

Chemical Analysis Report

TLH-ROC-2021-08-19-02

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

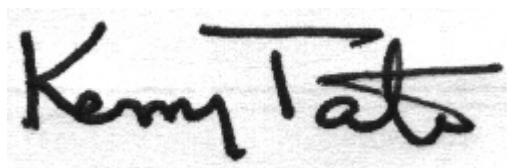
Event Description: **Run 7**
Request ID: **RQ-2021-08-09-37**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
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2600 Blair Stone Rd
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 15-SEP-2021 15:08

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Oyster Bay2

Collection Date/Time: 08/19/2021 10:00

Field ID: G1TLHR0152

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270718	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P402773	
	SM 2320 B-2011	Total Alkalinity	107		mg CaCO3/L	P402929	
	SM 2540 D-2011	TSS	6	I	mg/L	P403244	
	SM 4500 F-C-2011	Fluoride	0.71		mg F/L	P402930	
2270721	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P403079	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P403155	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P403008	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P402891	
	SM 5310 B-2011	Organic Carbon	8.8		mg C/L	P403057	
2270724	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P402772	

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: Oyster Bay1

Collection Date/Time: 08/19/2021 10:15

Field ID: G1TLHR0151

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270719	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P402773	
	SM 2320 B-2011	Total Alkalinity	101		mg CaCO3/L	P402851	
	SM 2540 D-2011	TSS	2	I	mg/L	P403198	
	SM 4500 F-C-2011	Fluoride	0.18		mg F/L	P402854	
2270722	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P403079	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P403155	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.057		mg N/L	P403008	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P402891	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P403240	
2270725	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P402772	

Sample Location: Spring Creek Springs Middle

Collection Date/Time: 08/19/2021 10:30

Field ID: G1TLHR0129

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270727	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P402773	
	SM 2320 B-2011	Total Alkalinity	104		mg CaCO3/L	P402851	
	SM 2540 D-2011	TSS	4	I	mg/L	P403198	
	SM 4500 F-C-2011	Fluoride	0.20		mg F/L	P402854	
2270729	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P403079	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P403155	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P403008	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P402891	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P403240	
2270731	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P402772	

Sample Location: Spring Creek Spring

Collection Date/Time: 08/19/2021 10:45

Field ID: G1TLHR0131

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270728	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P402773	
	SM 2320 B-2011	Total Alkalinity	104		mg CaCO3/L	P402851	
	SM 2540 D-2011	TSS	2	I	mg/L	P403198	
	SM 4500 F-C-2011	Fluoride	0.15		mg F/L	P402854	
2270730	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P403079	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P403155	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.060		mg N/L	P403008	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P402891	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P403240	
2270732	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P402772	

Sample Location: Alligator Harbor near Clam beds

Collection Date/Time: 08/19/2021 12:15

Field ID: G2TLHR0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270720	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P402773	
	SM 2320 B-2011	Total Alkalinity	112		mg CaCO3/L	P402929	
	SM 2540 D-2011	TSS	15		mg/L	P403244	
	SM 4500 F-C-2011	Fluoride	1.1		mg F/L	P402930	
2270723	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P403079	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P403155	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P403012	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P402891	
	SM 5310 B-2011	Organic Carbon	4.8		mg C/L	P403057	
2270726	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P402772	

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: P402773

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403079

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403155

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403012

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402891

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402772

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

Reference Method: SM 2320 B-2011
Batch ID: P402851

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

Reference Method: SM 2320 B-2011
Batch ID: P402929

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P403198

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P403244

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P402854

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P402930

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P403057

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

Reference Method: SM 5310 B-2011
Batch ID: P403240

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403079

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403155

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403012

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402891

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402772

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

Reference Method: SM 2320 B-2011
Batch ID: P402851

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P402929

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P402854

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P402930

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

Reference Method: SM 5310 B-2011
Batch ID: P403057

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P403240

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270723	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270721	Kjeldahl Nitrogen	97.5	94.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270721	NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271842	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402891

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268862	Total-P	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270726	O-Phosphate-P	106	106	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P402854

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271140	Fluoride	99.9	100	P/P	92 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P402930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270945	Fluoride	96.7	98.1	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P403057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270528	Organic Carbon	95.8	94.6	P/P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P403240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270722	Organic Carbon	94.0	97.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270693	Turbidity	2.81	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270723	Ammonia-N	0.181	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270721	Kjeldahl Nitrogen	2.79	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270721	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271842	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268862	Total-P	1.49	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270726	O-Phosphate-P	0.283	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P402851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271140	Total Alkalinity	1.71	Sample	P	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
 Batch ID: P402929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270945	Total Alkalinity	0.277	Sample	P	0 - 5.2

Reference Method: SM 2540 D-2011
 Batch ID: P403198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270425	TSS	5.94	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P402854

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271140	Fluoride	0.472	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
 Batch ID: P402930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270945	Fluoride	0.953	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
 Batch ID: P403057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270528	Organic Carbon	1.07	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P403240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270722	Organic Carbon	1.99	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: A107370

Included Lab Sample IDs: 2270724, 2270725, 2270726, 2270731, 2270732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107371

Included Lab Sample IDs: 2270718, 2270719, 2270720, 2270727, 2270728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A107408

Included Lab Sample IDs: 2270719, 2270727, 2270728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	104	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A107408

Included Lab Sample IDs: 2270719, 2270727, 2270728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110
Fluoride	103	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A107452

Included Lab Sample IDs: 2270718, 2270720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A107452

Included Lab Sample IDs: 2270718, 2270720

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107475

Included Lab Sample IDs: 2270721, 2270722, 2270723, 2270729, 2270730

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A107501

Included Lab Sample IDs: 2270721, 2270723

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	96.4	P/P	90 - 110
Organic Carbon	97.0	96.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107511

Included Lab Sample IDs: 2270721, 2270722, 2270723, 2270729, 2270730

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107534

Included Lab Sample IDs: 2270721, 2270722, 2270723, 2270729, 2270730

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	100	P/P	90 - 110
Total-P	99.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107566

Included Lab Sample IDs: 2270721, 2270722, 2270723, 2270729, 2270730

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.0	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107593

Included Lab Sample IDs: 2270722, 2270729, 2270730

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	97.1	P/P	90 - 110
Organic Carbon	96.5	97.8	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					2.81	
EPA 350.1 Rev. 2.0	Ammonia-N	98.2	100	100			0.181
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.7	97.5	94.2			2.79
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	98.0	98.0			0.0
	NO ₂ NO ₃ -N	99.5	100	100			0.499
EPA 365.1 Rev. 2.0	Total-P	101	103	105			1.49
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	106	106			0.283
SM 2320 B-2011	Total Alkalinity	101				1.71	
	Total Alkalinity	101				0.277	
SM 2540 D-2011	TSS					5.94	
SM 4500 F-C-2011	Fluoride	101	99.9	100			0.472
	Fluoride	99.2	96.7	98.1			0.953
SM 5310 B-2011	Organic Carbon	95.0	95.8	94.6			1.07
	Organic Carbon	96.7	94.0	97.5			1.99

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2270718, 2270719, 2270720, 2270727, 2270728
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2270721, 2270722, 2270723, 2270729, 2270730
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2270721, 2270722, 2270723, 2270729, 2270730
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2270721, 2270722, 2270723, 2270729, 2270730
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2270721, 2270722, 2270723, 2270729, 2270730
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2270724, 2270725, 2270726, 2270731, 2270732
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2270718, 2270719, 2270720, 2270727, 2270728
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2270718, 2270719, 2270720, 2270727, 2270728
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2270718, 2270719, 2270720, 2270727, 2270728
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2270721, 2270722, 2270723, 2270729, 2270730

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	08/19/2021			08/20/2021 16:40	Sarah A Nixon	2270718, 2270719, 2270720, 2270727, 2270728
EPA 350.1 Rev. 2.0	08/19/2021			08/27/2021 12:56	Ping Hua	2270723
	08/19/2021			08/27/2021 13:01	Ping Hua	2270721
	08/19/2021			08/27/2021 13:03	Ping Hua	2270722
	08/19/2021			08/27/2021 13:04	Ping Hua	2270729
	08/19/2021			08/27/2021 13:05	Ping Hua	2270730
EPA 351.2 Rev. 2.0	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 10:35	Alexandra J Mattheus	2270721
	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 10:40	Alexandra J Mattheus	2270722
	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 10:42	Alexandra J Mattheus	2270723
	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 10:44	Alexandra J Mattheus	2270729
	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 10:45	Alexandra J Mattheus	2270730
EPA 353.2 Rev. 2.0	08/19/2021			08/26/2021 09:03	Beverly Y. Sanders	2270721
	08/19/2021			08/26/2021 09:09	Beverly Y. Sanders	2270722
	08/19/2021			08/26/2021 09:10	Beverly Y. Sanders	2270729
	08/19/2021			08/26/2021 09:12	Beverly Y. Sanders	2270730
	08/19/2021			08/26/2021 10:18	Beverly Y. Sanders	2270723
EPA 365.1 Rev. 2.0	08/19/2021	08/24/2021 14:32	Simonne.V. Calhoun	08/26/2021 16:47	Shengyu Ding	2270721
	08/19/2021	08/24/2021 14:32	Simonne.V. Calhoun	08/26/2021 16:48	Shengyu Ding	2270722
	08/19/2021	08/24/2021 14:32	Simonne.V. Calhoun	08/26/2021 16:49	Shengyu Ding	2270723
	08/19/2021	08/24/2021 14:32	Simonne.V. Calhoun	08/26/2021 16:57	Shengyu Ding	2270729
	08/19/2021	08/24/2021 14:32	Simonne.V. Calhoun	08/26/2021 16:58	Shengyu Ding	2270730
EPA 365.1 Rev. 2.0 dissolved	08/19/2021			08/20/2021 16:11	James L Waggeberby	2270726
	08/19/2021			08/20/2021 16:14	James L Waggeberby	2270724
	08/19/2021			08/20/2021 16:15	James L Waggeberby	2270725
	08/19/2021			08/20/2021 16:16	James L Waggeberby	2270731
	08/19/2021			08/20/2021 16:17	James L Waggeberby	2270732
SM 2320 B-2011	08/19/2021			08/24/2021 03:14	Sarah A Nixon	2270728
	08/19/2021			08/24/2021 04:43	Sarah A Nixon	2270727
	08/19/2021			08/24/2021 05:16	Sarah A Nixon	2270719
	08/19/2021			08/24/2021 18:11	Dale L. Simmons	2270718
	08/19/2021			08/24/2021 18:26	Dale L. Simmons	2270720
SM 2540 D-2011	08/19/2021			08/23/2021 15:36	Yijie Li	2270718, 2270719, 2270720, 2270727, 2270728
SM 4500 F-C-2011	08/19/2021			08/24/2021 03:14	Sarah A Nixon	2270728
	08/19/2021			08/24/2021 04:43	Sarah A Nixon	2270727
	08/19/2021			08/24/2021 05:16	Sarah A Nixon	2270719
	08/19/2021			08/24/2021 15:49	Dale L. Simmons	2270718
	08/19/2021			08/24/2021 16:38	Dale L. Simmons	2270720
SM 5310 B-2011	08/19/2021			08/26/2021 15:57	Madeline Gruver	2270721

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	08/19/2021			08/26/2021 16:54	Madeline Gruver	2270723
	08/19/2021			08/31/2021 03:44	Touraj Touran	2270722
	08/19/2021			08/31/2021 07:28	Touraj Touran	2270729
	08/19/2021			08/31/2021 07:41	Touraj Touran	2270730