

Chemical Analysis Report

SE-DIST-2024-04-19-01

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

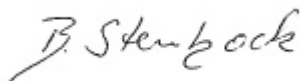
Event Description: **SMP - All Highlands (South, Central, North, Boat)**
Request ID: **RQ-2024-03-11-37**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Andrew Luering

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
Marek Topolski, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 17-MAY-2024 17:23



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: LAKE APTHORPE NEAR CENTER

Collection Date/Time: 04/18/2024 10:00

Field ID: G4SE0161					Matrix: W-SURF-FRH		
Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2483890	DEP SOP: NU-094-1	Color (true)	19		PCU	P444575	
	EPA 180.1 Rev. 2.0	Turbidity	6.6		NTU	P444583	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P445295	
		Sulfate	34		mg SO4/L	P445299	
	SM 2320 B-2011	Total Alkalinity	20	AJ	mg CaCO3/L	P444924	RPD
	SM 2540 C-2015	TDS	134	A	mg/L	P445040	
	SM 2540 D-2015	TSS	5	IA	mg/L	P444961	
	SM 4500-F- C-2011	Fluoride	0.047	I	mg F/L	P444927	
2483891	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P444626	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P444805	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P445200	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P444803	
	SM 5310 B-2014	Organic Carbon	7.9		mg C/L	P444902	

Ref. Method and Comment:
SM 2320 B-2011: Refer to the Lab Analysis Report for an explanation of QC Codes.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE LOTELA NEAR CENTER

Collection Date/Time: 04/18/2024 11:15

Field ID: G4SE0172					Matrix: W-SURF-FRH		
Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2483894	DEP SOP: NU-094-1	Color (true)	3.4	I	PCU	P444575	
	EPA 180.1 Rev. 2.0	Turbidity	9.8		NTU	P444583	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P445295	
		Sulfate	21		mg SO4/L	P445299	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P444924	RPD
	SM 2540 C-2015	TDS	103		mg/L	P445040	
	SM 2540 D-2015	TSS	30		mg/L	P444961	
	SM 4500-F- C-2011	Fluoride	0.070	I	mg F/L	P444927	
2483895	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P444626	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P444806	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P445200	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P444947	
	SM 5310 B-2014	Organic Carbon	0.50	U	mg C/L	P445098	

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: LAKE FRANCIS NEAR CENTER

Collection Date/Time: 04/18/2024 12:30

Field ID: G4SE0165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2483892	DEP SOP: NU-094-1	Color (true)	8.3		PCU	P444575	
	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P444583	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P445295	
		Sulfate	31		mg SO4/L	P445299	
	SM 2320 B-2011	Total Alkalinity	22		mg CaCO3/L	P444924	RPD
	SM 2540 C-2015	TDS	131		mg/L	P445040	
	SM 2540 D-2015	TSS	4	I	mg/L	P444961	
	SM 4500-F- C-2011	Fluoride	0.057	I	mg F/L	P444927	
2483893	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P444626	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P444806	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P445200	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P444803	
	SM 5310 B-2014	Organic Carbon	6.5		mg C/L	P445098	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P444575

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444583

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445295

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445299

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444626

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444805

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444806

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445200

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444803

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: P444947

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

Reference Method: SM 2320 B-2011
Batch ID: P444924

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

Reference Method: SM 2540 C-2015
Batch ID: P445040

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P444961

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P444927

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P444902

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

Reference Method: SM 5310 B-2014
Batch ID: P445098

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: P444575

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: P444583

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445295

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445299

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444805

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444806

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: P445200

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444803

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444947

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

Reference Method: SM 2320 B-2011
Batch ID: P444924

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P445040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	106		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P444961

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	104		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P444927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P444902

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Reference Method: SM 5310 B-2014
Batch ID: P445098

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483841	Chloride	102		P	90 - 110
2483890	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445299

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483841	Sulfate	102		P	90 - 110
2483890	Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483866	Ammonia-N	96.0	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444805

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483889	Kjeldahl Nitrogen	106	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2484036	Kjeldahl Nitrogen	97.4	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445200

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483756	NO2NO3-N	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444947

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485160	Total-P	106	105	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P444927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483890	Fluoride	99.9	101	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P444902

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483774	Organic Carbon	100	98.4	P/P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-2014
Batch ID: P445098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483893	Organic Carbon	98.1	99.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P444575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483865	Color (true)	1.38	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483888	Turbidity	7.89	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483841	Chloride	0.0415	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483841	Sulfate	0.422	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483866	Ammonia-N	1.14	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444805

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483889	Kjeldahl Nitrogen	3.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2484036	Kjeldahl Nitrogen	4.49	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445200

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483756	NO2NO3-N	2.39	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483867	Total-P	0.176	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485160	Total-P	1.19	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P444924

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483890	Total Alkalinity	11.2	Sample	F	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P445040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483890	TDS	2.99	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P444927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483890	Fluoride	0.545	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P444902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483774	Organic Carbon	1.51	Spike	P	0 - 15

Reference Method: SM 5310 B-2014
Batch ID: P445098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483893	Organic Carbon	1.22	Spike	P	0 - 15

* 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: A125434

Included Lab Sample IDs: 2483888, 2483890, 2483892, 2483894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.8	97.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A125437

Included Lab Sample IDs: 2483888, 2483890, 2483892, 2483894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	98.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A125453

Included Lab Sample IDs: 2483889, 2483891, 2483893, 2483895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A125547

Included Lab Sample IDs: 2483889, 2483891, 2483893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.2	96.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A125568

Included Lab Sample IDs: 2483888, 2483890, 2483892, 2483894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	98.6	P/P	90 - 110
Total Alkalinity	98.6	96.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A125568

Included Lab Sample IDs: 2483888, 2483890, 2483892, 2483894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	98.0	P/P	90 - 110
Fluoride	98.0	101	P/P	90 - 110

Reference Method: SM 5310 B-2014

Run ID: A125569

Included Lab Sample IDs: 2483889, 2483891

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	124	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A125610

Included Lab Sample IDs: 2483895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A125610
Included Lab Sample IDs: 2483895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A125625
Included Lab Sample IDs: 2483889, 2483891, 2483893, 2483895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.5	101	P/P	90 - 110

Reference Method: SM 5310 B-2014
Run ID: A125633
Included Lab Sample IDs: 2483893, 2483895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.3	116	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A125640
Included Lab Sample IDs: 2483888, 2483890, 2483892, 2483894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Chloride	103	103	P/P	90 - 110
Sulfate	105	105	P/P	90 - 110
Sulfate	105	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A125660
Included Lab Sample IDs: 2483889, 2483891, 2483893, 2483895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	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			1.38	
EPA 180.1 Rev. 2.0	Turbidity	101			7.89	
EPA 300.0 Rev. 2.1	Chloride	104	102	99.0	0.0415	
	Sulfate	105	102	97.5	0.422	
EPA 350.1 Rev. 2.0	Ammonia-N	95.4	96.0	97.6		1.14
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	106	101		3.33
	Kjeldahl Nitrogen	102	97.4	105		4.49
EPA 353.2 Rev. 2.0	NO2NO3-N	104	104	106		2.39
EPA 365.1 Rev. 2.0	Total-P	101				0.176
	Total-P	102	106	105		1.19
SM 2320 B-2011	Total Alkalinity	101			11.2	
SM 2540 C-2015	TDS	106			2.99	
SM 2540 D-2015	TSS	104				
SM 4500-F- C-2011	Fluoride	97.8	99.9	101		0.545
SM 5310 B-2014	Organic Carbon	101	100	98.4		1.51
	Organic Carbon	99.2	98.1	99.5		1.22

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2483888, 2483890, 2483892, 2483894
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2483888, 2483890, 2483892, 2483894
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2483888, 2483890, 2483892, 2483894
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2483888, 2483890, 2483892, 2483894
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2483889, 2483891, 2483893, 2483895
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2483889, 2483891, 2483893, 2483895
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2483889, 2483891, 2483893, 2483895
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2483889, 2483891, 2483893, 2483895
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2483888, 2483890, 2483892, 2483894
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2483888, 2483890, 2483892, 2483894
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2483888, 2483890, 2483892, 2483894
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2483888, 2483890, 2483892, 2483894
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2483889, 2483891, 2483893, 2483895

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	04/19/2024			04/19/2024 14:46	Jessica K Wilks	2483888, 2483890
	04/19/2024			04/19/2024 14:47	Jessica K Wilks	2483892, 2483894
EPA 180.1 Rev. 2.0	04/19/2024			04/19/2024 14:29	Jessica K Wilks	2483888
	04/19/2024			04/19/2024 14:31	Jessica K Wilks	2483890
	04/19/2024			04/19/2024 14:32	Jessica K Wilks	2483892
	04/19/2024			04/19/2024 14:33	Jessica K Wilks	2483894
EPA 300.0 Rev. 2.1	04/19/2024			05/03/2024 19:27	James L Waggeberby	2483890
	04/19/2024			05/03/2024 22:28	James L Waggeberby	2483888
	04/19/2024			05/03/2024 22:43	James L Waggeberby	2483892
	04/19/2024			05/03/2024 22:58	James L Waggeberby	2483894
EPA 350.1 Rev. 2.0	04/19/2024			04/22/2024 13:34	Khloe J Berg	2483889
	04/19/2024			04/22/2024 13:36	Khloe J Berg	2483891
	04/19/2024			04/22/2024 13:37	Khloe J Berg	2483893
	04/19/2024			04/22/2024 13:38	Khloe J Berg	2483895
EPA 351.2 Rev. 2.0	04/19/2024	04/25/2024 15:47	Simonne.V. Calhoun	04/30/2024 15:11	Robyn Blevins	2483889
	04/19/2024	04/25/2024 15:47	Simonne.V. Calhoun	04/30/2024 15:16	Robyn Blevins	2483891
	04/19/2024	04/25/2024 15:47	Simonne.V. Calhoun	04/30/2024 15:21	Robyn Blevins	2483893
	04/19/2024	04/25/2024 15:47	Simonne.V. Calhoun	04/30/2024 15:22	Robyn Blevins	2483895
EPA 353.2 Rev. 2.0	04/19/2024			05/01/2024 16:25	Fadila Guebre	2483889
	04/19/2024			05/01/2024 16:26	Fadila Guebre	2483891
	04/19/2024			05/01/2024 16:27	Fadila Guebre	2483893
	04/19/2024			05/01/2024 16:28	Fadila Guebre	2483895
EPA 365.1 Rev. 2.0	04/19/2024	04/25/2024 13:36	Josephine W Gitau	04/26/2024 11:05	Elise M. Gillis	2483889
	04/19/2024	04/25/2024 13:36	Josephine W Gitau	04/26/2024 11:06	Elise M. Gillis	2483891
	04/19/2024	04/25/2024 13:36	Josephine W Gitau	04/26/2024 11:07	Elise M. Gillis	2483893
	04/19/2024	04/30/2024 12:43	Adam P Silver	05/01/2024 11:55	Chandler E Cox	2483895
SM 2320 B-2011	04/19/2024			04/25/2024 22:45	Dale L. Simmons	2483890
	04/19/2024			04/26/2024 00:38	Dale L. Simmons	2483888
	04/19/2024			04/26/2024 00:49	Dale L. Simmons	2483892
	04/19/2024			04/26/2024 01:00	Dale L. Simmons	2483894
SM 2540 C-2015	04/19/2024			04/23/2024 15:01	Yijie Li	2483888, 2483890, 2483892, 2483894
SM 2540 D-2015	04/19/2024			04/23/2024 15:01	Yijie Li	2483888, 2483890, 2483892, 2483894
SM 4500-F- C-2011	04/19/2024			04/25/2024 22:36	Dale L. Simmons	2483890
	04/19/2024			04/26/2024 00:38	Dale L. Simmons	2483888
	04/19/2024			04/26/2024 00:49	Dale L. Simmons	2483892
	04/19/2024			04/26/2024 01:00	Dale L. Simmons	2483894
SM 5310 B-2014	04/19/2024			04/26/2024 12:06	Khloe J Berg	2483889
	04/19/2024			04/26/2024 12:21	Khloe J Berg	2483891
	04/19/2024			04/30/2024 04:52	Jessica K Wilks	2483893
	04/19/2024			04/30/2024 08:22	Jessica K Wilks	2483895