

Chemical Analysis Report

SW-DIST-2022-12-20-02

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

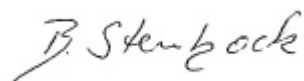
Event Description: **Run 13**
Request ID: **RQ-2022-12-12-10**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 12-JAN-2023 12:31



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: Pepper Mound Creek @ Bay Vue

Collection Date/Time: 12/19/2022 12:40

Field ID: G1SW0125

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2376633	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P423790	
	SM 2320 B-2011	Total Alkalinity	245		mg CaCO3/L	P424044	
	SM 2540 D-2015	TSS	2	I	mg/L	P424052	
	SM 4500-F- C-2011	Fluoride	0.29	J	mg F/L	P424396	MS
2376634	EPA 350.1 Rev. 2.0	Ammonia-N	0.49		mg N/L	P424223	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P423046	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P424203	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P424077	
	SM 5310 B-2011	Organic Carbon	9.1		mg C/L	P423877	
2376635	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.18		mg P/L	P423774	

Ref. Method and Comment:

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

SM 4500-F- C-2011: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Lake Jackson @ Center

Collection Date/Time: 12/19/2022 12:00

Field ID: G1SW0124

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2376630	DEP SOP: NU-094-1	Color (true)	150		PCU	P423776	
	EPA 180.1 Rev. 2.0	Turbidity	0.70	I	NTU	P423790	
	EPA 300.0 Rev. 2.1	Chloride	34	A	mg Cl/L	P423940	
		Sulfate	3.1	A	mg SO4/L	P423943	
	SM 2320 B-2011	Total Alkalinity	13		mg CaCO3/L	P424044	
	SM 2540 C-2015	TDS	112		mg/L	P424114	
	SM 2540 D-2015	TSS	2	U	mg/L	P424051	
	SM 4500-F- C-2011	Fluoride	0.069	I	mg F/L	P424241	
2376631	EPA 350.1 Rev. 2.0	Ammonia-N	0.092		mg N/L	P424302	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P423043	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P423974	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P424107	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P423877	
2376632	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P423773	

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: P423776

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423790

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423940

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423943

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424223

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424302

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423043

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423046

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423974

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424203

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424077

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424107

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423773

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423774

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

Reference Method: SM 2320 B-2011
Batch ID: P424044

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

Reference Method: SM 2540 C-2015
Batch ID: P424114

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P424051

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P424052

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P424241

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P424396

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P423877

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: P423776

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423790

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423940

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423943

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424223

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424302

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423043

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423046

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424203

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: P424077

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424107

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423773

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P424044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.0		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P424114

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

Reference Method: SM 2540 D-2015
Batch ID: P424051

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.0		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P424052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	98.5		P	85 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P424241

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P424396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P423877

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423940

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376630	Chloride	103		P	90 - 110
2376772	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423943

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376630	Sulfate	103		P	90 - 110
2376772	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376809	Ammonia-N	97.0	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376631	Kjeldahl Nitrogen	95.6	94.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2375396	Kjeldahl Nitrogen	95.1	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376504	NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376634	NO2NO3-N	99.9	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2377008	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376562	Total-P	102	104	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376491	O-Phosphate-P	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376635	O-Phosphate-P	95.3	95.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P424241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376802	Fluoride	102	102	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P424396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376633	Fluoride	106	105	F/F	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P423877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2376539	Organic Carbon	99.7		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P423776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376641	Color (true)	0.429	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P423790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376297	Turbidity	2.67	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376630	Chloride	0.265	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P423943

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376630	Sulfate	0.930	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375177	Ammonia-N	0.327	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376809	Ammonia-N	0.592	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376631	Kjeldahl Nitrogen	0.645	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2375396	Kjeldahl Nitrogen	8.90	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376504	NO2NO3-N	1.52	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376634	NO2NO3-N	1.40	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2377008	Total-P	0.939	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376562	Total-P	2.34	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376491	O-Phosphate-P	0.895	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P423774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376635	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P424044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376295	Total Alkalinity	1.21	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P424114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376535	TDS	2.78	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P424241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376802	Fluoride	0.467	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P424396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376633	Fluoride	0.473	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P423877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2376539	Organic Carbon	0.214	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: A116559

Included Lab Sample IDs: 2376630

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A116573

Included Lab Sample IDs: 2376632, 2376635

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.4	97.4	P/P	90 - 110
O-Phosphate-P	98.4	97.4	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A116574

Included Lab Sample IDs: 2376630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116579

Included Lab Sample IDs: 2376630, 2376633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A116614

Included Lab Sample IDs: 2376631, 2376634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.3	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116667

Included Lab Sample IDs: 2376631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	105	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116697

Included Lab Sample IDs: 2376630, 2376633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.6	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116719

Included Lab Sample IDs: 2376631, 2376634

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116719

Included Lab Sample IDs: 2376631, 2376634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.7	99.6	P/P	90 - 110
Kjeldahl Nitrogen	97.5	91.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116739

Included Lab Sample IDs: 2376634

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116747

Included Lab Sample IDs: 2376631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116767

Included Lab Sample IDs: 2376634

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116773

Included Lab Sample IDs: 2376634

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	99.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116780

Included Lab Sample IDs: 2376630

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116809

Included Lab Sample IDs: 2376631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	98.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116836

Included Lab Sample IDs: 2376633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	105	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* 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)	98.8			0.429	
EPA 180.1 Rev. 2.0	Turbidity	101			2.67	
EPA 300.0 Rev. 2.1	Chloride	103	103	103	0.265	
	Sulfate	103	103	103	0.930	
EPA 350.1 Rev. 2.0	Ammonia-N	98.2				0.327
	Ammonia-N	97.2	97.0	96.4		0.592
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	95.6	94.6		0.645
	Kjeldahl Nitrogen	98.3	95.1	105		8.90
EPA 353.2 Rev. 2.0	NO2NO3-N	105	104	102		1.52
	NO2NO3-N	104	99.9	101		1.40
EPA 365.1 Rev. 2.0	Total-P	103	103	104		0.939
	Total-P	102	102	104		2.34
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4	101	100		0.895
	O-Phosphate-P	98.3	95.3	95.3		0.0
SM 2320 B-2011	Total Alkalinity	99.0			1.21	
SM 2540 C-2015	TDS	94.8			2.78	
SM 2540 D-2015	TSS	96.0				
	TSS	98.5				
SM 4500-F- C-2011	Fluoride	101	102	102		0.467
	Fluoride	101	106	105		0.473
SM 5310 B-2011	Organic Carbon	97.0	99.7			0.214

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2376630
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2376630, 2376633
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2376630
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2376630
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2376631, 2376634
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2376631, 2376634
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2376631, 2376634
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2376631, 2376634
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2376632, 2376635
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2376630, 2376633
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2376630
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2376630, 2376633
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2376630, 2376633
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2376631, 2376634

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	12/20/2022			12/20/2022 14:12	Alexis Price	2376630
EPA 180.1 Rev. 2.0	12/20/2022			12/20/2022 14:25	Chandler E Cox	2376630
	12/20/2022			12/20/2022 14:26	Chandler E Cox	2376633
EPA 300.0 Rev. 2.1	12/20/2022			12/23/2022 04:10	Anna M. Plaviak	2376630
EPA 350.1 Rev. 2.0	12/20/2022			01/06/2023 11:35	Ping Hua	2376634
	12/20/2022			01/09/2023 13:51	Ping Hua	2376631
EPA 351.2 Rev. 2.0	12/20/2022	01/03/2023 13:30	Simonne.V. Calhoun	01/04/2023 12:03	Samantha L Bates	2376631
	12/20/2022	01/03/2023 13:30	Simonne.V. Calhoun	01/04/2023 12:40	Samantha L Bates	2376634
EPA 353.2 Rev. 2.0	12/20/2022			01/06/2023 09:53	Beverly Y. Sanders	2376634
	12/20/2022			12/28/2022 11:06	Beverly Y. Sanders	2376631
EPA 365.1 Rev. 2.0	12/20/2022	01/03/2023 14:10	Adam P Silver	01/05/2023 09:14	James L Waggeberby	2376634
	12/20/2022	01/03/2023 14:10	Adam P Silver	01/05/2023 13:59	James L Waggeberby	2376631
EPA 365.1 Rev. 2.0 dissolved	12/20/2022			12/20/2022 14:30	Elise M. Gillis	2376632
	12/20/2022			12/20/2022 14:40	Elise M. Gillis	2376635
SM 2320 B-2011	12/20/2022			12/29/2022 20:14	Dale L. Simmons	2376630
	12/20/2022			12/29/2022 21:14	Dale L. Simmons	2376633
SM 2540 C-2015	12/20/2022			12/21/2022 14:49	Yijie Li	2376630
SM 2540 D-2015	12/20/2022			12/21/2022 14:49	Yijie Li	2376630, 2376633
SM 4500-F- C-2011	12/20/2022			01/06/2023 00:41	Dale L. Simmons	2376630
	12/20/2022			01/10/2023 23:00	Dale L. Simmons	2376633
SM 5310 B-2011	12/20/2022			12/22/2022 00:30	Khloe J Berg	2376631
	12/20/2022			12/22/2022 00:46	Khloe J Berg	2376634