

Chemical Analysis Report

NE-DIST-2023-03-23-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Palm Valley Boat 2023**
Request ID: **RQ-2023-03-13-18**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 17-APR-2023 13:38

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the 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: Capo Creek 300m Above Mouth

Collection Date/Time: 03/22/2023 10:40

Field ID: 27010019

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395981	DEP SOP: NU-094-1	Color (true)	7.5		PCU	P427581	
	EPA 180.1 Rev. 2.0	Turbidity	8.4		NTU	P427583	
	EPA 300.0 Rev. 2.1	Chloride	1.7E+04		mg Cl/L	P427892	
		Sulfate	2.5E+03		mg SO4/L	P427894	
	SM 2320 B-2011	Total Alkalinity	108		mg CaCO3/L	P427667	
	SM 2540 C-2015	TDS	2.99E+04		mg/L	P428163	
	SM 2540 D-2015	TSS	13		mg/L	P427913	
	SM 4500-F- C-2011	Fluoride	1.1		mg F/L	P427669	
2395982	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P427758	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P428228	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P427918	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P427688	
	SM 5310 B-2011	Organic Carbon	5.5		mg C/L	P427907	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEEP CREEK 270M ABOVE ICW

Collection Date/Time: 03/22/2023 11:50

Field ID: 27010165

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395985	DEP SOP: NU-094-1	Color (true)	11		PCU	P427581	
	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P427583	
	EPA 300.0 Rev. 2.1	Chloride	1.7E+04		mg Cl/L	P427892	
		Sulfate	2.4E+03		mg SO4/L	P427894	
	SM 2320 B-2011	Total Alkalinity	109		mg CaCO3/L	P427667	
	SM 2540 C-2015	TDS	3.04E+04		mg/L	P428163	
	SM 2540 D-2015	TSS	9	I	mg/L	P427913	
	SM 4500-F- C-2011	Fluoride	1.0		mg F/L	P427669	
2395986	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P427758	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P428228	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P427918	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P427688	
	SM 5310 B-2011	Organic Carbon	5.9		mg C/L	P428061	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: St.Augustine Inlet SE of Vilano Bt. Rmp.

Collection Date/Time: 03/22/2023 11:45

Field ID: G5NE0587

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395983	DEP SOP: NU-094-1	Color (true)	12	U	PCU	P427581	
	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P427583	
	EPA 300.0 Rev. 2.1	Chloride	2.0E+04		mg Cl/L	P427892	
		Sulfate	2.8E+03		mg SO4/L	P427894	
	SM 2320 B-2011	Total Alkalinity	113		mg CaCO3/L	P427667	
	SM 2540 C-2015	TDS	3.22E+04		mg/L	P428163	
	SM 2540 D-2015	TSS	9	I	mg/L	P427913	
	SM 4500-F- C-2011	Fluoride	1.2		mg F/L	P427669	
2395984	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427758	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34	I	mg N/L	P427662	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P428113	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P427688	
	SM 5310 B-2011	Organic Carbon	3.0	I	mg C/L	P428061	

Ref. Method and Comment:

DEP SOP: NU-094-1: The MDL was elevated because of sample matrix interference.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P427581

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427583

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427892

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427894

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427758

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427662

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428228

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427918

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428113

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: P427688

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

Reference Method: SM 2320 B-2011
Batch ID: P427667

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

Reference Method: SM 2540 C-2015
Batch ID: P428163

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P427913

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P427669

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P427907

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

Reference Method: SM 5310 B-2011
Batch ID: P428061

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P427581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.7		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427583

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427892

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427894

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427758

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428228

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428113

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427688

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.8		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P427667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.2		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P428163

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.1		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P427913

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	99.5		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P427669

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.6		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427907

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.5		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P428061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395895	Chloride	101		P	90 - 110
2396077	Chloride	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395895	Sulfate	99.0		P	90 - 110
2396077	Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427758

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395976	Ammonia-N	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396113	Kjeldahl Nitrogen	101	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428228

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395976	Kjeldahl Nitrogen	110	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395982	NO2NO3-N	107	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428113

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396531	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427688

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395952	Total-P	95.8	96.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P427669

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395975	Fluoride	97.8	98.4	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P427907

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395953	Organic Carbon	92.3	90.7	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P428061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396533	Organic Carbon	89.6	89.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P427581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396077	Color (true)	2.18	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395895	Turbidity	8.14	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395895	Chloride	0.546	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395895	Sulfate	1.52	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395976	Ammonia-N	1.89	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396113	Kjeldahl Nitrogen	0.859	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428228

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395976	Kjeldahl Nitrogen	0.960	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395982	NO2NO3-N	0.913	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396531	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395952	Total-P	0.579	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P427667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395975	Total Alkalinity	0.610	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P428163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395677	TDS	1.72	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P427669

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395975	Fluoride	0.480	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P427907

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395953	Organic Carbon	1.31	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P428061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396533	Organic Carbon	0.205	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A118165

Included Lab Sample IDs: 2395981, 2395983, 2395985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	97.2	P/P	90 - 110
Color (true)	101	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A118166

Included Lab Sample IDs: 2395981, 2395983, 2395985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A118194

Included Lab Sample IDs: 2395981, 2395983, 2395985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.9	95.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A118194

Included Lab Sample IDs: 2395981, 2395983, 2395985

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118235

Included Lab Sample IDs: 2395982, 2395984, 2395986

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118236

Included Lab Sample IDs: 2395982, 2395984, 2395986

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.2	98.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118247

Included Lab Sample IDs: 2395981, 2395983, 2395985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.7	98.1	P/P	90 - 110
Sulfate	97.7	96.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118284

Included Lab Sample IDs: 2395984

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

Reference Method: SM 5310 B-2011

Run ID: A118311

Included Lab Sample IDs: 2395982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.6	94.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118313

Included Lab Sample IDs: 2395982, 2395986

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A118386

Included Lab Sample IDs: 2395984, 2395986

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	94.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118389

Included Lab Sample IDs: 2395984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	108	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118511

Included Lab Sample IDs: 2395982, 2395986

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	104	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
DEP SOP: NU-094-1	Color (true)	98.7			2.18	
EPA 180.1 Rev. 2.0	Turbidity	100			8.14	
EPA 300.0 Rev. 2.1	Chloride	98.7	101	94.8	0.546	
	Sulfate	96.7	99.0	96.4	1.52	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	101	104		1.89
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.7	101	99.8		0.859
	Kjeldahl Nitrogen	108	110	108		0.960
EPA 353.2 Rev. 2.0	NO2NO3-N	106	107	106		0.913
	NO2NO3-N	106	104	104		0.0
EPA 365.1 Rev. 2.0	Total-P	97.8	95.8	96.5		0.579
SM 2320 B-2011	Total Alkalinity	95.2			0.610	
SM 2540 C-2015	TDS	97.1			1.72	
SM 2540 D-2015	TSS	99.5				
SM 4500-F- C-2011	Fluoride	98.6	97.8	98.4		0.480
SM 5310 B-2011	Organic Carbon	98.5	92.3	90.7		1.31
	Organic Carbon	96.1	89.6	89.8		0.205

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2395981, 2395983, 2395985
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2395981, 2395983, 2395985
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2395981, 2395983, 2395985
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2395981, 2395983, 2395985
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2395982, 2395984, 2395986
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2395982, 2395984, 2395986
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2395982, 2395984, 2395986
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2395982, 2395984, 2395986
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2395981, 2395983, 2395985
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2395981, 2395983, 2395985
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2395981, 2395983, 2395985
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2395981, 2395983, 2395985
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2395982, 2395984, 2395986

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	03/23/2023			03/23/2023 14:11	Alexis Price	2395981
	03/23/2023			03/23/2023 14:12	Alexis Price	2395985
	03/23/2023			03/23/2023 14:18	Alexis Price	2395983
EPA 180.1 Rev. 2.0	03/23/2023			03/23/2023 13:49	Anna M. Plaviak	2395981
	03/23/2023			03/23/2023 13:50	Anna M. Plaviak	2395983
	03/23/2023			03/23/2023 13:51	Anna M. Plaviak	2395985
EPA 300.0 Rev. 2.1	03/23/2023			03/30/2023 14:47	James L Waggeberby	2395981
	03/23/2023			03/30/2023 15:02	James L Waggeberby	2395983
	03/23/2023			03/30/2023 15:17	James L Waggeberby	2395985
EPA 350.1 Rev. 2.0	03/23/2023			03/28/2023 11:47	Khloe J Berg	2395982
	03/23/2023			03/28/2023 11:48	Khloe J Berg	2395984
	03/23/2023			03/28/2023 11:50	Khloe J Berg	2395986
EPA 351.2 Rev. 2.0	03/23/2023	03/27/2023 07:40	Simonne.V. Calhoun	03/30/2023 10:05	Judith K. Clark	2395984
	03/23/2023	04/10/2023 12:45	Simonne.V. Calhoun	04/11/2023 16:22	Samantha L Bates	2395982
	03/23/2023	04/10/2023 12:45	Simonne.V. Calhoun	04/11/2023 16:23	Samantha L Bates	2395986
EPA 353.2 Rev. 2.0	03/23/2023			03/31/2023 10:11	Beverly Y. Sanders	2395982
	03/23/2023			03/31/2023 10:18	Beverly Y. Sanders	2395986
	03/23/2023			04/05/2023 11:43	Beverly Y. Sanders	2395984
EPA 365.1 Rev. 2.0	03/23/2023	03/27/2023 13:30	Alexis Price	03/28/2023 13:46	James L Waggeberby	2395982
	03/23/2023	03/27/2023 13:30	Alexis Price	03/28/2023 13:47	James L Waggeberby	2395984
	03/23/2023	03/27/2023 13:30	Alexis Price	03/28/2023 13:48	James L Waggeberby	2395986
SM 2320 B-2011	03/23/2023			03/25/2023 05:16	Chandler E Cox	2395985
	03/23/2023			03/25/2023 05:29	Chandler E Cox	2395981
	03/23/2023			03/25/2023 05:43	Chandler E Cox	2395983
SM 2540 C-2015	03/23/2023			03/24/2023 15:34	Yijie Li	2395981, 2395983, 2395985
SM 2540 D-2015	03/23/2023			03/24/2023 15:34	Yijie Li	2395981, 2395983, 2395985
SM 4500-F- C-2011	03/23/2023			03/25/2023 03:21	Chandler E Cox	2395985
	03/23/2023			03/25/2023 03:26	Chandler E Cox	2395981
	03/23/2023			03/25/2023 04:08	Chandler E Cox	2395983
SM 5310 B-2011	03/23/2023			03/31/2023 01:18	Elise M. Gillis	2395982
	03/23/2023			04/04/2023 20:31	Elise M. Gillis	2395984
	03/23/2023			04/04/2023 20:46	Elise M. Gillis	2395986