					
	TSS	96.5					
SM 4500-F- C-2011	Fluoride	97.0					0.490
	Fluoride	102	102	102			0.463
SM 5310 B-2011	Organic Carbon	100	103			0.0113	

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2365627
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2365627, 2365629
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2365627
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2365627
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2365628, 2365630
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2365628, 2365630
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2365628, 2365630
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2365628, 2365630
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2365627, 2365629
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2365627
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2365627, 2365629
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2365627, 2365629
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2365628, 2365630

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	10/27/2022			10/27/2022 15:11	Chandler E Cox	2365627
EPA 180.1 Rev. 2.0	10/27/2022			10/27/2022 13:53	Anna M. Plaviak	2365627
	10/27/2022			10/27/2022 14:29	Anna M. Plaviak	2365629
EPA 300.0 Rev. 2.1	10/27/2022			11/09/2022 00:56	Anna M. Plaviak	2365627
	10/27/2022			11/15/2022 15:14	Anna M. Plaviak	2365627
EPA 350.1 Rev. 2.0	10/27/2022			11/04/2022 15:32	Ping Hua	2365630
	10/27/2022			11/04/2022 16:20	Ping Hua	2365628
EPA 351.2 Rev. 2.0	10/27/2022	11/01/2022 12:07	Alexandra J Mattheus	11/03/2022 13:15	Samantha L Bates	2365628
	10/27/2022	11/01/2022 12:07	Alexandra J Mattheus	11/03/2022 13:16	Samantha L Bates	2365630
EPA 353.2 Rev. 2.0	10/27/2022			11/03/2022 09:59	Beverly Y. Sanders	2365628
	10/27/2022			11/03/2022 10:00	Beverly Y. Sanders	2365630
EPA 365.1 Rev. 2.0	10/27/2022	11/02/2022 17:10	Adam P Silver	11/03/2022 11:39	James L Waggerby	2365628
	10/27/2022	11/02/2022 17:10	Adam P Silver	11/03/2022 13:01	Simonne.V. Calhoun	2365630
SM 2320 B-2011	10/27/2022			10/28/2022 21:38	Dale L. Simmons	2365627
	10/27/2022			11/05/2022 08:03	Dale L. Simmons	2365629
SM 2540 C-2015	10/27/2022			10/28/2022 15:58	Yijie Li	2365627
SM 2540 D-2015	10/27/2022			10/28/2022 15:58	Yijie Li	2365627, 2365629
SM 4500-F- C-2011	10/27/2022			10/28/2022 21:38	Dale L. Simmons	2365627
	10/27/2022			11/05/2022 08:03	Dale L. Simmons	2365629
SM 5310 B-2011	10/27/2022			11/03/2022 08:57	Khloe J Berg	2365628
	10/27/2022			11/03/2022 09:13	Khloe J Berg	2365630