

Chemical Analysis Report

SO-DIST-2023-03-17-01

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

Event Description: **2023 SMP: Sheldon J. Plankton**
Request ID: **RQ-2023-03-06-46**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
Attn: William Mullen

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Certified by: Colin Wright, Program Administrator

Date Certified: 05-APR-2023 09:51

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed 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: Little Bonnet Lake @ Middle

Collection Date/Time: 03/16/2023 10:15

Field ID: G4SD0169

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2394640	DEP SOP: NU-094-1	Color (true)	15	A	PCU	P427308	
	EPA 180.1 Rev. 2.0	Turbidity	8.7		NTU	P427313	
	EPA 300.0 Rev. 2.1	Chloride	18	A	mg Cl/L	P427729	
		Sulfate	25	A	mg SO4/L	P427732	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P427557	
	SM 2540 C-2015	TDS	119		mg/L	P427922	
	SM 2540 D-2015	TSS	11		mg/L	P427592	
	SM 4500-F- C-2011	Fluoride	0.079	I	mg F/L	P427559	MS
2394642	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P427498	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P427465	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.72		mg N/L	P427467	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P427337	
	SM 5310 B-2011	Organic Carbon	6.6		mg C/L	P427683	
2394644	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P427312	

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: FB

Collection Date/Time: 03/16/2023 10:30

Field ID: FB_03162023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2394646	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P427308	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P427313	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P427729	
		Sulfate	0.20	U	mg SO4/L	P427732	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P427557	
	SM 2540 C-2015	TDS	15	U	mg/L	P427922	
	SM 2540 D-2015	TSS	2	U	mg/L	P427592	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P427559	MS
2394647	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427498	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P427465	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P427468	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P427337	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P427683	
2394648	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P427312	

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: Bonnet Lake @ Middle

Collection Date/Time: 03/16/2023 11:05

Field ID: G4SD0170

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2394641	DEP SOP: NU-094-1	Color (true)	24		PCU	P427308	
	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P427313	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P427729	
		Sulfate	35		mg SO4/L	P427732	
	SM 2320 B-2011	Total Alkalinity	21		mg CaCO3/L	P427557	
	SM 2540 C-2015	TDS	116		mg/L	P427922	
	SM 2540 D-2015	TSS	14		mg/L	P427592	
	SM 4500-F- C-2011	Fluoride	0.084	I	mg F/L	P427559	MS
2394643	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P427498	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P427465	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29		mg N/L	P427468	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P427337	
	SM 5310 B-2011	Organic Carbon	7.3		mg C/L	P427683	
2394645	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P427312	

Ref. Method and Comment:

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: P427308

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427313

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427729

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427732

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427498

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427465

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427467

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427468

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427337

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 dissolved
Batch ID: P427312

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

Reference Method: SM 2320 B-2011
Batch ID: P427557

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

Reference Method: SM 2540 C-2015
Batch ID: P427922

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P427592

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P427559

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P427683

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: P427308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427313

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427729

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: P427732

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427498

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427465

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: P427467

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: P427468

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427337

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P427312

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

Reference Method: SM 2320 B-2011
Batch ID: P427557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.8		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P427922

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

Reference Method: SM 2540 D-2015
Batch ID: P427592

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.4		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P427559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427683

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394640	Chloride	100		P	90 - 110
2394641	Chloride	98.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394640	Sulfate	97.2		P	90 - 110
2394641	Sulfate	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394559	Ammonia-N	98.2	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394642	Kjeldahl Nitrogen	97.6	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427467

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394557	NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394643	NO2NO3-N	93.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394665	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P427312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394637	O-Phosphate-P	99.3	99.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P427559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394809	Fluoride	105	103	F/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P427683

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394674	Organic Carbon	93.1	94.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P427308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394640	Color (true)	0.743	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427313

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394596	Turbidity	6.34	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394640	Chloride	1.60	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394640	Sulfate	2.05	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394559	Ammonia-N	0.408	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394642	Kjeldahl Nitrogen	5.17	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427467

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394557	NO2NO3-N	0.266	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394643	NO2NO3-N	0.207	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P427337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394665	Total-P	0.453	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P427312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394637	O-Phosphate-P	0.187	Spike	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P427557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394809	Total Alkalinity	1.65	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P427922

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394298	TDS	1.25	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P427559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394809	Fluoride	0.992	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P427683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394674	Organic Carbon	0.693	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: A118058

Included Lab Sample IDs: 2394640, 2394641, 2394646

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A118061

Included Lab Sample IDs: 2394644, 2394645, 2394648

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	98.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A118062

Included Lab Sample IDs: 2394640, 2394641, 2394646

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118124

Included Lab Sample IDs: 2394640, 2394641, 2394646

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.1	98.6	P/P	90 - 110
Chloride	97.7	96.1	P/P	90 - 110
Sulfate	96.6	98.4	P/P	90 - 110
Sulfate	97.8	96.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118130

Included Lab Sample IDs: 2394642, 2394643, 2394647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118134

Included Lab Sample IDs: 2394642, 2394643, 2394647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.0	97.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118136

Included Lab Sample IDs: 2394642, 2394643, 2394647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A118161

Included Lab Sample IDs: 2394640, 2394641, 2394646

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.7	93.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A118161

Included Lab Sample IDs: 2394640, 2394641, 2394646

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

Reference Method: SM 5310 B-2011

Run ID: A118205

Included Lab Sample IDs: 2394642, 2394643, 2394647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118246

Included Lab Sample IDs: 2394642, 2394643, 2394647

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.4	91.6	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)	102			0.743	
EPA 180.1 Rev. 2.0	Turbidity	101			6.34	
EPA 300.0 Rev. 2.1	Chloride	98.7	100	98.2	1.60	
	Sulfate	98.5	97.2	96.3	2.05	
EPA 350.1 Rev. 2.0	Ammonia-N	94.8	98.2	97.8		0.408
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	97.6	106		5.17
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	98.5	99.0		0.266
	NO2NO3-N	99.0	93.8			0.207
EPA 365.1 Rev. 2.0	Total-P	102	107	107		0.453
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	99.3	99.5		0.187
SM 2320 B-2011	Total Alkalinity	94.8			1.65	
SM 2540 C-2015	TDS	97.1			1.25	
SM 2540 D-2015	TSS	96.4				
SM 4500-F- C-2011	Fluoride	103	105	103		0.992
SM 5310 B-2011	Organic Carbon	94.9	93.1	94.1		0.693

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2394640, 2394641, 2394646
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2394640, 2394641, 2394646
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2394640, 2394641, 2394646
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2394640, 2394641, 2394646
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2394642, 2394643, 2394647
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2394642, 2394643, 2394647
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2394642, 2394643, 2394647
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2394642, 2394643, 2394647
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2394644, 2394645, 2394648
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2394640, 2394641, 2394646
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2394640, 2394641, 2394646
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2394640, 2394641, 2394646
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2394640, 2394641, 2394646
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2394642, 2394643, 2394647

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	03/17/2023			03/17/2023 14:01	Alexis Price	2394640
	03/17/2023			03/17/2023 14:02	Alexis Price	2394641, 2394646
	03/17/2023			03/17/2023 13:33	Anna M. Plaviak	2394640
EPA 180.1 Rev. 2.0	03/17/2023			03/17/2023 13:34	Anna M. Plaviak	2394641
	03/17/2023			03/17/2023 13:37	Anna M. Plaviak	2394646
	03/17/2023			03/24/2023 02:48	Judith K. Clark	2394640
EPA 300.0 Rev. 2.1	03/17/2023			03/24/2023 03:19	Judith K. Clark	2394641
	03/17/2023			03/24/2023 07:35	Judith K. Clark	2394646
	03/17/2023			03/22/2023 14:15	Khloe J Berg	2394642
EPA 350.1 Rev. 2.0	03/17/2023			03/22/2023 14:17	Khloe J Berg	2394643
	03/17/2023			03/22/2023 14:18	Khloe J Berg	2394647
	03/17/2023	03/23/2023 12:00	Simonne.V. Calhoun	03/28/2023 14:41	Judith K. Clark	2394642
EPA 351.2 Rev. 2.0	03/17/2023	03/23/2023 12:00	Simonne.V. Calhoun	03/28/2023 14:45	Judith K. Clark	2394643
	03/17/2023	03/23/2023 12:00	Simonne.V. Calhoun	03/28/2023 14:47	Judith K. Clark	2394647
	03/17/2023			03/22/2023 09:25	Beverly Y. Sanders	2394642
EPA 353.2 Rev. 2.0	03/17/2023			03/22/2023 09:33	Beverly Y. Sanders	2394643
	03/17/2023			03/22/2023 09:38	Beverly Y. Sanders	2394647
	03/17/2023	03/20/2023 14:58	Adam P Silver	03/22/2023 11:58	James L Waggeberby	2394647
EPA 365.1 Rev. 2.0	03/17/2023	03/20/2023 14:58	Adam P Silver	03/22/2023 12:00	James L Waggeberby	2394642
	03/17/2023	03/20/2023 14:58	Adam P Silver	03/22/2023 12:01	James L Waggeberby	2394643
	03/17/2023			03/17/2023 15:46	Chandler E Cox	2394644, 2394645
EPA 365.1 Rev. 2.0 dissolved	03/17/2023			03/17/2023 15:47	Chandler E Cox	2394648
	03/17/2023			03/22/2023 18:04	Dale L. Simmons	2394640
	03/17/2023			03/22/2023 18:16	Dale L. Simmons	2394641
SM 2320 B-2011	03/17/2023			03/22/2023 18:25	Dale L. Simmons	2394646
	03/17/2023			03/21/2023 16:04	Yijie Li	2394640, 2394641, 2394646
	03/17/2023			03/21/2023 16:04	Yijie Li	2394640, 2394641, 2394646
SM 2540 C-2015	03/17/2023			03/22/2023 18:04	Dale L. Simmons	2394640
	03/17/2023			03/22/2023 18:16	Dale L. Simmons	2394641
	03/17/2023			03/22/2023 18:25	Dale L. Simmons	2394646
SM 2540 D-2015	03/17/2023			03/25/2023 06:59	Khloe J Berg	2394642
	03/17/2023			03/25/2023 07:14	Khloe J Berg	2394643
	03/17/2023			03/25/2023 07:30	Khloe J Berg	2394647
SM 4500-F- C-2011	03/17/2023					
	03/17/2023					
	03/17/2023					
SM 5310 B-2011	03/17/2023					
	03/17/2023					
	03/17/2023					