Chemical Analysis Report

SW-DIST-2023-10-25-03

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

Event Description: **Run 2**
Request ID: **RQ-2023-10-16-53**
Customer: **SW-DIST**
Project ID: **SMP**

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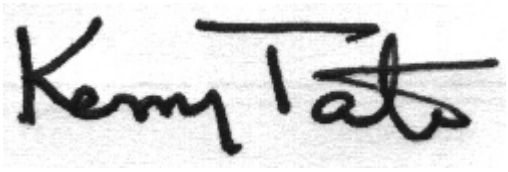
Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 09-NOV-2023 14:02



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: 10/24/2023 11:00**

Field ID: G4SW0114 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2447012	DEP SOP: NU-094-1	Color (true)	340	A	PCU	P436996	
	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P436988	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P437221	
		Sulfate	0.69		mg SO4/L	P437224	
	SM 2320 B-2011	Total Alkalinity	12		mg CaCO3/L	P437314	
	SM 2540 C-2015	TDS	136		mg/L	P437390	
	SM 2540 D-2015	TSS	3	I	mg/L	P437270	
	SM 4500-F- C-2011	Fluoride	0.087	I	mg F/L	P437316	
2447015	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P437035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P437009	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P437165	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P437016	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P437107	

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.
SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE LINDSAY AT CENTER **Collection Date/Time: 10/24/2023 12:30**

Field ID: G4SW0124 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2447013	DEP SOP: NU-094-1	Color (true)	27	A	PCU	P436995	
	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P436988	
	EPA 300.0 Rev. 2.1	Chloride	6.7		mg Cl/L	P437221	
		Sulfate	0.20	U	mg SO4/L	P437224	
	SM 2320 B-2011	Total Alkalinity	10		mg CaCO3/L	P437314	
	SM 2540 C-2015	TDS	45		mg/L	P437390	
	SM 2540 D-2015	TSS	5	U	mg/L	P437270	
	SM 4500-F- C-2011	Fluoride	0.053	I	mg F/L	P437316	
2447016	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P437035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P437009	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P437165	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P437279	
	SM 5310 B-2011	Organic Carbon	8.9		mg C/L	P437107	

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. The MDL was elevated because of sample matrix interference. The result was confirmed on 11/03/2023.
SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: MCKETHAN LAKE **Collection Date/Time: 10/24/2023 13:10**

Field ID: G4SW0021 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2447014	DEP SOP: NU-094-1	Color (true)	41		PCU	P436997	
	EPA 180.1 Rev. 2.0	Turbidity	16		NTU	P436988	
	EPA 300.0 Rev. 2.1	Chloride	5.9		mg Cl/L	P437221	
		Sulfate	1.7		mg SO4/L	P437224	
	SM 2320 B-2011	Total Alkalinity	4.0		mg CaCO3/L	P437314	
	SM 2540 C-2015	TDS	66		mg/L	P437390	
	SM 2540 D-2015	TSS	44	I	mg/L	P437270	
	SM 4500-F- C-2011	Fluoride	0.047	I	mg F/L	P437316	
2447017	EPA 350.1 Rev. 2.0	Ammonia-N	0.50		mg N/L	P437035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.4		mg N/L	P437009	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P437165	
	EPA 365.1 Rev. 2.0	Total-P	0.27		mg P/L	P437016	
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P437107	

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. The PQL was elevated because of sample matrix interference.
SM 4500-F- C-2011: 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: P436995

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P436996

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P436997

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436988

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437221

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437224

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437035

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437009

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437165

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437016

Component	Result	Code	Units
Total-P	0.010	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437279

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

Reference Method: SM 2320 B-2011
Batch ID: P437314

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

Reference Method: SM 2540 C-2015
Batch ID: P437390

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P437270

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P437316

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P437107

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: P436995

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.4		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P436996

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P436997

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436988

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437221

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437224

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437035

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437009

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437165

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437016

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437279

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

Reference Method: SM 2320 B-2011
Batch ID: P437314

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

Reference Method: SM 2540 C-2015
Batch ID: P437390

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.2		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P437270

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.4		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P437316

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P437107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.0		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446899	Chloride	103		P	90 - 110
2447012	Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437224

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446899	Sulfate	104		P	90 - 110
2447012	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446992	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437009

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2447041	Kjeldahl Nitrogen	99.4	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446992	NO2NO3-N	98.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437016

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446992	Total-P	105	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2447086	Total-P	104	105	P/P	90 - 110

Reference Method: SM 5310 B-2011
Batch ID: P437107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2446828	Organic Carbon	102		P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P436995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447013	Color (true)	5.56	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P436996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447012	Color (true)	1.57	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P436997

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446943	Color (true)	4.48	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446930	Turbidity	19.1	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P437221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446899	Chloride	0.436	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P437035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446992	Ammonia-N	0.462	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P437009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447041	Kjeldahl Nitrogen	0.447	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P437165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446992	NO2NO3-N	1.35	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437016

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446992	Total-P	2.80	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P437279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447086	Total-P	0.769	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P437314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447072	Total Alkalinity	1.41	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P437390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446954	TDS	4.70	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P437316

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2447072	Fluoride	0.477	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P437107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2446828	Organic Carbon	0.151	Sample	P	0 - 20

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A122354
Included Lab Sample IDs: 2447012, 2447013, 2447014

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

Reference Method: DEP SOP: NU-094-1
Run ID: A122356
Included Lab Sample IDs: 2447012, 2447013, 2447014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	98.7	P/P	90 - 110
Color (true)	99.3	100	P/P	90 - 110
Color (true)	100	99.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A122380
Included Lab Sample IDs: 2447015, 2447016, 2447017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	99.0	P/P	90 - 110
Ammonia-N	99.3	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A122399
Included Lab Sample IDs: 2447015, 2447017

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A122418
Included Lab Sample IDs: 2447015, 2447016, 2447017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.2	94.3	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A122423
Included Lab Sample IDs: 2447015, 2447016, 2447017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	99.0	P/P	90 - 110
Organic Carbon	99.0	99.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A122446
Included Lab Sample IDs: 2447015, 2447016, 2447017

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A122479
Included Lab Sample IDs: 2447012, 2447013, 2447014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Chloride	103	103	P/P	90 - 110
Sulfate	102	103	P/P	90 - 110
Sulfate	103	103	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A122537
Included Lab Sample IDs: 2447012, 2447013, 2447014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	95.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A122537
Included Lab Sample IDs: 2447012, 2447013, 2447014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A122552
Included Lab Sample IDs: 2447016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	102	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	SMP	MS
DEP SOP: NU-094-1	Color (true)	99.4				5.56	
	Color (true)	101				1.57	
	Color (true)	100				4.48	
EPA 180.1 Rev. 2.0	Turbidity	104				19.1	
EPA 300.0 Rev. 2.1	Chloride	106	103	107		0.436	
	Sulfate	106	104	106			
EPA 350.1 Rev. 2.0	Ammonia-N	100	100	101			0.462
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.6	99.4	100			0.447
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	98.5	100			1.35
EPA 365.1 Rev. 2.0	Total-P	106	105	108			2.80
	Total-P	102	104	105			0.769
SM 2320 B-2011	Total Alkalinity	100				1.41	
SM 2540 C-2015	TDS	93.2				4.70	
SM 2540 D-2015	TSS	94.4					
SM 4500-F- C-2011	Fluoride	99.6					0.477
SM 5310 B-2011	Organic Carbon	99.0	102			0.151	

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2447012, 2447013, 2447014
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2447012, 2447013, 2447014
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2447012, 2447013, 2447014
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2447012, 2447013, 2447014
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2447015, 2447016, 2447017
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2447015, 2447016, 2447017
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2447015, 2447016, 2447017
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2447015, 2447016, 2447017
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2447012, 2447013, 2447014
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2447012, 2447013, 2447014
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2447012, 2447013, 2447014
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2447012, 2447013, 2447014
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2447015, 2447016, 2447017

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	10/25/2023			10/25/2023 14:04	Anna M. Plaviak	2447013
	10/25/2023			10/25/2023 14:24	Anna M. Plaviak	2447012
	10/25/2023			10/25/2023 14:30	Anna M. Plaviak	2447014
EPA 180.1 Rev. 2.0	10/25/2023			10/25/2023 14:22	Khloe J Berg	2447014
	10/25/2023			10/25/2023 14:25	Khloe J Berg	2447012
	10/25/2023			10/25/2023 14:27	Khloe J Berg	2447013
EPA 300.0 Rev. 2.1	10/25/2023			10/31/2023 14:31	James L Waggerby	2447012
	10/25/2023			10/31/2023 18:48	James L Waggerby	2447013
	10/25/2023			10/31/2023 19:03	James L Waggerby	2447014
EPA 350.1 Rev. 2.0	10/25/2023			10/26/2023 11:37	Ping Hua	2447015
	10/25/2023			10/26/2023 11:39	Ping Hua	2447016
	10/25/2023			10/26/2023 12:16	Ping Hua	2447017
EPA 351.2 Rev. 2.0	10/25/2023	10/26/2023 11:38	Simonne.V. Calhoun	10/27/2023 13:41	Ping Hua	2447015
	10/25/2023	10/26/2023 11:38	Simonne.V. Calhoun	10/27/2023 13:43	Ping Hua	2447016
	10/25/2023	10/26/2023 11:38	Simonne.V. Calhoun	10/27/2023 13:44	Ping Hua	2447017
EPA 353.2 Rev. 2.0	10/25/2023			10/30/2023 12:57	Anna M. Plaviak	2447015
	10/25/2023			10/30/2023 12:58	Anna M. Plaviak	2447016
	10/25/2023			10/30/2023 12:59	Anna M. Plaviak	2447017
EPA 365.1 Rev. 2.0	10/25/2023	10/26/2023 12:20	Adam P Silver	10/27/2023 08:53	Simonne.V. Calhoun	2447015
	10/25/2023	10/26/2023 12:20	Adam P Silver	10/27/2023 08:55	Simonne.V. Calhoun	2447017
	10/25/2023	11/02/2023 09:55	Simonne.V. Calhoun	11/03/2023 13:52	Simonne.V. Calhoun	2447016
SM 2320 B-2011	10/25/2023			11/02/2023 20:00	Dale L. Simmons	2447012
	10/25/2023			11/02/2023 20:11	Dale L. Simmons	2447013
	10/25/2023			11/02/2023 20:22	Dale L. Simmons	2447014
SM 2540 C-2015	10/25/2023			10/27/2023 16:33	Yijie Li	2447012, 2447013, 2447014
SM 2540 D-2015	10/25/2023			10/27/2023 16:33	Yijie Li	2447012, 2447013, 2447014
SM 4500-F- C-2011	10/25/2023			11/02/2023 20:00	Dale L. Simmons	2447012
	10/25/2023			11/02/2023 20:11	Dale L. Simmons	2447013
	10/25/2023			11/02/2023 20:22	Dale L. Simmons	2447014
SM 5310 B-2011	10/25/2023			10/27/2023 12:56	Khloe J Berg	2447015
	10/25/2023			10/27/2023 13:39	Khloe J Berg	2447016
	10/25/2023			10/27/2023 13:53	Khloe J Berg	2447017