

Chemical Analysis Report

SE-DIST-2020-07-02-01

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

Event Description: **SMP- Lake O Tribs**
Request ID: **RQ-2020-06-29-33**
Customer: **SE-DIST**
Project ID: **SMP**

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Date Certified: 23-JUL-2020 17:36



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: Taylor Creek @ 70

Collection Date/Time: 07/01/2020 10:40

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180479	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P384011	
	EPA 300.0 Rev. 2.1	Chloride	56		mg Cl/L	P384558	
		Sulfate	56		mg SO4/L	P384560	
		Color (true)	220		PCU	P384018	
	SM 2320 B-2011	Total Alkalinity	142		mg CaCO3/L	P384611	
	SM 2540 C-2011	TDS	407	J	mg/L	P384664	
	SM 2540 D-2011	TSS	3	I	mg/L	P384167	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P384389	
2180482	EPA 350.1 Rev. 2.0	Ammonia-N	0.43		mg N/L	P384040	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.6		mg N/L	P384277	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P384117	
	EPA 365.1 Rev. 2.0	Total-P	0.38		mg P/L	P384402	
	SM 5310 B-2011	Organic Carbon	32		mg C/L	P384264	
2180485	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.26		mg P/L	P384087	

Ref. Method and Comment:

SM 2540 C-2011: Because of analytical difficulties a constant dry weight was not attained.

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

Sample Location: Taylor Creek @ 441

Collection Date/Time: 07/01/2020 10:55

Field ID: G1SE0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180480	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P384011	
	EPA 300.0 Rev. 2.1	Chloride	50		mg Cl/L	P384558	
		Sulfate	28		mg SO4/L	P384560	
	SM 2120 B-2011	Color (true)	270		PCU	P384018	
	SM 2320 B-2011	Total Alkalinity	81		mg CaCO3/L	P384611	
	SM 2540 C-2011	TDS	284		mg/L	P384665	
	SM 2540 D-2011	TSS	4	I	mg/L	P384167	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P384389	
2180483	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P384040	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P384277	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P384117	
	EPA 365.1 Rev. 2.0	Total-P	0.43		mg P/L	P384402	
	SM 5310 B-2011	Organic Carbon	29		mg C/L	P384264	
2180486	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.34		mg P/L	P384087	

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: Lemkin Creek @ 78

Collection Date/Time: 07/01/2020 11:25

Field ID: G1SE0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180481	EPA 180.1 Rev. 2.0	Turbidity	2.3	A	NTU	P384012	
	EPA 300.0 Rev. 2.1	Chloride	210		mg Cl/L	P384558	
		Sulfate	140		mg SO4/L	P384560	
	SM 2120 B-2011	Color (true)	66		PCU	P384018	
	SM 2320 B-2011	Total Alkalinity	100		mg CaCO3/L	P384611	
	SM 2540 C-2011	TDS	718		mg/L	P384665	
	SM 2540 D-2011	TSS	4	I	mg/L	P384168	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P384389	
2180484	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P384040	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P384277	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P384117	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P384402	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P384264	
2180487	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.060		mg P/L	P384087	

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: P384011

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P384012

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384558

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384560

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384040

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384277

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384117

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384402

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384087

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: P384018

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P384611

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

Reference Method: SM 2540 C-2011
Batch ID: P384664

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P384665

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384167

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384168

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P384389

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P384264

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: P384558

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384560

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384040

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: P384277

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384117

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: P384402

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384087

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

Reference Method: SM 2120 B-2011
Batch ID: P384018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P384611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	93 - 104

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P384389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P384264

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: P384558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180449	Chloride	103		P	90 - 110
2180537	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180449	Sulfate	102		P	90 - 110
2180537	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180452	Ammonia-N	98.5	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180451	Kjeldahl Nitrogen	109	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384117

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180451	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180472	Total-P	107	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180435	O-Phosphate-P	98.0	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P384389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180449	Fluoride	98.7	98.2	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P384264

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180452	Organic Carbon	101	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P384011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180427	Turbidity	5.48	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P384012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180481	Turbidity	3.05	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180449	Chloride	0.0178	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180449	Sulfate	0.270	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180452	Ammonia-N	0.296	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180451	Kjeldahl Nitrogen	0.0161	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180451	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180472	Total-P	1.47	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P384087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180435	O-Phosphate-P	1.22	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
 Batch ID: P384018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180507	Color (true)	0.126	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P384611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180449	Total Alkalinity	0.158	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P384664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180431	TDS	3.15	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
 Batch ID: P384665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180449	TDS	3.23	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P384389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180449	Fluoride	0.462	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P384264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180452	Organic Carbon	1.09	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: A99661

Included Lab Sample IDs: 2180479, 2180480, 2180481

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

Reference Method: SM 2120 B-2011

Run ID: A99662

Included Lab Sample IDs: 2180479, 2180480, 2180481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	102	103	P/P	90 - 115

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99668

Included Lab Sample IDs: 2180482, 2180483, 2180484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99692

Included Lab Sample IDs: 2180485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99694

Included Lab Sample IDs: 2180486, 2180487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.9	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99705

Included Lab Sample IDs: 2180482, 2180483, 2180484

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

Reference Method: SM 5310 B-2011

Run ID: A99754

Included Lab Sample IDs: 2180482, 2180483, 2180484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A99792

Included Lab Sample IDs: 2180479, 2180480, 2180481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A99792

Included Lab Sample IDs: 2180479, 2180480, 2180481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99796

Included Lab Sample IDs: 2180482, 2180483, 2180484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.8	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99824

Included Lab Sample IDs: 2180482, 2180483, 2180484

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.6	P/P	90 - 110
Total-P	99.6	98.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99856

Included Lab Sample IDs: 2180479, 2180480, 2180481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.6	98.9	P/P	90 - 110
Sulfate	98.8	99.1	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A99877

Included Lab Sample IDs: 2180479, 2180480, 2180481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	99.6	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					5.48	
	Turbidity					3.05	
EPA 300.0 Rev. 2.1	Chloride	101	103	102		0.0178	
	Sulfate	100	102	102		0.270	
EPA 350.1 Rev. 2.0	Ammonia-N	101	98.5	98.8			0.296
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	109	109			0.0161
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.0	99.5	99.0			0.504
EPA 365.1 Rev. 2.0	Total-P	103	107	109			1.47
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0	98.0	99.2			1.22
SM 2120 B-2011	Color (true)	99.6				0.126	
SM 2320 B-2011	Total Alkalinity	99.5				0.158	
SM 2540 C-2011	TDS					3.15	
	TDS					3.23	
SM 4500 F-C-2011	Fluoride	100	98.7	98.2			0.462
SM 5310 B-2011	Organic Carbon	100	101	103			1.09

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2180479, 2180480, 2180481
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2180479, 2180480, 2180481
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2180479, 2180480, 2180481
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2180482, 2180483, 2180484
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2180482, 2180483, 2180484
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2180482, 2180483, 2180484
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2180482, 2180483, 2180484
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2180485, 2180486, 2180487
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2180479, 2180480, 2180481
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2180479, 2180480, 2180481
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2180479, 2180480, 2180481
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2180479, 2180480, 2180481
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2180479, 2180480, 2180481
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2180482, 2180483, 2180484

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	07/02/2020			07/02/2020 14:42	Yen Ta	2180479, 2180480, 2180481
EPA 300.0 Rev. 2.1	07/02/2020			07/09/2020 01:46	Elliott Rodriguez	2180479
	07/02/2020			07/09/2020 01:58	Elliott Rodriguez	2180480
	07/02/2020			07/09/2020 02:10	Elliott Rodriguez	2180481
EPA 350.1 Rev. 2.0	07/02/2020			07/05/2020 21:18	Ping Hua	2180482
	07/02/2020			07/05/2020 21:20	Ping Hua	2180483
	07/02/2020			07/05/2020 21:21	Ping Hua	2180484
EPA 351.2 Rev. 2.0	07/02/2020	07/09/2020 09:20	Sima Feizi	07/10/2020 13:22	Jhamieka S. Greenwood	2180482
	07/02/2020	07/09/2020 09:20	Sima Feizi	07/10/2020 13:23	Jhamieka S. Greenwood	2180483
	07/02/2020	07/09/2020 09:20	Sima Feizi	07/10/2020 13:25	Jhamieka S. Greenwood	2180484
EPA 353.2 Rev. 2.0	07/02/2020			07/07/2020 09:18	Beverly Y. Sanders	2180482
	07/02/2020			07/07/2020 09:19	Beverly Y. Sanders	2180483
	07/02/2020			07/07/2020 09:20	Beverly Y. Sanders	2180484
EPA 365.1 Rev. 2.0	07/02/2020	07/10/2020 13:26	Yen Ta	07/13/2020 09:08	Benjamin T. Nordmann	2180482
	07/02/2020	07/10/2020 13:26	Yen Ta	07/13/2020 09:09	Benjamin T. Nordmann	2180483
	07/02/2020	07/10/2020 13:26	Yen Ta	07/13/2020 09:12	Benjamin T. Nordmann	2180484
EPA 365.1 Rev. 2.0 dissolved	07/02/2020			07/02/2020 17:22	Carlos Miranda	2180485
	07/02/2020			07/02/2020 18:22	Carlos Miranda	2180486
	07/02/2020			07/02/2020 18:23	Carlos Miranda	2180487
SM 2120 B-2011	07/02/2020			07/02/2020 16:09	Madeline Gruver	2180481
	07/02/2020			07/02/2020 16:39	Madeline Gruver	2180479
	07/02/2020			07/02/2020 16:40	Madeline Gruver	2180480
SM 2320 B-2011	07/02/2020			07/13/2020 23:22	Dale L. Simmons	2180479
	07/02/2020			07/13/2020 23:33	Dale L. Simmons	2180480
	07/02/2020			07/13/2020 23:44	Dale L. Simmons	2180481
SM 2540 C-2011	07/02/2020			07/06/2020 19:14	Madeline Gruver	2180479, 2180480, 2180481
SM 2540 D-2011	07/02/2020			07/06/2020 19:14	Madeline Gruver	2180479, 2180480, 2180481
SM 4500 F-C-2011	07/02/2020			07/09/2020 04:16	Dale L. Simmons	2180479
	07/02/2020			07/09/2020 04:28	Dale L. Simmons	2180480
	07/02/2020			07/09/2020 04:41	Dale L. Simmons	2180481
SM 5310 B-2011	07/02/2020			07/08/2020 18:13	David Boose	2180482
	07/02/2020			07/08/2020 18:27	David Boose	2180483
	07/02/2020			07/08/2020 18:39	David Boose	2180484