

Chemical Analysis Report

NW-DIST-2019-11-08-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Western Lakes**
Request ID: **RQ-2019-11-18-32**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 03-DEC-2019 13:20



NON-CONFORMANCE REPORT INCLUDED

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: SPRING LAKE CENTER

Collection Date/Time: 11/06/2019 10:43

Field ID: G3NW0164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135084	EPA 180.1 Rev. 2.0	Turbidity	1.9	AQ	NTU	P373949	
	EPA 300.0 Rev. 2.1	Chloride	2.7		mg Cl/L	P374326	
		Sulfate	0.39	I	mg SO4/L	P374328	
	SM 2120 B	Color (true)	11	Q	PCU	P373951	
	SM 2320 B-97	Total Alkalinity	3.1		mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	24	I	mg/L	P374416	
	SM 2540 D-97	TSS	3	I	mg/L	P374418	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374497	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P374262	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P374783	
2135086	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374239	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	5.8		mg C/L	P374270	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	UQ	mg P/L	P374008	
	dissolved						

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: Lake Karick (center) (also 33040210)

Collection Date/Time: 11/06/2019 12:13

Field ID: G4NW0274

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135085	EPA 180.1 Rev. 2.0	Turbidity	4.4	A	NTU	P373947	
	EPA 300.0 Rev. 2.1	Chloride	2.5		mg Cl/L	P374326	
		Sulfate	0.63		mg SO4/L	P374328	
	SM 2120 B	Color (true)	36	Q	PCU	P373951	
	SM 2320 B-97	Total Alkalinity	8.9		mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	22	I	mg/L	P374416	
	SM 2540 D-97	TSS	2	I	mg/L	P374418	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374497	
2135087	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P374262	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P374783	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P374240	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	5.0		mg C/L	P374270	
2135089	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P374008	

Ref. Method and Comment:

SM 2120 B: The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Non-Conformance Report

NCR ID: 8009

Event(s)

NW-DIST-2019-11-08-02

Job(s)

Sample(s)

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Samples arrived late

Observation: Samples arrived one day late by FedEx, samples received within the acceptable temperature

Resolution: Customers M.King & H.Schmuki, Biology, and Chemistry supervisors were notified by email.
Samples will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 11/12/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373947

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373949

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374326

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374262

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374783

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374239

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374240

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374425

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374008

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: SM 2120 B
Batch ID: P373951

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P374493

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P374416

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P374418

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374497

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374270

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P374326

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P374328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P374262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P374783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P374239

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	100		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P374240

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: P374425

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374008

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.7		P	90 - 110

Reference Method: SM 2120 B
 Batch ID: P373951

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P374493

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P374270

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134921	Chloride	98.8		P	90 - 110
2135287	Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134921	Sulfate	99.1		P	90 - 110
2135287	Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135382	Ammonia-N	93.8	94.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135374	Kjeldahl Nitrogen	94.1	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134913	NO2NO3-N	97.8	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135087	NO2NO3-N	97.8	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134922	Total-P	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134975	O-Phosphate-P	99.4	99.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P374497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134912	Fluoride	97.7	97.1	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P374270

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134974	Organic Carbon	103	104	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135085	Turbidity	4.77	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373949

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135084	Turbidity	1.57	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134921	Chloride	0.353	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134921	Sulfate	0.131	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135382	Ammonia-N	1.13	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135374	Kjeldahl Nitrogen	1.23	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134913	NO2NO3-N	0.447	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135087	NO2NO3-N	3.13	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P374425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134922	Total-P	2.68	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134975	O-Phosphate-P	0.101	Spike	P	0 - 20

Reference Method: SM 2120 B
 Batch ID: P373951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134969	Color (true)	4.07	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P374493

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134912	Total Alkalinity	2.22	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
 Batch ID: P374416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134921	TDS	2.88	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P374497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134912	Fluoride	0.495	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
 Batch ID: P374270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134974	Organic Carbon	0.465	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: A95599

Included Lab Sample IDs: 2135084, 2135085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	99.0	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A95600

Included Lab Sample IDs: 2135084, 2135085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95628

Included Lab Sample IDs: 2135088, 2135089

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95734

Included Lab Sample IDs: 2135086, 2135087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95747

Included Lab Sample IDs: 2135086, 2135087

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

Reference Method: SM 5310 B-00

Run ID: A95750

Included Lab Sample IDs: 2135086, 2135087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	108	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95765

Included Lab Sample IDs: 2135084, 2135085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	99.0	P/P	90 - 110
Sulfate	99.5	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A95843

Included Lab Sample IDs: 2135084, 2135085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.0	99.9	P/P	90 - 110
Total Alkalinity	99.9	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95843

Included Lab Sample IDs: 2135084, 2135085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110
Fluoride	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95931

Included Lab Sample IDs: 2135086, 2135087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95999

Included Lab Sample IDs: 2135086, 2135087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	109	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		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					4.77	
	Turbidity					1.57	
EPA 300.0 Rev. 2.1	Chloride	98.0	98.8	98.9		0.353	
	Sulfate	97.8	99.1	97.1		0.131	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	93.8	94.9			1.13
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	94.1	96.0			1.23
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	97.8	98.3			0.447
	NO ₂ NO ₃ -N	104	97.8	101			3.13
EPA 365.1 Rev. 2.0	Total-P	102	104	101			2.68
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.7	99.4	99.5			0.101
SM 2120 B	Color (true)	100				4.07	
SM 2320 B-97	Total Alkalinity	101				2.22	
SM 2540 C-97	TDS					2.88	
SM 4500 F-C-97	Fluoride	97.2	97.7	97.1			0.495
SM 5310 B-00	Organic Carbon	103	103	104			0.465

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2135084, 2135085
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2135084, 2135085
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2135084, 2135085
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2135086, 2135087
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2135086, 2135087
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2135086, 2135087
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2135086, 2135087
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2135088, 2135089
SM 2120 B / E31780	True Color measured at 450 nm	2135084, 2135085
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2135084, 2135085
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2135084, 2135085
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2135084, 2135085
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2135084, 2135085
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2135086, 2135087

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	11/08/2019			11/08/2019 12:10	Samantha Davila	2135085
	11/08/2019			11/08/2019 14:40	Samantha Davila	2135084
EPA 300.0 Rev. 2.1	11/08/2019			11/15/2019 17:07	Lipi Saha	2135084
	11/08/2019			11/15/2019 17:19	Lipi Saha	2135085
EPA 350.1 Rev. 2.0	11/08/2019			11/14/2019 13:28	Ping Hua	2135086
	11/08/2019			11/14/2019 13:32	Ping Hua	2135087
EPA 351.2 Rev. 2.0	11/08/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 17:46	Jhamieka S. Greenwood	2135086
	11/08/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 17:48	Jhamieka S. Greenwood	2135087
EPA 353.2 Rev. 2.0	11/08/2019			11/14/2019 10:59	Beverly Y. Sanders	2135086
	11/08/2019			11/14/2019 11:06	Beverly Y. Sanders	2135087
EPA 365.1 Rev. 2.0	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 13:46	Benjamin T. Nordmann	2135086
	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 13:47	Benjamin T. Nordmann	2135087
EPA 365.1 Rev. 2.0 dissolved	11/08/2019			11/08/2019 15:20	Virginia P. Brown	2135088
	11/08/2019			11/08/2019 15:21	Virginia P. Brown	2135089
SM 2120 B	11/08/2019			11/08/2019 16:16	Madeline Funaro	2135084, 2135085
SM 2320 B-97	11/08/2019			11/15/2019 23:13	Dale L. Simmons	2135084
	11/08/2019			11/15/2019 23:49	Dale L. Simmons	2135085
SM 2540 C-97	11/08/2019			11/13/2019 09:08	Yijie Li	2135084
	11/08/2019			11/13/2019 11:56	Yijie Li	2135085
SM 2540 D-97	11/08/2019			11/13/2019 09:08	Yijie Li	2135084
	11/08/2019			11/13/2019 11:56	Yijie Li	2135085
SM 4500 F-C-97	11/08/2019			11/15/2019 23:13	Dale L. Simmons	2135084
	11/08/2019			11/15/2019 23:49	Dale L. Simmons	2135085
SM 5310 B-00	11/08/2019			11/14/2019 19:03	Madeline Funaro	2135086
	11/08/2019			11/14/2019 19:15	Madeline Funaro	2135087