

Chemical Analysis Report

SW-DIST-2023-05-10-01

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

Event Description: **Run 2**
Request ID: **RQ-2023-05-08-05**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Date Certified: 26-MAY-2023 10:29



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: SPARKMAN LAKE AT CENTER

Collection Date/Time: 05/09/2023 09:10

Field ID: G4SW0114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2408604	DEP SOP: NU-094-1	Color (true)	190		PCU	P429681	
	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P429689	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P429795	
		Sulfate	0.80		mg SO4/L	P429797	
	SM 2320 B-2011	Total Alkalinity	15		mg CaCO3/L	P430117	
	SM 2540 C-2015	TDS	106		mg/L	P430183	
	SM 2540 D-2015	TSS	8	I	mg/L	P430027	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P429887	
2408607	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P429928	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P429954	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P429984	
	EPA 365.1 Rev. 2.0	Total-P	0.056		mg P/L	P429803	
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P429896	

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 LINDSAY AT CENTER

Collection Date/Time: 05/09/2023 10:00

Field ID: G4SW0124

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2408605	DEP SOP: NU-094-1	Color (true)	45	A	PCU	P429682	
	EPA 180.1 Rev. 2.0	Turbidity	0.95	I	NTU	P429689	
	EPA 300.0 Rev. 2.1	Chloride	6.5	A	mg Cl/L	P430017	
		Sulfate	0.20	UA	mg SO4/L	P430020	
	SM 2320 B-2011	Total Alkalinity	9.3		mg CaCO3/L	P430117	
	SM 2540 C-2015	TDS	36		mg/L	P430183	
	SM 2540 D-2015	TSS	2	I	mg/L	P430027	
	SM 4500-F- C-2011	Fluoride	0.047	I	mg F/L	P429887	
2408608	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P429928	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P429954	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P429984	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P429803	
	SM 5310 B-2011	Organic Carbon	9.7		mg C/L	P429896	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: MCKETHAN LAKE

Collection Date/Time: 05/09/2023 10:50

Field ID: G4SW0021

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2408606	DEP SOP: NU-094-1	Color (true)	54		PCU	P429682	
	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P429689	
	EPA 300.0 Rev. 2.1	Chloride	4.6		mg Cl/L	P430017	
		Sulfate	0.27	I	mg SO4/L	P430020	
	SM 2320 B-2011	Total Alkalinity	8.0		mg CaCO3/L	P430117	
	SM 2540 C-2015	TDS	42		mg/L	P430183	
	SM 2540 D-2015	TSS	5	I	mg/L	P430027	
	SM 4500-F- C-2011	Fluoride	0.044	I	mg F/L	P429887	
2408609	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P429928	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.1		mg N/L	P429954	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P429984	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P429803	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P429896	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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: P429681

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P429682

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429689

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429795

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429797

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430017

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430020

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429928

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429954

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429984

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429803

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

Reference Method: SM 2320 B-2011
Batch ID: P430117

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

Reference Method: SM 2540 C-2015
Batch ID: P430183

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P430027

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P429887

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P429896

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: P429681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P429682

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: P429689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429795

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430017

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430020

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429928

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: P429954

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429984

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429803

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

Reference Method: SM 2320 B-2011
Batch ID: P430117

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P430183

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

Reference Method: SM 2540 D-2015
Batch ID: P430027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.9		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P429887

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P429896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408147	Chloride	98.7		P	90 - 110
2408294	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408147	Sulfate	97.6		P	90 - 110
2408294	Sulfate	98.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408605	Chloride	102		P	90 - 110
2408888	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408605	Sulfate	100		P	90 - 110
2408888	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408313	Ammonia-N	99.8	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408374	Kjeldahl Nitrogen	106	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408313	NO2NO3-N	100	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408652	Total-P	104	104	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P429887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P429887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408651	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P429896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408608	Organic Carbon	97.6	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P429681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408073	Color (true)	1.12	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P429682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408605	Color (true)	1.14	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408371	Turbidity	1.06	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429795

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408147	Chloride	0.265	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408147	Sulfate	0.218	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408605	Chloride	0.662	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408313	Ammonia-N	1.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P429954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408374	Kjeldahl Nitrogen	0.773	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408313	NO2NO3-N	0.347	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408652	Total-P	0.468	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P430117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408651	Total Alkalinity	1.29	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P430183

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408073	TDS	7.07	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P429887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408651	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P429896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408608	Organic Carbon	0.412	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119070

Included Lab Sample IDs: 2408604

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	99.3	99.6	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A119072

Included Lab Sample IDs: 2408604, 2408605, 2408606

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119076

Included Lab Sample IDs: 2408604, 2408605, 2408606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119148

Included Lab Sample IDs: 2408607, 2408609

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119172

Included Lab Sample IDs: 2408608

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

Reference Method: SM 4500-F- C-2011

Run ID: A119179

Included Lab Sample IDs: 2408604, 2408605, 2408606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	104	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A119185

Included Lab Sample IDs: 2408607, 2408608, 2408609

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	96.2	P/P	90 - 110
Organic Carbon	96.6	96.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119199

Included Lab Sample IDs: 2408607, 2408608, 2408609

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119199

Included Lab Sample IDs: 2408607, 2408608, 2408609

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	98.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119211

Included Lab Sample IDs: 2408605, 2408606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.2	99.9	P/P	90 - 110
Sulfate	99.2	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A119221

Included Lab Sample IDs: 2408607, 2408608, 2408609

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119245

Included Lab Sample IDs: 2408607, 2408608, 2408609

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

Reference Method: SM 2320 B-2011

Run ID: A119276

Included Lab Sample IDs: 2408604, 2408605, 2408606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.1	93.7	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)	100			1.12	
	Color (true)	101			1.14	
EPA 180.1 Rev. 2.0	Turbidity	97.3			1.06	
EPA 300.0 Rev. 2.1	Chloride	99.3	98.7	97.9	0.265	
	Chloride	101	102	102	0.662	
	Sulfate	97.9	97.6	98.2	0.218	
	Sulfate	100	100	101		
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	99.8	102		1.46
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	106	105		0.773
EPA 353.2 Rev. 2.0	NO2NO3-N	102	100	99.7		0.347
EPA 365.1 Rev. 2.0	Total-P	104	104	104		0.468
SM 2320 B-2011	Total Alkalinity	100			1.29	
SM 2540 C-2015	TDS	105			7.07	
SM 2540 D-2015	TSS	95.9				
SM 4500-F- C-2011	Fluoride	100	103	103		0.0
SM 5310 B-2011	Organic Carbon	96.7	97.6	97.0		0.412

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2408604, 2408605, 2408606
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2408604, 2408605, 2408606
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2408604, 2408605, 2408606
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2408604, 2408605, 2408606
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2408607, 2408608, 2408609
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2408607, 2408608, 2408609
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2408607, 2408608, 2408609
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2408607, 2408608, 2408609
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2408604, 2408605, 2408606
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2408604, 2408605, 2408606
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2408604, 2408605, 2408606
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2408604, 2408605, 2408606
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2408607, 2408608, 2408609

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	05/10/2023			05/10/2023 15:06	Alexis Price	2408605, 2408606
	05/10/2023			05/10/2023 15:10	Alexis Price	2408604
	05/10/2023			05/10/2023 14:30	Anna M. Plaviak	2408604
EPA 180.1 Rev. 2.0	05/10/2023			05/10/2023 14:31	Anna M. Plaviak	2408605
	05/10/2023			05/10/2023 14:32	Anna M. Plaviak	2408606
	05/10/2023			05/11/2023 23:52	James L Waggeberby	2408604
EPA 300.0 Rev. 2.1	05/10/2023			05/17/2023 12:12	James L Waggeberby	2408605
	05/10/2023			05/17/2023 13:12	James L Waggeberby	2408606
	05/10/2023			05/16/2023 14:20	Khloe J Berg	2408607
EPA 350.1 Rev. 2.0	05/10/2023			05/16/2023 14:21	Khloe J Berg	2408608
	05/10/2023			05/16/2023 14:22	Khloe J Berg	2408609
	05/10/2023			05/18/2023 11:01	Samantha L Bates	2408607
EPA 351.2 Rev. 2.0	05/10/2023	05/17/2023 10:59	Dana G. Hughes	05/18/2023 11:03	Samantha L Bates	2408608
	05/10/2023	05/17/2023 10:59	Dana G. Hughes	05/18/2023 11:04	Samantha L Bates	2408609
	05/10/2023	05/17/2023 10:59	Dana G. Hughes	05/17/2023 11:21	Beverly Y. Sanders	2408607
EPA 353.2 Rev. 2.0	05/10/2023			05/17/2023 11:22	Beverly Y. Sanders	2408608
	05/10/2023			05/17/2023 11:23	Beverly Y. Sanders	2408609
	05/10/2023			05/12/2023 16:55	James L Waggeberby	2408607
EPA 365.1 Rev. 2.0	05/10/2023	05/12/2023 12:59	Adam P Silver	05/12/2023 16:57	James L Waggeberby	2408609
	05/10/2023	05/12/2023 12:59	Adam P Silver	05/15/2023 15:29	James L Waggeberby	2408608
	05/10/2023	05/12/2023 12:59	Adam P Silver	05/19/2023 01:09	Dale L. Simmons	2408604
SM 2320 B-2011	05/10/2023			05/19/2023 01:18	Dale L. Simmons	2408605
	05/10/2023			05/19/2023 01:27	Dale L. Simmons	2408606
	05/10/2023			05/12/2023 15:01	Yijie Li	2408604, 2408605, 2408606
SM 2540 C-2015	05/10/2023			05/12/2023 15:01	Yijie Li	2408604, 2408605, 2408606
SM 2540 D-2015	05/10/2023			05/15/2023 23:55	Dale L. Simmons	2408604
	05/10/2023			05/16/2023 00:00	Dale L. Simmons	2408605
	05/10/2023			05/16/2023 00:06	Dale L. Simmons	2408606
SM 4500-F- C-2011	05/10/2023			05/15/2023 15:31	Elise M. Gillis	2408608
	05/10/2023			05/15/2023 18:24	Elise M. Gillis	2408607
	05/10/2023			05/15/2023 18:38	Elise M. Gillis	2408609