Chemical Analysis Report

NE-DIST-2021-04-28-01

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

Event Description: **unnamed run boat**
Request ID: **RQ-2021-04-26-15**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
Suite 100
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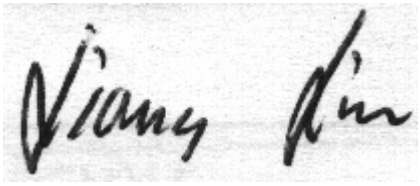
Certified by: Liang Lin, Environmental Administrator

Date Certified: 14-MAY-2021 10:39



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: Unnamed Drain South Entrance **Collection Date/Time: 04/27/2021 11:15**

Field ID: G5NE0591 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2243352	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P397352	
	SM 2320 B-2011	Total Alkalinity	113		mg CaCO3/L	P397927	
	SM 2540 D-2011	TSS	8	I	mg/L	P397596	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P397526	
2243354	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P397634	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25	I	mg N/L	P397547	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P397323	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P397441	
	SM 5310 B-2011	Organic Carbon	2.9		mg C/L	P397483	
2243356	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P397348	

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: Unnamed Drain South Entrance **Collection Date/Time: 04/27/2021 11:20**

Field ID: G5NE0591 DUP Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2243353	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P397352	
	SM 2320 B-2011	Total Alkalinity	114		mg CaCO3/L	P397927	
	SM 2540 D-2011	TSS	9	I	mg/L	P397596	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P397526	
2243355	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P397634	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	mg N/L	P397547	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P397475	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P397441	
	SM 5310 B-2011	Organic Carbon	2.7		mg C/L	P397483	
2243357	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.01	I	mg P/L	P397348	

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: Unnamed Drain South Entrance **Collection Date/Time: 04/27/2021 11:25**

Field ID: FB_04262021 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2243358	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P397352	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P397927	
	SM 2540 D-2011	TSS	2	U	mg/L	P397595	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P397524	
2243359	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P397514	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P397549	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P397545	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P397438	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P397803	
2243360	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P397346	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P397352

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397514

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397547

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397549

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397323

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397475

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397545

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397438

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: P397441

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397346

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397348

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

Reference Method: SM 2320 B-2011
Batch ID: P397927

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

Reference Method: SM 2540 D-2011
Batch ID: P397595

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P397596

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P397524

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P397526

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P397483

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P397803

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: P397514

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397547

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397549

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397323

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: P397475

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397545

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397438

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397441

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397346

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397348

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

Reference Method: SM 2320 B-2011
Batch ID: P397927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P397524

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P397526

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

Reference Method: SM 5310 B-2011
Batch ID: P397483

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P397803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397514

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2242205	Ammonia-N	94.2	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243029	Ammonia-N	98.4	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243029	Kjeldahl Nitrogen	107	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397549

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243450	Kjeldahl Nitrogen	105	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243354	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397475

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243403	NO2NO3-N	96.2	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243303	NO2NO3-N	97.4	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243450	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243354	Total-P	98.2	99.4	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243470	O-Phosphate-P	96.2	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243356	O-Phosphate-P	97.3	95.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P397524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243503	Fluoride	97.4	98.5	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P397526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243400	Fluoride	95.5	98.4	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P397483

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243404	Organic Carbon	92.4	94.5	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P397803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243469	Organic Carbon	95.5	96.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P397352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243233	Turbidity	3.93	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397514

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2242205	Ammonia-N	3.27	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243029	Ammonia-N	2.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243029	Kjeldahl Nitrogen	0.0303	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243450	Kjeldahl Nitrogen	1.65	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243354	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397475

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243403	NO2NO3-N	1.99	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243303	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243450	Total-P	1.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243354	Total-P	1.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243470	O-Phosphate-P	0.424	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P397348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243356	O-Phosphate-P	1.43	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P397927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243103	Total Alkalinity	1.66	Sample	P	0 - 8.1

Reference Method: SM 2540 D-2011
Batch ID: P397595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243615	TSS	6.25	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P397524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243503	Fluoride	0.929	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P397526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243400	Fluoride	1.85	Spike	P	0 - 2.8

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2011
Batch ID: P397483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243404	Organic Carbon	1.98	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P397803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243469	Organic Carbon	0.649	Spike	P	0 - 20

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A105051
Included Lab Sample IDs: 2243354

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A105061
Included Lab Sample IDs: 2243356, 2243357, 2243360

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	99.2	P/P	90 - 110
O-Phosphate-P	99.9	99.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A105062
Included Lab Sample IDs: 2243352, 2243353, 2243358

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.0	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A105106
Included Lab Sample IDs: 2243355

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

Reference Method: SM 5310 B-2011
Run ID: A105109
Included Lab Sample IDs: 2243354, 2243355

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.7	95.0	P/P	90 - 110
Organic Carbon	95.7	94.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A105117
Included Lab Sample IDs: 2243354, 2243355, 2243359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.5	95.3	P/P	90 - 110
Ammonia-N	98.6	98.7	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A105119
Included Lab Sample IDs: 2243352, 2243353, 2243358

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A105129
Included Lab Sample IDs: 2243359

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A105131
Included Lab Sample IDs: 2243354, 2243355, 2243359

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A105166
Included Lab Sample IDs: 2243354, 2243355, 2243359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	102	P/P	90 - 110
Kjeldahl Nitrogen	102	106	P/P	90 - 110
Kjeldahl Nitrogen	106	96.4	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A105235
Included Lab Sample IDs: 2243359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	96.8	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A105297
Included Lab Sample IDs: 2243352, 2243353, 2243358

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.0	P/P	90 - 110
Total Alkalinity	98.0	101	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	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					3.93	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	94.2	98.4			3.27
	Ammonia-N	98.0	98.4	95.2			2.84
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	107	107			0.0303
	Kjeldahl Nitrogen	102	105	109			1.65
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	100	100			0.499
	NO2NO3-N	97.0	96.2	98.2			1.99
	NO2NO3-N	102	97.4	97.4			0.0
EPA 365.1 Rev. 2.0	Total-P	104	104	105			1.11
	Total-P	109	98.2	99.4			1.18
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.0	96.2	95.5			0.424
	O-Phosphate-P	98.7	97.3	95.8			1.43
SM 2320 B-2011	Total Alkalinity	100				1.66	
SM 2540 D-2011	TSS					6.25	
SM 4500 F-C-2011	Fluoride	99.6	97.4	98.5			0.929
	Fluoride	100	95.5	98.4			1.85
SM 5310 B-2011	Organic Carbon	95.2	92.4	94.5			1.98
	Organic Carbon	95.2	95.5	96.4			0.649

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2243352, 2243353, 2243358
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2243354, 2243355, 2243359
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2243354, 2243355, 2243359
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2243354, 2243355, 2243359
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2243354, 2243355, 2243359
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2243356, 2243357, 2243360
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2243352, 2243353, 2243358
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2243352, 2243353, 2243358
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2243352, 2243353, 2243358
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2243354, 2243355, 2243359

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	04/28/2021			04/28/2021 16:51	Sarah A Nixon	2243352, 2243353, 2243358
EPA 350.1 Rev. 2.0	04/28/2021			05/01/2021 12:51	Ping Hua	2243359
	04/28/2021			05/04/2021 18:17	Ping Hua	2243354
	04/28/2021			05/04/2021 18:19	Ping Hua	2243355
EPA 351.2 Rev. 2.0	04/28/2021	05/03/2021 13:05	Benjamin T. Nordmann	05/04/2021 13:27	Virginia P. Brown	2243354
	04/28/2021	05/03/2021 13:05	Benjamin T. Nordmann	05/04/2021 13:32	Virginia P. Brown	2243355
	04/28/2021	05/03/2021 13:05	Benjamin T. Nordmann	05/04/2021 14:00	Virginia P. Brown	2243359
EPA 353.2 Rev. 2.0	04/28/2021			04/28/2021 13:42	Beverly Y. Sanders	2243354
	04/28/2021			04/30/2021 13:21	Touraj Touran	2243355
	04/28/2021			05/03/2021 11:22	Beverly Y. Sanders	2243359
EPA 365.1 Rev. 2.0	04/28/2021	04/29/2021 15:25	Yen Ta	05/03/2021 12:57	Shengyu Ding	2243359
	04/28/2021	04/29/2021 15:25	Yen Ta	05/03/2021 13:01	Shengyu Ding	2243354
	04/28/2021	04/29/2021 15:25	Yen Ta	05/03/2021 13:09	Shengyu Ding	2243355
EPA 365.1 Rev. 2.0 dissolved	04/28/2021			04/28/2021 15:09	Patrick M. Roche	2243360
	04/28/2021			04/28/2021 15:43	Patrick M. Roche	2243356
	04/28/2021			04/28/2021 15:45	Patrick M. Roche	2243357
SM 2320 B-2011	04/28/2021			05/11/2021 00:48	Dale L. Simmons	2243358
	04/28/2021			05/11/2021 01:52	Dale L. Simmons	2243352
	04/28/2021			05/11/2021 02:04	Dale L. Simmons	2243353
SM 2540 D-2011	04/28/2021			04/30/2021 15:17	Yijie Li	2243352, 2243353, 2243358
SM 4500 F-C-2011	04/28/2021			05/02/2021 06:50	Dale L. Simmons	2243358
	04/28/2021			05/02/2021 11:55	Dale L. Simmons	2243352
	04/28/2021			05/02/2021 12:00	Dale L. Simmons	2243353
SM 5310 B-2011	04/28/2021			04/30/2021 08:11	Madeline Gruver	2243354
	04/28/2021			04/30/2021 09:17	Madeline Gruver	2243355
	04/28/2021			05/06/2021 01:56	Madeline Gruver	2243359