

Chemical Analysis Report

NE-DIST-2023-09-14-01

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

Event Description: **Palm Valley Boat 2023**
Request ID: **RQ-2023-09-11-44**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 05-OCT-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: STAUGUSTINE INLET SE OF VILANO BTRMP Collection Date/Time: 09/13/2023 09:35

Field ID: G5NE0587

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437186	DEP SOP: NU-094-1	Color (true)	12	U	PCU	P435017	
	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P435019	
	EPA 300.0 Rev. 2.1	Chloride	2.1E+04		mg Cl/L	P435377	
		Sulfate	3.0E+03		mg SO4/L	P435380	
	SM 2320 B-2011	Total Alkalinity	116		mg CaCO3/L	P435435	
	SM 2540 C-2015	TDS	3.52E+04		mg/L	P435610	
	SM 2540 D-2015	TSS	8	I	mg/L	P435613	RPD
	SM 4500-F- C-2011	Fluoride	1.3		mg F/L	P435590	
2437187	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P435189	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40	I	mg N/L	P435650	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P435632	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P435229	
	SM 5310 B-2011	Organic Carbon	2.1	I	mg C/L	P435499	

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

Sample Location: DEEP CREEK 270M ABOVE ICW

Collection Date/Time: 09/13/2023 11:25

Field ID: 27010165

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437188	DEP SOP: NU-094-1	Color (true)	26		PCU	P435017	
	EPA 180.1 Rev. 2.0	Turbidity	8.7		NTU	P435019	
	EPA 300.0 Rev. 2.1	Chloride	1.7E+04		mg Cl/L	P435377	
		Sulfate	2.4E+03		mg SO4/L	P435380	
	SM 2320 B-2011	Total Alkalinity	114		mg CaCO3/L	P435435	
	SM 2540 C-2015	TDS	2.82E+04		mg/L	P435610	
	SM 2540 D-2015	TSS	12	AJ	mg/L	P435613	RPD
	SM 4500-F- C-2011	Fluoride	1.1		mg F/L	P435590	
2437189	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P435189	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P435650	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P435633	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P435229	
	SM 5310 B-2011	Organic Carbon	8.8		mg C/L	P435499	

Ref. Method and Comment:

SM 2540 D-2015: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: CAPO CREEK 300M ABOVE MOUTH

Collection Date/Time: 09/13/2023 11:50

Field ID: 27010019

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2437184	DEP SOP: NU-094-1	Color (true)	22		PCU	P435017	
	EPA 180.1 Rev. 2.0	Turbidity	8.2		NTU	P435019	
	EPA 300.0 Rev. 2.1	Chloride	1.7E+04		mg Cl/L	P435377	
		Sulfate	2.5E+03		mg SO4/L	P435380	
	SM 2320 B-2011	Total Alkalinity	115		mg CaCO3/L	P435435	
	SM 2540 C-2015	TDS	2.92E+04		mg/L	P435610	
	SM 2540 D-2015	TSS	14		mg/L	P435613	RPD
	SM 4500-F- C-2011	Fluoride	1.1		mg F/L	P435590	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P435138	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P435650	
2437185	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P435632	
	EPA 365.1 Rev. 2.0	Total-P	0.076		mg P/L	P435229	
	SM 5310 B-2011	Organic Carbon	7.0		mg C/L	P435499	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P435017

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435019

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435377

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435380

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435138

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435189

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435650

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435632

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435633

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: P435229

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

Reference Method: SM 2320 B-2011
Batch ID: P435435

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

Reference Method: SM 2540 C-2015
Batch ID: P435610

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P435613

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P435590

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P435499

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: P435017

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435019

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435377

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435380

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435138

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435189

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435650

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435632

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: P435633

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435229

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

Reference Method: SM 2320 B-2011
Batch ID: P435435

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.6		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P435610

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	98.1		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P435613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P435590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.7		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P435499

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437205	Chloride	102		P	90 - 110
2437371	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437205	Sulfate	99.9		P	90 - 110
2437371	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435138

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436560	Ammonia-N	99.0	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435189

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437187	Ammonia-N	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437405	Kjeldahl Nitrogen	97.7	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436563	NO2NO3-N	99.6	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2436502	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435229

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437166	Total-P	106	106	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P435590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438194	Fluoride	97.2	98.0	P/P	94 - 106

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P435499

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437166	Organic Carbon	89.6	90.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P435017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437118	Color (true)	0.990	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435019

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437054	Turbidity	5.19	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437205	Chloride	0.859	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437205	Sulfate	0.170	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436560	Ammonia-N	1.50	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437187	Ammonia-N	0.708	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437405	Kjeldahl Nitrogen	0.294	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436563	NO2NO3-N	0.484	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2436502	NO2NO3-N	0.489	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435229

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437166	Total-P	0.0707	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P435435

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437957	Total Alkalinity	0.921	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P435610

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437620	TDS	6.67	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P435613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437188	TSS	10.2	Sample	F	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P435590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438194	Fluoride	0.480	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P435499

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437166	Organic Carbon	0.452	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: A121541

Included Lab Sample IDs: 2437184, 2437188

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.2	98.6	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A121542

Included Lab Sample IDs: 2437186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.1	99.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A121543

Included Lab Sample IDs: 2437184, 2437186, 2437188

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121599

Included Lab Sample IDs: 2437185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.0	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121624

Included Lab Sample IDs: 2437187, 2437189

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121683

Included Lab Sample IDs: 2437185, 2437187, 2437189

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	93.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121711

Included Lab Sample IDs: 2437184, 2437186, 2437188

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.2	102	P/P	90 - 110
Sulfate	99.6	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A121739

Included Lab Sample IDs: 2437184, 2437186, 2437188

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.6	93.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A121761

Included Lab Sample IDs: 2437185, 2437187, 2437189

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	99.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121790

Included Lab Sample IDs: 2437184, 2437186, 2437188

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121809

Included Lab Sample IDs: 2437185, 2437187, 2437189

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121848

Included Lab Sample IDs: 2437185, 2437187, 2437189

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	104	P/P	90 - 110
Kjeldahl Nitrogen	104	106	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)	101			0.990	
EPA 180.1 Rev. 2.0	Turbidity	102			5.19	
EPA 300.0 Rev. 2.1	Chloride	103	102	104	0.859	
	Sulfate	101	99.9	102	0.170	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	99.0	101		1.50
	Ammonia-N	98.8	104	105		0.708
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	97.7	98.0		0.294
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	99.6	100		0.484
	NO2NO3-N	99.5	102	102		0.489
EPA 365.1 Rev. 2.0	Total-P	103	106	106		0.0707
SM 2320 B-2011	Total Alkalinity	95.6			0.921	
SM 2540 C-2015	TDS	98.1			6.67	
SM 2540 D-2015	TSS	95.3			10.2	
SM 4500-F- C-2011	Fluoride	99.7	97.2	98.0		0.480
SM 5310 B-2011	Organic Carbon	98.2	89.6	90.1		0.452

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2437184, 2437186, 2437188
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2437184, 2437186, 2437188
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2437184, 2437186, 2437188
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2437184, 2437186, 2437188
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2437185, 2437187, 2437189
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2437185, 2437187, 2437189
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2437185, 2437187, 2437189
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2437185, 2437187, 2437189
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2437184, 2437186, 2437188
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2437184, 2437186, 2437188
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2437184, 2437186, 2437188
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2437184, 2437186, 2437188
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2437185, 2437187, 2437189

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	09/14/2023			09/14/2023 14:12	Samantha L Bates	2437184
	09/14/2023			09/14/2023 14:13	Samantha L Bates	2437188
	09/14/2023			09/14/2023 14:40	Samantha L Bates	2437186
EPA 180.1 Rev. 2.0	09/14/2023			09/14/2023 13:19	Alexis Price	2437184
	09/14/2023			09/14/2023 13:20	Alexis Price	2437186
	09/14/2023			09/14/2023 13:21	Alexis Price	2437188
EPA 300.0 Rev. 2.1	09/14/2023			09/21/2023 08:21	James L Waggeberby	2437184
	09/14/2023			09/21/2023 08:36	James L Waggeberby	2437186
	09/14/2023			09/21/2023 08:51	James L Waggeberby	2437188
EPA 350.1 Rev. 2.0	09/14/2023			09/18/2023 11:54	Ping Hua	2437185
	09/14/2023			09/19/2023 12:55	Ping Hua	2437187
	09/14/2023			09/19/2023 12:59	Ping Hua	2437189
EPA 351.2 Rev. 2.0	09/14/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 11:32	Ping Hua	2437185
	09/14/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 11:37	Ping Hua	2437187
	09/14/2023	09/28/2023 13:28	Simonne.V. Calhoun	09/29/2023 11:39	Ping Hua	2437189
EPA 353.2 Rev. 2.0	09/14/2023			09/26/2023 11:47	Anna M. Plaviak	2437185
	09/14/2023			09/26/2023 11:48	Anna M. Plaviak	2437187
	09/14/2023			09/26/2023 12:09	Anna M. Plaviak	2437189
EPA 365.1 Rev. 2.0	09/14/2023	09/19/2023 16:30	Alexis Price	09/21/2023 11:54	Simonne.V. Calhoun	2437185
	09/14/2023	09/19/2023 16:30	Alexis Price	09/21/2023 11:55	Simonne.V. Calhoun	2437187
	09/14/2023	09/19/2023 16:30	Alexis Price	09/21/2023 11:56	Simonne.V. Calhoun	2437189
SM 2320 B-2011	09/14/2023			09/22/2023 20:00	Dale L. Simmons	2437188
	09/14/2023			09/22/2023 20:11	Dale L. Simmons	2437184
	09/14/2023			09/22/2023 20:22	Dale L. Simmons	2437186
SM 2540 C-2015	09/14/2023			09/19/2023 15:12	Yijie Li	2437184, 2437186, 2437188
SM 2540 D-2015	09/14/2023			09/19/2023 15:12	Yijie Li	2437184, 2437186, 2437188
SM 4500-F- C-2011	09/14/2023			09/27/2023 09:52	Adam P Silver	2437184
	09/14/2023			09/27/2023 09:57	Adam P Silver	2437186
	09/14/2023			09/27/2023 10:02	Adam P Silver	2437188
SM 5310 B-2011	09/14/2023			09/26/2023 02:56	Elise M. Gillis	2437185
	09/14/2023			09/26/2023 03:26	Elise M. Gillis	2437187
	09/14/2023			09/26/2023 03:45	Elise M. Gillis	2437189