

Chemical Analysis Report

CEN-DIST-2021-02-09-02

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

Event Description: **Johns Lake Outlet/Lake Jane/Lake Lotta**
Request ID: **RQ-2021-02-01-27**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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Certified by: Colin Wright, Program Administrator

Date Certified: 26-FEB-2021 12:05

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

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: John's Lake Outlet @ 500m NW of Avalon Rd Collection Date/Time: 02/08/2021 11:12

Field ID: G1CE0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224396	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P393569	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P393739	
		Sulfate	7.8		mg SO4/L	P393741	
	SM 2120 B-2011	Color (true)	160		PCU	P393563	
	SM 2320 B-2011	Total Alkalinity	44		mg CaCO3/L	P393787	
	SM 2540 C-2011	TDS	147	A	mg/L	P393821	
	SM 2540 D-2011	TSS	2	IA	mg/L	P393814	
	SM 4500 F-C-2011	Fluoride	0.10		mg F/L	P393651	
2224398	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P393917	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P393835	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P393704	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P393716	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P393932	
2224400	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.076		mg P/L	P393559	

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: Lake Jane @ Center

Collection Date/Time: 02/08/2021 11:59

Field ID: G4CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2224397	EPA 180.1 Rev. 2.0	Turbidity	7.0		NTU	P393569	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P393739	
		Sulfate	14		mg SO4/L	P393741	
	SM 2120 B-2011	Color (true)	30	A	PCU	P393564	
	SM 2320 B-2011	Total Alkalinity	104		mg CaCO3/L	P393787	
	SM 2540 C-2011	TDS	182		mg/L	P393821	
	SM 2540 D-2011	TSS	9	I	mg/L	P393814	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P393651	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P393917	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P393835	
2224399	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P393704	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P393716	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P393932	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P393561	
	dissolved						
2224401	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P393561	

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: P393569

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393739

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393741

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393917

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393835

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393704

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393716

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393559

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393561

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: P393563

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P393564

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P393787

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

Reference Method: SM 2540 C-2011
Batch ID: P393821

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393814

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P393651

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P393932

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: P393739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393917

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393835

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393704

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393716

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: P393559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393561

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

Reference Method: SM 2120 B-2011
Batch ID: P393563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.1		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P393564

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.1		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P393787

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.5		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P393651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P393932

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224354	Chloride	101		P	90 - 110
2224402	Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224354	Sulfate	101		P	90 - 110
2224402	Sulfate	98.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393917

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224714	Ammonia-N	97.6	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224373	Kjeldahl Nitrogen	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224398	NO2NO3-N	93.9	93.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393716

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224303	Total-P	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224163	O-Phosphate-P	95.9	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224401	O-Phosphate-P	99.4	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P393651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224396	Fluoride	97.5	97.5	P/P	94 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P393932

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224352	Organic Carbon	99.4		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224351	Turbidity	0.149	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224402	Chloride	0.398	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224402	Sulfate	1.65	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393917

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224714	Ammonia-N	0.205	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224373	Kjeldahl Nitrogen	1.05	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224398	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224303	Total-P	1.81	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224163	O-Phosphate-P	1.71	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224401	O-Phosphate-P	0.502	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P393563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224372	Color (true)	1.59	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P393564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224397	Color (true)	9.19	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P393787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224892	Total Alkalinity	1.49	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P393821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224396	TDS	1.36	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P393651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224396	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P393932

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224352	Organic Carbon	0.474	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: A103481

Included Lab Sample IDs: 2224396, 2224397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.7	99.6	P/P	90 - 110
Sulfate	99.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A103496

Included Lab Sample IDs: 2224400, 2224401

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	99.6	P/P	90 - 110
O-Phosphate-P	99.5	98.4	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A103497

Included Lab Sample IDs: 2224397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.6	99.7	P/P	90 - 115

Reference Method: SM 2120 B-2011

Run ID: A103498

Included Lab Sample IDs: 2224396

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A103499

Included Lab Sample IDs: 2224396, 2224397

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

Reference Method: SM 4500 F-C-2011

Run ID: A103534

Included Lab Sample IDs: 2224396, 2224397

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103559

Included Lab Sample IDs: 2224398, 2224399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103587

Included Lab Sample IDs: 2224398, 2224399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.4	98.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A103594

Included Lab Sample IDs: 2224396, 2224397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.1	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A103638

Included Lab Sample IDs: 2224398, 2224399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.3	P/P	90 - 110
Ammonia-N	98.4	96.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A103645

Included Lab Sample IDs: 2224398, 2224399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	93.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A103655

Included Lab Sample IDs: 2224398, 2224399

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	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		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					0.149	
EPA 300.0 Rev. 2.1	Chloride	98.8	99.3	101		0.398	
	Sulfate	99.6	98.5	101		1.65	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6	97.6	97.8			0.205
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	102	101			1.05
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.0	93.9	93.9			0.0
EPA 365.1 Rev. 2.0	Total-P	104	101	103			1.81
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.6	95.9	97.7			1.71
	O-Phosphate-P	97.8	99.4	99.9			0.502
SM 2120 B-2011	Color (true)	98.1				1.59	
	Color (true)	99.1				9.19	
SM 2320 B-2011	Total Alkalinity	96.5				1.49	
SM 2540 C-2011	TDS					1.36	
SM 4500 F-C-2011	Fluoride	98.8	97.5	97.5			0.0
SM 5310 B-2011	Organic Carbon	94.8	99.4				0.474

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2224396, 2224397
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2224396, 2224397
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2224396, 2224397
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2224398, 2224399
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2224398, 2224399
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2224398, 2224399
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2224398, 2224399
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2224400, 2224401
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2224396, 2224397
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2224396, 2224397
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2224396, 2224397
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2224396, 2224397
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2224396, 2224397
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2224398, 2224399

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	02/09/2021			02/09/2021 14:44	Yen Ta	2224396, 2224397
EPA 300.0 Rev. 2.1	02/09/2021			02/11/2021 22:43	Lipi Saha	2224396
	02/09/2021			02/11/2021 22:55	Lipi Saha	2224397
EPA 350.1 Rev. 2.0	02/09/2021			02/17/2021 17:24	Ping Hua	2224398
	02/09/2021			02/17/2021 18:29	Ping Hua	2224399
EPA 351.2 Rev. 2.0	02/09/2021	02/16/2021 12:31	Yen Ta	02/17/2021 12:56	Julia Storbeck	2224398
	02/09/2021	02/16/2021 12:31	Yen Ta	02/17/2021 12:57	Julia Storbeck	2224399
EPA 353.2 Rev. 2.0	02/09/2021			02/12/2021 10:48	Beverly Y. Sanders	2224398
	02/09/2021			02/12/2021 10:54	Beverly Y. Sanders	2224399
EPA 365.1 Rev. 2.0	02/09/2021	02/12/2021 14:20	Lipi Saha	02/15/2021 14:13	Shengyu Wang	2224398
	02/09/2021	02/12/2021 14:20	Lipi Saha	02/15/2021 14:14	Shengyu Wang	2224399
EPA 365.1 Rev. 2.0 dissolved	02/09/2021			02/09/2021 15:29	Blanca Fach	2224400
	02/09/2021			02/09/2021 15:48	Blanca Fach	2224401
SM 2120 B-2011	02/09/2021			02/09/2021 15:41	Benjamin T. Nordmann	2224397
	02/09/2021			02/09/2021 16:07	Benjamin T. Nordmann	2224396
SM 2320 B-2011	02/09/2021			02/12/2021 23:28	Dale L. Simmons	2224396
	02/09/2021			02/12/2021 23:40	Dale L. Simmons	2224397
SM 2540 C-2011	02/09/2021			02/10/2021 14:52	Yijie Li	2224396, 2224397
SM 2540 D-2011	02/09/2021			02/10/2021 14:52	Yijie Li	2224396, 2224397
SM 4500 F-C-2011	02/09/2021			02/10/2021 22:40	Dale L. Simmons	2224396
	02/09/2021			02/11/2021 00:44	Dale L. Simmons	2224397
SM 5310 B-2011	02/09/2021			02/16/2021 20:20	Touraj Touran	2224398
	02/09/2021			02/16/2021 20:32	Touraj Touran	2224399