Chemical Analysis Report

NW-DIST-2023-04-26-04

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

Event Description: **Escambia River Run**
Request ID: **RQ-2023-04-24-22**
Customer: **NW-DIST**
Project ID: **SMP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 15-MAY-2023 08:52

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: ESCAMBIA RIVER DOWNSTREAM OF COTTON LAKE **Collection Date/Time: 04/25/2023 11:05**

Field ID: G4NW0403 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2403180	DEP SOP: NU-094-1	Color (true)	22		PCU	P429021	
	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P429018	
	EPA 300.0 Rev. 2.1	Chloride	6.2		mg Cl/L	P429145	
		Sulfate	8.1		mg SO4/L	P429148	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P429391	
	SM 2540 C-2015	TDS	65		mg/L	P429528	
	SM 2540 D-2015	TSS	16		mg/L	P429530	
	SM 4500-F- C-2011	Fluoride	0.032	I	mg F/L	P429284	
2403182	EPA 350.1 Rev. 2.0	Ammonia-N	0.074		mg N/L	P429343	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P429133	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P429330	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P429044	
	SM 5310 B-2011	Organic Carbon	4.4		mg C/L	P429239	

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: ESCAMBIA RIVER UPSTREAM OF MITCHELL CREEK **Collection Date/Time: 04/25/2023 10:10**

Field ID: G4NW0404 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2403181	DEP SOP: NU-094-1	Color (true)	54		PCU	P429020	
	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P429018	
	EPA 300.0 Rev. 2.1	Chloride	6.1	A	mg Cl/L	P429483	
		Sulfate	8.1	A	mg SO4/L	P429486	
	SM 2320 B-2011	Total Alkalinity	36		mg CaCO3/L	P429391	
	SM 2540 C-2015	TDS	73		mg/L	P429528	
	SM 2540 D-2015	TSS	15		mg/L	P429530	
	SM 4500-F- C-2011	Fluoride	0.030	I	mg F/L	P429284	
2403183	EPA 350.1 Rev. 2.0	Ammonia-N	0.083		mg N/L	P429343	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P429133	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P429330	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P429044	
	SM 5310 B-2011	Organic Carbon	4.2		mg C/L	P429239	

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

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P429020

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P429021

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429018

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429145

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429148

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429483

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429343

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429133

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429330

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429044

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

Reference Method: SM 2320 B-2011
Batch ID: P429391

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

Reference Method: SM 2540 C-2015
Batch ID: P429528

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P429530

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P429284

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P429239

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: P429020

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.7		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P429021

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429145

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429148

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429483

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429343

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429133

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P429391

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P429528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	98.3		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P429530

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	97.9		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P429284

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P429239

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402952	Chloride	101		P	90 - 110
2403100	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402952	Sulfate	102		P	90 - 110
2403100	Sulfate	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429483

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403181	Chloride	101		P	90 - 110
2403247	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403181	Sulfate	98.7		P	90 - 110
2403247	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403356	Ammonia-N	98.6	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403183	Kjeldahl Nitrogen	104	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403101	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403159	Total-P	108	109	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P429284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P429284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403073	Fluoride	100	102	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P429239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403159	Organic Carbon	94.4	95.7	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P429020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403173	Color (true)	1.06	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P429021

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402952	Color (true)	4.08	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403157	Turbidity	0.913	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402952	Chloride	0.696	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402952	Sulfate	1.07	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403181	Chloride	0.0995	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403181	Sulfate	0.476	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403356	Ammonia-N	0.437	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403183	Kjeldahl Nitrogen	5.16	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403101	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403159	Total-P	1.09	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P429391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402972	Total Alkalinity	0.122	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P429528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402949	TDS	5.90	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P429284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403073	Fluoride	0.973	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P429239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403159	Organic Carbon	1.16	Spike	P	0 - 20

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A118755
Included Lab Sample IDs: 2403180

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.7	100	P/P	90 - 110
Sulfate	99.4	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A118794
Included Lab Sample IDs: 2403180, 2403181

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

Reference Method: DEP SOP: NU-094-1
Run ID: A118795
Included Lab Sample IDs: 2403180, 2403181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.7	99.8	P/P	90 - 110
Color (true)	99.8	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A118857
Included Lab Sample IDs: 2403182, 2403183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A118896
Included Lab Sample IDs: 2403182, 2403183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A118911
Included Lab Sample IDs: 2403182, 2403183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	106	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A118916
Included Lab Sample IDs: 2403180, 2403181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A118919
Included Lab Sample IDs: 2403181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A118919
Included Lab Sample IDs: 2403181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A118933
Included Lab Sample IDs: 2403182, 2403183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A118935
Included Lab Sample IDs: 2403182, 2403183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	99.6	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A118951
Included Lab Sample IDs: 2403180, 2403181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.1	99.0	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)	97.7				1.06	
	Color (true)	96.8				4.08	
EPA 180.1 Rev. 2.0	Turbidity	97.1				0.913	
EPA 300.0 Rev. 2.1	Chloride	102	101	103		0.696	
	Chloride	104	101	102		0.0995	
	Sulfate	103	102	103		1.07	
	Sulfate	104	98.7	102		0.476	
EPA 350.1 Rev. 2.0	Ammonia-N	100	98.6	99.2			0.437
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	104	97.2			5.16
EPA 353.2 Rev. 2.0	NO2NO3-N	104	103	103			0.0
EPA 365.1 Rev. 2.0	Total-P	106	108	109			1.09
SM 2320 B-2011	Total Alkalinity	100				0.122	
SM 2540 C-2015	TDS	98.3				5.90	
SM 2540 D-2015	TSS	97.9					
SM 4500-F- C-2011	Fluoride	98.8	100	102			0.973
SM 5310 B-2011	Organic Carbon	96.8	94.4	95.7			1.16

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2403180, 2403181
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2403180, 2403181
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2403180, 2403181
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2403180, 2403181
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2403182, 2403183
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2403182, 2403183
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2403182, 2403183
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2403182, 2403183
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2403180, 2403181
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2403180, 2403181
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2403180, 2403181
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2403180, 2403181
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2403182, 2403183

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	04/26/2023			04/26/2023 15:09	Alexis Price	2403181
	04/26/2023			04/26/2023 15:18	Alexis Price	2403180
EPA 180.1 Rev. 2.0	04/26/2023			04/26/2023 14:06	Khloe J Berg	2403180
	04/26/2023			04/26/2023 14:08	Khloe J Berg	2403181
EPA 300.0 Rev. 2.1	04/26/2023			04/28/2023 10:53	James L Waggerby	2403180
	04/26/2023			05/03/2023 14:02	James L Waggerby	2403181
EPA 350.1 Rev. 2.0	04/26/2023			05/03/2023 11:20	Ping Hua	2403182
	04/26/2023			05/03/2023 11:24	Ping Hua	2403183
EPA 351.2 Rev. 2.0	04/26/2023	04/28/2023 12:49	Simonne.V. Calhoun	05/02/2023 13:46	Samantha L Bates	2403182
	04/26/2023	04/28/2023 12:49	Simonne.V. Calhoun	05/02/2023 13:47	Samantha L Bates	2403183
EPA 353.2 Rev. 2.0	04/26/2023			05/03/2023 10:58	Beverly Y. Sanders	2403182
	04/26/2023			05/03/2023 10:59	Beverly Y. Sanders	2403183
EPA 365.1 Rev. 2.0	04/26/2023	04/27/2023 13:00	Alexis Price	04/28/2023 14:36	Chandler E Cox	2403182
	04/26/2023	04/27/2023 13:00	Alexis Price	04/28/2023 14:37	Chandler E Cox	2403183
SM 2320 B-2011	04/26/2023			05/04/2023 00:19	Dale L. Simmons	2403180
	04/26/2023			05/04/2023 00:29	Dale L. Simmons	2403181
SM 2540 C-2015	04/26/2023			04/28/2023 15:36	Yijie Li	2403180, 2403181
SM 2540 D-2015	04/26/2023			04/28/2023 15:36	Yijie Li	2403180, 2403181
SM 4500-F- C-2011	04/26/2023			05/02/2023 22:14	Dale L. Simmons	2403180
	04/26/2023			05/02/2023 22:19	Dale L. Simmons	2403181
SM 5310 B-2011	04/26/2023			05/01/2023 19:49	Elise M. Gillis	2403182
	04/26/2023			05/01/2023 20:03	Elise M. Gillis	2403183