

Chemical Analysis Report

CEN-DIST-2021-07-30-01

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

Event Description: **Park/Gem/Theresa**
Request ID: **RQ-2021-06-28-15**
Customer: **CEN-DIST**
Project ID: **SMP**

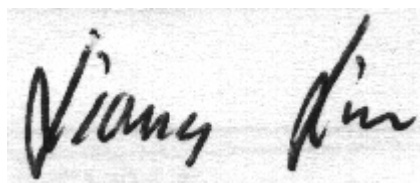
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 24-AUG-2021 14:11

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored 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: Lake Gem at Center

Collection Date/Time: 07/29/2021 12:52

Field ID: G2CE0204

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266078	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P401778	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P402078	
		Sulfate	9.5		mg SO4/L	P402080	
	SM 2120 B-2011	Color (true)	12	A	PCU	P401781	
	SM 2320 B-2011	Total Alkalinity	64		mg CaCO3/L	P401937	
	SM 2540 C-2011	TDS	106	A	mg/L	P402222	
	SM 2540 D-2011	TSS	5	IA	mg/L	P402225	
	SM 4500 F-C-2011	Fluoride	0.057	I	mg F/L	P401939	
2266081	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P402257	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P402527	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P401809	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P402012	
	SM 5310 B-2011	Organic Carbon	6.5		mg C/L	P402468	
2266084	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P401768	

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: Lake Park @ Center

Collection Date/Time: 07/29/2021 13:04

Field ID: G2CE0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266079	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P401778	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P402078	
		Sulfate	15		mg SO4/L	P402080	
	SM 2120 B-2011	Color (true)	15		PCU	P401781	
	SM 2320 B-2011	Total Alkalinity	62		mg CaCO3/L	P401937	
	SM 2540 C-2011	TDS	116	A	mg/L	P402223	
	SM 2540 D-2011	TSS	2	I	mg/L	P402225	
2266082	SM 4500 F-C-2011	Fluoride	0.061	I	mg F/L	P401939	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P402267	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P402527	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P401809	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P402012	
2266085	SM 5310 B-2011	Organic Carbon	7.0		mg C/L	P402468	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P401768	

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: Lake Theresa @ Center

Collection Date/Time: 07/29/2021 13:57

Field ID: G4CE0151

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2266080	EPA 180.1 Rev. 2.0	Turbidity	2.4	A	NTU	P401779	
	EPA 300.0 Rev. 2.1	Chloride	7.2		mg Cl/L	P402078	
		Sulfate	1.8		mg SO4/L	P402080	
	SM 2120 B-2011	Color (true)	27		PCU	P401781	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P401937	
	SM 2540 C-2011	TDS	80		mg/L	P402222	
	SM 2540 D-2011	TSS	3	I	mg/L	P402225	
	SM 4500 F-C-2011	Fluoride	0.081	I	mg F/L	P401939	
2266083	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P402267	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P402527	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P401810	
	EPA 365.1 Rev. 2.0	Total-P	0.070		mg P/L	P402012	
	SM 5310 B-2011	Organic Carbon	7.0		mg C/L	P402468	
2266086	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P401771	

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: P401778

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P401779

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402078

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402080

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402267

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402527

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401809

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401810

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402012

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401768

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401771

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

Reference Method: SM 2120 B-2011
Batch ID: P401781

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P401937

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

Reference Method: SM 2540 C-2011
Batch ID: P402222

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P402223

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P402225

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P401939

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P402468

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: P402078

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402080

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402267

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: P402527

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401809

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401810

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: P402012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.1		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401771

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.8		P	90 - 110

Reference Method: SM 2120 B-2011
Batch ID: P401781

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

Reference Method: SM 2320 B-2011
Batch ID: P401937

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P401939

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

Reference Method: SM 5310 B-2011
Batch ID: P402468

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265759	Chloride	98.7		P	90 - 110
2265947	Chloride	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265759	Sulfate	94.5		P	90 - 110
2265947	Sulfate	99.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266030	Ammonia-N	101	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402267

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266082	Ammonia-N	99.4	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265948	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266083	NO2NO3-N	99.3	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266213	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265949	O-Phosphate-P	96.0	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266086	O-Phosphate-P	95.0	97.4	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P401939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266207	Fluoride	99.2	101	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P402468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2266214	Organic Carbon	98.6	99.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P401778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266041	Turbidity	6.65	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P401779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266080	Turbidity	5.74	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265759	Chloride	0.114	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P402080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265759	Sulfate	0.795	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266030	Ammonia-N	2.21	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402267

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266082	Ammonia-N	0.182	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266215	Kjeldahl Nitrogen	6.17	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265948	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P401810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266083	NO2NO3-N	0.438	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P402012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266213	Total-P	0.464	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265949	O-Phosphate-P	1.24	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P401771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266086	O-Phosphate-P	2.21	Spike	P	0 - 20

Reference Method: SM 2120 B-2011

Batch ID: P401781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266078	Color (true)	7.26	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P401937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266207	Total Alkalinity	0.690	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P402222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266078	TDS	6.64	Sample	P	0 - 10

Reference Method: SM 2540 C-2011

Batch ID: P402223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266079	TDS	2.60	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P401939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266207	Fluoride	0.897	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P402468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2266214	Organic Carbon	0.218	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: A106947

Included Lab Sample IDs: 2266084, 2266085, 2266086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.6	97.7	P/P	90 - 110
O-Phosphate-P	97.7	98.2	P/P	90 - 110
O-Phosphate-P	98.2	96.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106950

Included Lab Sample IDs: 2266078, 2266079, 2266080

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

Reference Method: SM 2120 B-2011

Run ID: A106951

Included Lab Sample IDs: 2266078, 2266079, 2266080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	101	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106974

Included Lab Sample IDs: 2266081, 2266082, 2266083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107025

Included Lab Sample IDs: 2266078, 2266079, 2266080

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

Reference Method: SM 2320 B-2011

Run ID: A107027

Included Lab Sample IDs: 2266078, 2266079, 2266080

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: A107027

Included Lab Sample IDs: 2266078, 2266079, 2266080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107087

Included Lab Sample IDs: 2266083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107092

Included Lab Sample IDs: 2266081, 2266082

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107151

Included Lab Sample IDs: 2266081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107154

Included Lab Sample IDs: 2266082, 2266083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	98.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107246

Included Lab Sample IDs: 2266081, 2266082, 2266083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107303

Included Lab Sample IDs: 2266081, 2266082, 2266083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	100	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	
						SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					6.65	
	Turbidity					5.74	
EPA 300.0 Rev. 2.1	Chloride	98.2	98.7	99.4		0.114	
	Sulfate	96.6	94.5	99.2		0.795	
EPA 350.1 Rev. 2.0	Ammonia-N	100	101	105			2.21
	Ammonia-N	101	99.4	99.6			0.182
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100					6.17
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	100	100			0.0
	NO2NO3-N	99.5	99.3	98.8			0.438
EPA 365.1 Rev. 2.0	Total-P	106	105	106			0.464
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	96.0	97.2			1.24
	O-Phosphate-P	99.8	95.0	97.4			2.21
SM 2120 B-2011	Color (true)	99.1				7.26	
SM 2320 B-2011	Total Alkalinity	102				0.690	
SM 2540 C-2011	TDS					6.64	
	TDS					2.60	
SM 4500 F-C-2011	Fluoride	101	99.2	101			0.897
SM 5310 B-2011	Organic Carbon	97.6	98.6	99.0			0.218

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2266078, 2266079, 2266080
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2266078, 2266079, 2266080
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2266078, 2266079, 2266080
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2266081, 2266082, 2266083
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2266081, 2266082, 2266083
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2266081, 2266082, 2266083
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2266081, 2266082, 2266083
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2266084, 2266085, 2266086
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2266078, 2266079, 2266080
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2266078, 2266079, 2266080
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2266078, 2266079, 2266080
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2266078, 2266079, 2266080
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2266078, 2266079, 2266080
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2266081, 2266082, 2266083

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	07/30/2021			07/30/2021 15:49	Sarah A Nixon	2266078, 2266079, 2266080
EPA 300.0 Rev. 2.1	07/30/2021			08/06/2021 00:56	Lipi Saha	2266078
	07/30/2021			08/06/2021 01:09	Lipi Saha	2266079
	07/30/2021			08/06/2021 01:21	Lipi Saha	2266080
EPA 350.1 Rev. 2.0	07/30/2021			08/10/2021 12:18	Roberta Tatti	2266081
	07/30/2021			08/10/2021 13:52	Ping Hua	2266082
	07/30/2021			08/10/2021 13:56	Ping Hua	2266083
EPA 351.2 Rev. 2.0	07/30/2021	08/16/2021 18:04	Madeline Gruver	08/17/2021 14:33	Virginia P. Brown	2266081
	07/30/2021	08/16/2021 18:04	Madeline Gruver	08/17/2021 14:35	Virginia P. Brown	2266082
	07/30/2021	08/16/2021 18:04	Madeline Gruver	08/17/2021 14:36	Virginia P. Brown	2266083
EPA 353.2 Rev. 2.0	07/30/2021			08/02/2021 09:31	Beverly Y. Sanders	2266081
	07/30/2021			08/02/2021 09:32	Beverly Y. Sanders	2266082
	07/30/2021			08/02/2021 09:39	Beverly Y. Sanders	2266083
EPA 365.1 Rev. 2.0	07/30/2021	08/05/2021 15:45	Simonne.V. Calhoun	08/06/2021 09:58	Shengyu Ding	2266083
	07/30/2021	08/05/2021 15:45	Simonne.V. Calhoun	08/06/2021 12:49	Shengyu Ding	2266081
	07/30/2021	08/05/2021 15:45	Simonne.V. Calhoun	08/06/2021 12:50	Shengyu Ding	2266082
EPA 365.1 Rev. 2.0 dissolved	07/30/2021			07/30/2021 15:14	Ping Hua	2266085
	07/30/2021			07/30/2021 15:33	Ping Hua	2266086
	07/30/2021			07/30/2021 16:09	Ping Hua	2266084
SM 2120 B-2011	07/30/2021			07/30/2021 16:37	Sarah A Nixon	2266078
	07/30/2021			07/30/2021 16:39	Sarah A Nixon	2266079, 2266080
SM 2320 B-2011	07/30/2021			08/03/2021 17:36	Dale L. Simmons	2266078
	07/30/2021			08/03/2021 17:51	Dale L. Simmons	2266079
	07/30/2021			08/03/2021 18:06	Dale L. Simmons	2266080
SM 2540 C-2011	07/30/2021			08/03/2021 14:36	Yijie Li	2266078, 2266079, 2266080
SM 2540 D-2011	07/30/2021			08/03/2021 14:36	Yijie Li	2266078, 2266079, 2266080
SM 4500 F-C-2011	07/30/2021			08/03/2021 17:36	Dale L. Simmons	2266078
	07/30/2021			08/03/2021 17:51	Dale L. Simmons	2266079
	07/30/2021			08/03/2021 18:06	Dale L. Simmons	2266080
SM 5310 B-2011	07/30/2021			08/12/2021 06:46	Madeline Gruver	2266081
	07/30/2021			08/12/2021 06:59	Madeline Gruver	2266082
	07/30/2021			08/12/2021 07:12	Madeline Gruver	2266083