

Chemical Analysis Report

SW-DIST-2023-04-21-01

Florida DEP Laboratory
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Tallahassee, FL 32399-2400
DOH Accreditation E31780

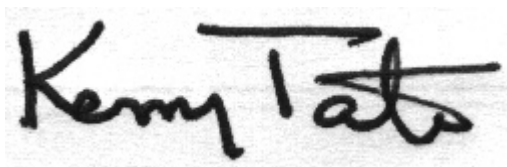
Event Description: **Run 18**
Request ID: **RQ-2023-04-17-15**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 15-MAY-2023 10:38

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: ITCHEPACKESASSA CREEK IN PARK

Collection Date/Time: 04/20/2023 10:00

Field ID: G2SW0145

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2402260	DEP SOP: NU-094-1	Color (true)	15		PCU	P428841	
	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P428852	
	EPA 300.0 Rev. 2.1	Chloride	110		mg Cl/L	P429143	
		Sulfate	100		mg SO4/L	P429146	
	SM 2320 B-2011	Total Alkalinity	206		mg CaCO3/L	P429189	
	SM 2540 C-2015	TDS	565		mg/L	P429500	
	SM 2540 D-2015	TSS	2	U	mg/L	P429317	
	SM 4500-F- C-2011	Fluoride	0.49		mg F/L	P429282	
2402262	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P429138	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P428998	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.053		mg N/L	P429246	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P428987	
	SM 5310 B-2011	Organic Carbon	6.3		mg C/L	P429041	

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 WIMAUMA DRAIN IN LIL MANATEE PRESERVE

Collection Date/Time: 04/20/2023 11:45

Field ID: G2SW0166

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2402261	DEP SOP: NU-094-1	Color (true)	38	A	PCU	P428842	
	EPA 180.1 Rev. 2.0	Turbidity	2.4	A	NTU	P428853	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P429143	
		Sulfate	230		mg SO4/L	P429486	
	SM 2320 B-2011	Total Alkalinity	26		mg CaCO3/L	P429192	
	SM 2540 C-2015	TDS	389		mg/L	P429500	
	SM 2540 D-2015	TSS	2	I	mg/L	P429317	
	SM 4500-F- C-2011	Fluoride	0.25		mg F/L	P429282	
2402263	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P429139	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P428998	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P429246	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P428987	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P429041	

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: P428841

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P428842

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428852

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428853

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429143

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429146

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429138

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429139

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428998

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429246

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428987

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

Reference Method: SM 2320 B-2011
Batch ID: P429189

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

Reference Method: SM 2320 B-2011
Batch ID: P429192

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

Reference Method: SM 2540 C-2015
Batch ID: P429500

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P429317

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P429282

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P429041

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: P428841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P428842

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.5		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428853

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429143

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429146

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429138

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429139

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428998

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429246

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.4		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P429189

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.2		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P429192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.8		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P429500

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

Reference Method: SM 2540 D-2015
Batch ID: P429317

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

Reference Method: SM 4500-F- C-2011
Batch ID: P429282

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P429041

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402187	Chloride	101		P	90 - 110
2402529	Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429146

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402187	Sulfate	101		P	90 - 110
2402529	Sulfate	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2403181	Sulfate	98.7		P	90 - 110
2403247	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429138

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402161	Ammonia-N	99.0	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402558	Ammonia-N	96.6	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428998

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402262	Kjeldahl Nitrogen	97.8	95.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429246

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402263	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402225	Total-P	101	100	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P429282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402166	Fluoride	101	101	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P429041

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2402010	Organic Carbon	95.6	95.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P428841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402166	Color (true)	0.139	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P428842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402261	Color (true)	0.708	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2401974	Turbidity	5.57	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402261	Turbidity	6.72	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402187	Chloride	0.683	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402187	Sulfate	0.147	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P429486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403181	Sulfate	0.476	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402161	Ammonia-N	1.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P429139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402558	Ammonia-N	0.722	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428998

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402262	Kjeldahl Nitrogen	1.82	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P429246

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402263	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402225	Total-P	0.580	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P429189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2403072	Total Alkalinity	0.185	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P429192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402648	Total Alkalinity	1.96	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P429500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2401995	TDS	5.85	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P429282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402166	Fluoride	0.0	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P429041

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2402010	Organic Carbon	0.136	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: A118714

Included Lab Sample IDs: 2402260, 2402261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.3	P/P	90 - 110
Color (true)	99.3	99.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A118720

Included Lab Sample IDs: 2402260, 2402261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	98.5	P/P	95 - 105
Turbidity	98.5	98.0	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118755

Included Lab Sample IDs: 2402260, 2402261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.7	98.0	P/P	90 - 110
Sulfate	98.3	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A118810

Included Lab Sample IDs: 2402262, 2402263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118812

Included Lab Sample IDs: 2402262, 2402263

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118833

Included Lab Sample IDs: 2402262, 2402263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	93.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118854

Included Lab Sample IDs: 2402262, 2402263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.4	P/P	90 - 110
Ammonia-N	99.4	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A118869

Included Lab Sample IDs: 2402260, 2402261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.2	95.5	P/P	90 - 110
Total Alkalinity	95.5	94.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118899

Included Lab Sample IDs: 2402262, 2402263

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

Reference Method: SM 4500-F- C-2011

Run ID: A118916

Included Lab Sample IDs: 2402260, 2402261

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118919

Included Lab Sample IDs: 2402261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	102	101	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		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	99.6				0.139	
	Color (true)	99.8				0.708	
EPA 180.1 Rev. 2.0	Turbidity	97.5				5.57	
	Turbidity	97.8				6.72	
EPA 300.0 Rev. 2.1	Chloride	99.2	101	98.3		0.683	
	Sulfate	100	101	98.1		0.147	
	Sulfate	104	98.7	102		0.476	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	99.0	97.8			1.12
	Ammonia-N	99.8	96.6	95.8			0.722
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.0	97.8	95.3			1.82
EPA 353.2 Rev. 2.0	NO2NO3-N	106	106	106			0.0
EPA 365.1 Rev. 2.0	Total-P	99.4	101	100			0.580
SM 2320 B-2011	Total Alkalinity	96.2				0.185	
	Total Alkalinity	95.8				1.96	
SM 2540 C-2015	TDS	95.4				5.85	
SM 2540 D-2015	TSS	95.3					
SM 4500-F- C-2011	Fluoride	98.8	101	101			0.0
SM 5310 B-2011	Organic Carbon	98.1	95.6	95.4			0.136

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2402260, 2402261
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2402260, 2402261
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2402260, 2402261
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2402260, 2402261
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2402262, 2402263
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2402262, 2402263
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2402262, 2402263
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2402262, 2402263
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2402260, 2402261
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2402260, 2402261
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2402260, 2402261
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2402260, 2402261
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2402262, 2402263

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	04/21/2023			04/21/2023 14:44	Alexis Price	2402260
	04/21/2023			04/21/2023 14:48	Alexis Price	2402261
EPA 180.1 Rev. 2.0	04/21/2023			04/21/2023 13:55	Khloe J Berg	2402260
	04/21/2023			04/21/2023 14:03	Khloe J Berg	2402261
EPA 300.0 Rev. 2.1	04/21/2023			04/27/2023 18:33	James L Waggeberby	2402260
	04/21/2023			04/27/2023 18:48	James L Waggeberby	2402261
	04/21/2023			05/03/2023 17:03	James L Waggeberby	2402261
EPA 350.1 Rev. 2.0	04/21/2023			04/28/2023 12:56	Ping Hua	2402262
	04/21/2023			04/28/2023 13:12	Ping Hua	2402263
EPA 351.2 Rev. 2.0	04/21/2023	04/26/2023 12:25	Dana G. Hughes	04/27/2023 15:37	Ping Hua	2402262
	04/21/2023	04/26/2023 12:25	Dana G. Hughes	04/27/2023 15:41	Ping Hua	2402263
EPA 353.2 Rev. 2.0	04/21/2023			05/02/2023 11:12	Beverly Y. Sanders	2402263
	04/21/2023			05/02/2023 11:24	Beverly Y. Sanders	2402262
EPA 365.1 Rev. 2.0	04/21/2023	04/26/2023 14:50	Adam P Silver	04/27/2023 08:45	Simonne.V. Calhoun	2402262
	04/21/2023	04/26/2023 14:50	Adam P Silver	04/27/2023 08:47	Simonne.V. Calhoun	2402263
SM 2320 B-2011	04/21/2023			04/28/2023 04:58	Dale L. Simmons	2402260
	04/21/2023			04/28/2023 06:43	Dale L. Simmons	2402261
SM 2540 C-2015	04/21/2023			04/26/2023 15:12	Yijie Li	2402260, 2402261
SM 2540 D-2015	04/21/2023			04/26/2023 15:12	Yijie Li	2402260, 2402261
SM 4500-F- C-2011	04/21/2023			05/02/2023 16:52	Dale L. Simmons	2402260
	04/21/2023			05/02/2023 16:57	Dale L. Simmons	2402261
SM 5310 B-2011	04/21/2023			04/27/2023 03:23	Elise M. Gillis	2402262
	04/21/2023			04/27/2023 03:37	Elise M. Gillis	2402263