

Chemical Analysis Report

TLH-ROC-2021-05-26-02

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

Event Description: **Run 11**
Request ID: **RQ-2021-05-31-19**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
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Date Certified: 21-JUN-2021 10:28



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: Eagles Nest Continuous Monitoring

Collection Date/Time: 05/26/2021 11:40

Field ID: G3TLHR0019

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2250475	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P398859	
	SM 2320 B-2011	Total Alkalinity	58		mg CaCO3/L	P399027	
	SM 2540 D-2011	TSS	8	I	mg/L	P399106	
	SM 4500 F-C-2011	Fluoride	0.35		mg F/L	P399029	
2250477	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P399320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38	I	mg N/L	P399326	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P398976	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P398975	
	SM 5310 B-2011	Organic Carbon	4.7		mg C/L	P399729	
2250479	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P398848	

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: Sandy Creek Upstream Boat Ramp

Collection Date/Time: 05/26/2021 11:00

Field ID: G3TLHR0037

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2250476	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P398859	
	SM 2320 B-2011	Total Alkalinity	10		mg CaCO3/L	P398969	
	SM 2540 D-2011	TSS	3	I	mg/L	P399106	
	SM 4500 F-C-2011	Fluoride	0.049	I	mg F/L	P398972	
2250478	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P399307	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21		mg N/L	P399711	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P398984	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P398973	
	SM 5310 B-2011	Organic Carbon	3.2		mg C/L	P399729	
2250480	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P398849	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Sandy Creek

Collection Date/Time: 05/26/2021 12:20

Field ID: G3TLHR0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2250472	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P398859	
	EPA 300.0 Rev. 2.1	Chloride	4.1		mg Cl/L	P399476	
	SM 2120 B-2011	Color (true)	51		PCU	P398863	
	SM 2320 B-2011	Total Alkalinity	6.1		mg CaCO3/L	P398969	
	SM 2540 C-2011	TDS	27		mg/L	P399416	
	SM 2540 D-2011	TSS	2	I	mg/L	P399104	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P398972	
2250473	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P399307	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P399711	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.053		mg N/L	P398984	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P398973	
	SM 5310 B-2011	Organic Carbon	2.8		mg C/L	P399729	
2250474	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P398849	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P398859

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399476

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399307

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399320

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399326

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399711

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398976

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398984

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398973

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
Batch ID: P398975

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398848

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398849

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

Reference Method: SM 2120 B-2011
Batch ID: P398863

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P398969

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

Reference Method: SM 2320 B-2011
Batch ID: P399027

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

Reference Method: SM 2540 C-2011
Batch ID: P399416

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P399104

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P399106

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P398972

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P399029

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P399729

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: P399476

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399307

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399320

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399326

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399711

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: P398976

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: P398984

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: P398973

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398975

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398848

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398849

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.7		P	90 - 110

Reference Method: SM 2120 B-2011
Batch ID: P398863

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

Reference Method: SM 2320 B-2011
Batch ID: P398969

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.5		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P399027

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

Reference Method: SM 4500 F-C-2011
Batch ID: P398972

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.4		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P399029

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.2		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P399729

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: P399476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250461	Chloride	92.8		P	90 - 110
2250718	Chloride	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P399307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250473	Ammonia-N	97.2	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P399320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250818	Ammonia-N	104	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P399326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249817	Kjeldahl Nitrogen	95.2	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P398976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250477	NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P398984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250473	NO2NO3-N	99.4	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P398973

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250275	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P398975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250477	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P398848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250213	O-Phosphate-P	96.5	97.5	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398849

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250025	O-Phosphate-P	96.4	96.7	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P398972

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250461	Fluoride	97.7	98.4	P/P	92 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P399029

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250822	Fluoride	98.2	98.8	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P399729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250478	Organic Carbon	94.6	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P398859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250272	Turbidity	2.60	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250461	Chloride	0.637	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250473	Ammonia-N	1.23	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250818	Ammonia-N	1.75	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249817	Kjeldahl Nitrogen	3.99	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253743	Kjeldahl Nitrogen	2.16	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250477	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250473	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250275	Total-P	0.473	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250477	Total-P	2.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250213	O-Phosphate-P	0.763	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398849

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250025	O-Phosphate-P	0.220	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P398863

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250272	Color (true)	0.423	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P398969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250461	Total Alkalinity	0.440	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P399027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250822	Total Alkalinity	0.471	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P399416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250596	TDS	7.11	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P398972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250461	Fluoride	0.502	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P399029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250822	Fluoride	0.461	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P399729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250478	Organic Carbon	0.812	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A105691

Included Lab Sample IDs: 2250474, 2250479, 2250480

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A105696

Included Lab Sample IDs: 2250472, 2250475, 2250476

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

Reference Method: SM 2120 B-2011

Run ID: A105697

Included Lab Sample IDs: 2250472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.8	99.5	P/P	90 - 115

Reference Method: SM 2320 B-2011

Run ID: A105756

Included Lab Sample IDs: 2250472, 2250476

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.2	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A105756

Included Lab Sample IDs: 2250472, 2250476

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A105758

Included Lab Sample IDs: 2250477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A105761

Included Lab Sample IDs: 2250473, 2250478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A105786

Included Lab Sample IDs: 2250475

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A105786

Included Lab Sample IDs: 2250475

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A105792

Included Lab Sample IDs: 2250473, 2250477, 2250478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.8	P/P	90 - 110
Total-P	99.8	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A105920

Included Lab Sample IDs: 2250473, 2250477, 2250478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.3	97.8	P/P	90 - 110
Ammonia-N	97.6	97.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A105956

Included Lab Sample IDs: 2250472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.5	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A105971

Included Lab Sample IDs: 2250477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.2	94.7	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A106083

Included Lab Sample IDs: 2250473, 2250477, 2250478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	100	P/P	90 - 110
Organic Carbon	97.4	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A106117

Included Lab Sample IDs: 2250473, 2250478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.1	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				2.60	
EPA 300.0 Rev. 2.1	Chloride	97.3	92.8	97.2	0.637	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	97.2	98.6		1.23
	Ammonia-N	100	104	102		1.75
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	95.2	100		3.99
	Kjeldahl Nitrogen	107				2.16
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	99.5	99.5		0.0
	NO ₂ NO ₃ -N	100	99.4	99.4		0.0
EPA 365.1 Rev. 2.0	Total-P	103	104	105		0.473
	Total-P	104	104	102		2.46
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	96.5	97.5		0.763
	O-Phosphate-P	98.7	96.4	96.7		0.220
SM 2120 B-2011	Color (true)	100			0.423	
SM 2320 B-2011	Total Alkalinity	98.5			0.440	
	Total Alkalinity	97.2			0.471	
SM 2540 C-2011	TDS				7.11	
SM 4500 F-C-2011	Fluoride	98.4	97.7	98.4		0.502
	Fluoride	99.2	98.2	98.8		0.461
SM 5310 B-2011	Organic Carbon	94.8	94.6	95.5		0.812

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2250472, 2250475, 2250476
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2250472
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2250473, 2250477, 2250478
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2250473, 2250477, 2250478
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2250473, 2250477, 2250478
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2250473, 2250477, 2250478
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2250474, 2250479, 2250480
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2250472
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2250472, 2250475, 2250476
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2250472
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2250472, 2250475, 2250476
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2250472, 2250475, 2250476
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2250473, 2250477, 2250478

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	05/26/2021			05/26/2021 15:34	Yen Ta	2250472, 2250475, 2250476
EPA 300.0 Rev. 2.1	05/26/2021			06/09/2021 12:29	Lipi Saha	2250472
EPA 350.1 Rev. 2.0	05/26/2021			06/07/2021 13:41	Ping Hua	2250473
	05/26/2021			06/07/2021 13:47	Ping Hua	2250478
	05/26/2021			06/07/2021 14:12	Ping Hua	2250477
EPA 351.2 Rev. 2.0	05/26/2021	06/07/2021 13:44	Benjamin T. Nordmann	06/09/2021 15:22	Virginia P. Brown	2250477
	05/26/2021	06/15/2021 14:13	Benjamin T. Nordmann	06/16/2021 12:52	Virginia P. Brown	2250473
	05/26/2021	06/15/2021 14:13	Benjamin T. Nordmann	06/16/2021 12:54	Virginia P. Brown	2250478
EPA 353.2 Rev. 2.0	05/26/2021			05/28/2021 09:26	Beverly Y. Sanders	2250473
	05/26/2021			05/28/2021 09:31	Beverly Y. Sanders	2250478
	05/26/2021			05/28/2021 11:57	Beverly Y. Sanders	2250477
EPA 365.1 Rev. 2.0	05/26/2021	05/28/2021 13:30	Yen Ta	06/01/2021 14:18	Shengyu Ding	2250473
	05/26/2021	05/28/2021 13:30	Yen Ta	06/01/2021 14:19	Shengyu Ding	2250478
	05/26/2021	05/28/2021 13:30	Yen Ta	06/01/2021 14:34	Shengyu Ding	2250477
EPA 365.1 Rev. 2.0 dissolved	05/26/2021			05/26/2021 15:35	Ping Hua	2250474, 2250479
	05/26/2021			05/26/2021 15:36	Ping Hua	2250480
SM 2120 B-2011	05/26/2021			05/26/2021 16:05	Sarah A Nixon	2250472
SM 2320 B-2011	05/26/2021			05/28/2021 07:07	Dale L. Simmons	2250472
	05/26/2021			05/28/2021 07:18	Dale L. Simmons	2250476
	05/26/2021			05/29/2021 04:40	Dale L. Simmons	2250475
SM 2540 C-2011	05/26/2021			06/01/2021 14:02	Yijie Li	2250472
SM 2540 D-2011	05/26/2021			06/01/2021 14:02	Yijie Li	2250472, 2250475, 2250476
SM 4500 F-C-2011	05/26/2021			05/28/2021 07:07	Dale L. Simmons	2250472
	05/26/2021			05/28/2021 07:18	Dale L. Simmons	2250476
	05/26/2021			05/29/2021 01:39	Dale L. Simmons	2250475
SM 5310 B-2011	05/26/2021			06/14/2021 19:35	Madeline Gruver	2250478
	05/26/2021			06/14/2021 22:02	Madeline Gruver	2250473
	05/26/2021			06/14/2021 22:14	Madeline Gruver	2250477