Chemical Analysis Report

NW-DIST-2023-03-09-01

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

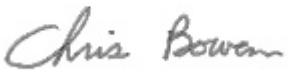
Event Description: **Eastern Lakes Run**
Request ID: **RQ-2023-03-06-48**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
Attn: Myranda Butler

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

Certified by: Chris Bowen, Environmental Administrator

Date Certified: 30-MAR-2023 12:56



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: Kings Lake **Collection Date/Time: 03/08/2023 11:40**

Field ID: G4NW0537 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2393217	DEP SOP: NU-094-1	Color (true)	8.5		PCU	P426952	
	EPA 180.1 Rev. 2.0	Turbidity	0.75	I	NTU	P426953	
	EPA 300.0 Rev. 2.1	Chloride	3.3		mg Cl/L	P427540	
		Sulfate	0.99		mg SO4/L	P427543	
	SM 2320 B-2011	Total Alkalinity	0.77	I	mg CaCO3/L	P427114	
	SM 2540 C-2015	TDS	15	U	mg/L	P427512	
	SM 2540 D-2015	TSS	2	I	mg/L	P427358	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P427295	
2393220	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P427248	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P427182	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P427167	
	SM 5310 B-2011	Organic Carbon	3.9		mg C/L	P427324	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Holly Lake **Collection Date/Time: 03/08/2023 12:46**

Field ID: G4NW0517 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2393218	DEP SOP: NU-094-1	Color (true)	16	A	PCU	P426952	
	EPA 180.1 Rev. 2.0	Turbidity	0.65	I	NTU	P426955	
	EPA 300.0 Rev. 2.1	Chloride	3.2		mg Cl/L	P427540	
		Sulfate	0.64		mg SO4/L	P427543	
	SM 2320 B-2011	Total Alkalinity	1.2	I	mg CaCO3/L	P427114	
	SM 2540 C-2015	TDS	20	I	mg/L	P427512	
	SM 2540 D-2015	TSS	2	U	mg/L	P427358	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P427295	
2393221	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P427083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P427248	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P427182	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P427167	
	SM 5310 B-2011	Organic Carbon	4.6		mg C/L	P427324	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Roberts Lake **Collection Date/Time: 03/08/2023 15:00**

Field ID: G3NW0447 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2393219	DEP SOP: NU-094-1	Color (true)	14		PCU	P426952	
	EPA 180.1 Rev. 2.0	Turbidity	0.85	I A	NTU	P426955	
	EPA 300.0 Rev. 2.1	Chloride	3.0		mg Cl/L	P427540	
		Sulfate	1.7		mg SO4/L	P427543	
	SM 2320 B-2011	Total Alkalinity	1.6	I	mg CaCO3/L	P427114	
	SM 2540 C-2015	TDS	20	I	mg/L	P427512	
	SM 2540 D-2015	TSS	2	I	mg/L	P427358	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P427295	
2393222	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427080	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20	I	mg N/L	P427248	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038		mg N/L	P427182	
	EPA 365.1 Rev. 2.0	Total-P	0.005		mg P/L	P427167	
	SM 5310 B-2011	Organic Carbon	1.7		mg C/L	P427324	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: 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: P426952

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426953

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426955

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427540

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427543

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427080

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427083

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427248

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427182

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427167

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

Reference Method: SM 2320 B-2011
Batch ID: P427114

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

Reference Method: SM 2540 C-2015
Batch ID: P427512

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P427358

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P427295

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P427324

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: P426952

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426953

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426955

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427080

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427083

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427248

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427182

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427167

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

Reference Method: SM 2320 B-2011
Batch ID: P427114

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.4		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P427512

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

Reference Method: SM 2540 D-2015
Batch ID: P427358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.7		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P427295

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.7		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427324

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393309	Chloride	96.5		P	90 - 110
2393339	Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393309	Sulfate	93.2		P	90 - 110
2393339	Sulfate	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393222	Ammonia-N	98.6	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393171	Ammonia-N	97.2	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393205	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393109	Total-P	101	99.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P427295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393233	Fluoride	99.1	99.1	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427324

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2393172	Organic Carbon	97.9	99.2	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P426952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393218	Color (true)	0.512	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2392929	Turbidity	1.42	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393309	Chloride	0.848	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393309	Sulfate	1.04	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393222	Ammonia-N	1.41	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393171	Ammonia-N	0.328	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393192	Kjeldahl Nitrogen	4.82	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393205	NO2NO3-N	0.489	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393109	Total-P	1.60	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P427114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393556	Total Alkalinity	0.490	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P427512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393123	TDS	3.13	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P427295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393233	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P427324

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2393172	Organic Carbon	0.960	Spike	P	0 - 20

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A117905
Included Lab Sample IDs: 2393217, 2393218, 2393219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105
Turbidity	99.5	100	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1
Run ID: A117906
Included Lab Sample IDs: 2393217, 2393218, 2393219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.8	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A117961
Included Lab Sample IDs: 2393220, 2393221, 2393222

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.4	97.7	P/P	90 - 110
Ammonia-N	98.6	97.8	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A117971
Included Lab Sample IDs: 2393217, 2393218, 2393219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.9	95.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A117999
Included Lab Sample IDs: 2393220, 2393221, 2393222

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A118053
Included Lab Sample IDs: 2393217, 2393218, 2393219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A118060
Included Lab Sample IDs: 2393220, 2393221, 2393222

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	101	P/P	90 - 110
Total-P	98.5	104	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-2011
Run ID: A118072
Included Lab Sample IDs: 2393220, 2393221, 2393222

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A118082
Included Lab Sample IDs: 2393220, 2393221, 2393222

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A118124
Included Lab Sample IDs: 2393217, 2393218, 2393219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.4	96.6	P/P	90 - 110
Sulfate	96.3	97.2	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)	99.6				0.512	
EPA 180.1 Rev. 2.0	Turbidity	100				1.42	
	Turbidity	99.8					
EPA 300.0 Rev. 2.1	Chloride	99.7	96.5	98.8		0.848	
	Sulfate	98.1	93.2	96.7		1.04	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	98.6	100			1.41
	Ammonia-N	96.4	97.2	96.8			0.328
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	110					4.82
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	102			0.489
EPA 365.1 Rev. 2.0	Total-P	98.3	101	99.4			1.60
SM 2320 B-2011	Total Alkalinity	96.4				0.490	
SM 2540 C-2015	TDS	107				3.13	
SM 2540 D-2015	TSS	91.7					
SM 4500-F- C-2011	Fluoride	95.7	99.1	99.1			0.0
SM 5310 B-2011	Organic Carbon	96.6	97.9	99.2			0.960

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2393217, 2393218, 2393219
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2393217, 2393218, 2393219
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2393217, 2393218, 2393219
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2393217, 2393218, 2393219
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2393220, 2393221, 2393222
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2393220, 2393221, 2393222
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2393220, 2393221, 2393222
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2393220, 2393221, 2393222
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2393217, 2393218, 2393219
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2393217, 2393218, 2393219
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2393217, 2393218, 2393219
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2393217, 2393218, 2393219
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2393220, 2393221, 2393222

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	03/09/2023			03/09/2023 13:53	Alexis Price	2393217
	03/09/2023			03/09/2023 13:54	Alexis Price	2393218, 2393219
EPA 180.1 Rev. 2.0	03/09/2023			03/09/2023 14:00	Chandler E Cox	2393217
	03/09/2023			03/09/2023 14:06	Chandler E Cox	2393218
	03/09/2023			03/09/2023 14:15	Chandler E Cox	2393219
EPA 300.0 Rev. 2.1	03/09/2023			03/22/2023 13:30	Judith K. Clark	2393217
	03/09/2023			03/22/2023 13:45	Judith K. Clark	2393218
	03/09/2023			03/22/2023 14:08	Judith K. Clark	2393219
EPA 350.1 Rev. 2.0	03/09/2023			03/13/2023 12:19	Khloe J Berg	2393222
	03/09/2023			03/13/2023 13:53	Khloe J Berg	2393220
	03/09/2023			03/13/2023 13:55	Khloe J Berg	2393221
EPA 351.2 Rev. 2.0	03/09/2023	03/16/2023 13:04	Simonne.V. Calhoun	03/20/2023 13:24	Samantha L Bates	2393220
	03/09/2023	03/16/2023 13:04	Simonne.V. Calhoun	03/20/2023 13:26	Samantha L Bates	2393221
	03/09/2023	03/16/2023 13:04	Simonne.V. Calhoun	03/20/2023 13:27	Samantha L Bates	2393222
EPA 353.2 Rev. 2.0	03/09/2023			03/15/2023 10:46	Beverly Y. Sanders	2393220
	03/09/2023			03/15/2023 10:47	Beverly Y. Sanders	2393221
	03/09/2023			03/15/2023 10:49	Beverly Y. Sanders	2393222
EPA 365.1 Rev. 2.0	03/09/2023	03/15/2023 13:09	Adam P Silver	03/17/2023 14:04	James L Waggerby	2393220
	03/09/2023	03/15/2023 13:09	Adam P Silver	03/17/2023 14:05	James L Waggerby	2393221
	03/09/2023	03/15/2023 13:09	Adam P Silver	03/17/2023 14:12	James L Waggerby	2393222
SM 2320 B-2011	03/09/2023			03/14/2023 04:23	Chandler E Cox	2393217
	03/09/2023			03/14/2023 04:33	Chandler E Cox	2393218
	03/09/2023			03/14/2023 04:43	Chandler E Cox	2393219
SM 2540 C-2015	03/09/2023			03/14/2023 16:02	Yijie Li	2393217, 2393218, 2393219
SM 2540 D-2015	03/09/2023			03/14/2023 16:02	Yijie Li	2393217, 2393218, 2393219
SM 4500-F- C-2011	03/09/2023			03/17/2023 00:44	Dale L. Simmons	2393217
	03/09/2023			03/17/2023 00:49	Dale L. Simmons	2393218
	03/09/2023			03/17/2023 00:54	Dale L. Simmons	2393219
SM 5310 B-2011	03/09/2023			03/16/2023 00:10	Elise M. Gillis	2393220
	03/09/2023			03/16/2023 00:27	Elise M. Gillis	2393221
	03/09/2023			03/16/2023 00:41	Elise M. Gillis	2393222