

Chemical Analysis Report

CEN-DIST-2020-06-05-01

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

Event Description: **Bird Lake and Roberts Branch**

Request ID: **RQ-2020-06-01-48**

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: Natalie Ayala

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, Chemist Administrator

Date Certified: 22-JUN-2020 10:13



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: Roberts Branch @ Curryville Rd

Collection Date/Time: 06/04/2020 10:46

Field ID: G3CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2174893	EPA 180.1 Rev. 2.0	Turbidity	95		NTU	P382862	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P383134	
		Sulfate	6.4		mg SO4/L	P383137	
		Color (true)	59		PCU	P382868	
	SM 2320 B-2011	Total Alkalinity	6.3		mg CaCO3/L	P382962	
	SM 2540 C-2011	TDS	90		mg/L	P383271	
	SM 2540 D-2011	TSS	73		mg/L	P383238	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P382963	
2174895	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P382884	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P383262	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P382901	
	EPA 365.1 Rev. 2.0	Total-P	0.35		mg P/L	P382938	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P382944	
2174897	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P382869	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Bird Lake Ditches @ 75m East of FL 407

Collection Date/Time: 06/04/2020 11:54

Field ID: G3CE0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2174894	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P382862	
	EPA 300.0 Rev. 2.1	Chloride	62		mg Cl/L	P383134	
		Sulfate	34		mg SO4/L	P383137	
	SM 2120 B-2011	Color (true)	23	A	PCU	P382866	
	SM 2320 B-2011	Total Alkalinity	247		mg CaCO3/L	P382962	
	SM 2540 C-2011	TDS	412		mg/L	P383271	
	SM 2540 D-2011	TSS	3	I	mg/L	P383238	
	SM 4500 F-C-2011	Fluoride	0.048	I	mg F/L	P382963	
2174896	EPA 350.1 Rev. 2.0	Ammonia-N	0.19		mg N/L	P382884	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P383262	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P382901	
	EPA 365.1 Rev. 2.0	Total-P	0.094		mg P/L	P383012	
	SM 5310 B-2011	Organic Carbon	7.1		mg C/L	P382944	
2174898	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.057		mg P/L	P382869	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P382862

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383134

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383137

Component	Result	Code	Units
Sulfate	0.20	U	mg SO ₄ /L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382884

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383262

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382901

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382938

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383012

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P382869

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P382866

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P382868

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P382962

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

Reference Method: SM 2540 C-2011
Batch ID: P383271

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P383238

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P382963

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P382944

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: P383134

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383137

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382884

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383262

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382901

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382938

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383012

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P382869

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.4		P	90 - 110

Reference Method: SM 2120 B-2011
Batch ID: P382866

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P382868

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P382962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.9		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P382963

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P382944

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: P383134

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174739	Chloride	104		P	90 - 110
2174811	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383137

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174739	Sulfate	103		P	90 - 110
2174811	Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174913	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2175568	Kjeldahl Nitrogen	97.4	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382901

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174891	NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382938

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174813	Total-P	102	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174896	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P382869

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174892	O-Phosphate-P	94.6	94.5	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P382963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174911	Fluoride	97.0	97.5	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P382944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2174896	Organic Carbon	99.0	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P382862

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174867	Turbidity	3.38	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383134

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174739	Chloride	1.03	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P383137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174739	Sulfate	0.125	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P382884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174913	Ammonia-N	0.141	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2175568	Kjeldahl Nitrogen	0.151	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P382901

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174891	NO2NO3-N	1.01	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P382938

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174813	Total-P	2.88	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174896	Total-P	0.448	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P382869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174892	O-Phosphate-P	0.100	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
 Batch ID: P382866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174894	Color (true)	2.47	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
 Batch ID: P382868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174945	Color (true)	2.80	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P382962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174911	Total Alkalinity	1.43	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P383271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174911	TDS	2.30	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P382963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174911	Fluoride	0.482	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P382944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2174896	Organic Carbon	0.596	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: A99188

Included Lab Sample IDs: 2174893, 2174894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	102	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A99189

Included Lab Sample IDs: 2174893, 2174894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	90 - 115
Color (true)	99.9	102	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99190

Included Lab Sample IDs: 2174897, 2174898

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	98.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99193

Included Lab Sample IDs: 2174895, 2174896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99201

Included Lab Sample IDs: 2174895, 2174896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A99217

Included Lab Sample IDs: 2174895, 2174896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	97.6	P/P	90 - 110
Organic Carbon	99.8	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A99225

Included Lab Sample IDs: 2174893, 2174894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A99225

Included Lab Sample IDs: 2174893, 2174894

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A99225

Included Lab Sample IDs: 2174893, 2174894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.5	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99236

Included Lab Sample IDs: 2174895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.6	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99256

Included Lab Sample IDs: 2174896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.1	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99295

Included Lab Sample IDs: 2174893, 2174894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.7	99.8	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99382

Included Lab Sample IDs: 2174895, 2174896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	96.0	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		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					3.38	
EPA 300.0 Rev. 2.1	Chloride	100	104	105		1.03	
	Sulfate	103	103	105		0.125	
EPA 350.1 Rev. 2.0	Ammonia-N	101	100	100			0.141
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	97.4	97.6			0.151
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	100	99.0			1.01
EPA 365.1 Rev. 2.0	Total-P	102	102	105			2.88
	Total-P	104	105	104			0.448
EPA 365.1 Rev. 2.0 dissolved SM 2120 B-2011	O-Phosphate-P	97.4	94.6	94.5			0.100
	Color (true)	102				2.47	
	Color (true)	102				2.80	
SM 2320 B-2011	Total Alkalinity	97.9				1.43	
SM 2540 C-2011	TDS					2.30	
SM 4500 F-C-2011	Fluoride	99.3	97.0	97.5			0.482
SM 5310 B-2011	Organic Carbon	100	99.0	98.2			0.596

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2174893, 2174894
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2174893, 2174894
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2174893, 2174894
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2174895, 2174896
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2174895, 2174896
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2174895, 2174896
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2174895, 2174896
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2174897, 2174898
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2174893, 2174894
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2174893, 2174894
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2174893, 2174894
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2174893, 2174894
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2174893, 2174894
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2174895, 2174896

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	06/05/2020			06/05/2020 15:30	Yen Ta	2174893, 2174894
EPA 300.0 Rev. 2.1	06/05/2020			06/11/2020 07:10	Elliott Rodriguez	2174893
	06/05/2020			06/11/2020 07:23	Elliott Rodriguez	2174894
EPA 350.1 Rev. 2.0	06/05/2020			06/07/2020 11:48	Ping Hua	2174895
	06/05/2020			06/07/2020 11:49	Ping Hua	2174896
EPA 351.2 Rev. 2.0	06/05/2020	06/16/2020 10:50	Sima Feizi	06/17/2020 13:44	Jhamieka S. Greenwood	2174895
	06/05/2020	06/16/2020 10:50	Sima Feizi	06/17/2020 13:46	Jhamieka S. Greenwood	2174896
EPA 353.2 Rev. 2.0	06/05/2020			06/08/2020 09:52	Beverly Y. Sanders	2174895
	06/05/2020			06/08/2020 09:53	Beverly Y. Sanders	2174896
EPA 365.1 Rev. 2.0	06/05/2020	06/08/2020 17:04	Yen Ta	06/10/2020 09:21	Lipi Saha	2174895
	06/05/2020	06/10/2020 13:08	Yen Ta	06/11/2020 07:54	Lipi Saha	2174896
EPA 365.1 Rev. 2.0 dissolved	06/05/2020			06/05/2020 16:38	Carlos Miranda	2174897
	06/05/2020			06/05/2020 16:39	Carlos Miranda	2174898
SM 2120 B-2011	06/05/2020			06/05/2020 16:25	Samantha Davila	2174894
	06/05/2020			06/05/2020 16:42	Samantha Davila	2174893
SM 2320 B-2011	06/05/2020			06/08/2020 16:49	Dale L. Simmons	2174893
	06/05/2020			06/08/2020 17:03	Dale L. Simmons	2174894
SM 2540 C-2011	06/05/2020			06/09/2020 12:54	Yijie Li	2174893, 2174894
SM 2540 D-2011	06/05/2020			06/09/2020 12:54	Yijie Li	2174893, 2174894
SM 4500 F-C-2011	06/05/2020			06/08/2020 16:49	Dale L. Simmons	2174893
	06/05/2020			06/08/2020 17:03	Dale L. Simmons	2174894
SM 5310 B-2011	06/05/2020			06/08/2020 13:58	David Boose	2174896
	06/05/2020			06/08/2020 16:48	David Boose	2174895