

Chemical Analysis Report

SW-DIST-2022-11-04-02

Florida DEP Laboratory
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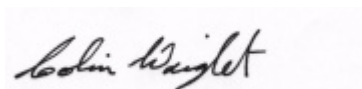
Event Description: **Run 13**
Request ID: **RQ-2022-10-31-11**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 01-DEC-2022 10:59



Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Lake Whistler @ Center

Collection Date/Time: 11/03/2022 10:30

Field ID: G3SW0100

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2367774	DEP SOP: NU-094-1	Color (true)	16		PCU	P421985	
	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P421961	
	EPA 300.0 Rev. 2.1	Chloride	30	A	mg Cl/L	P422648	
		Sulfate	32	A	mg SO4/L	P422651	
	SM 2320 B-2011	Total Alkalinity	21		mg CaCO3/L	P422255	
	SM 2540 C-2015	TDS	121		mg/L	P422521	
	SM 2540 D-2015	TSS	4	I	mg/L	P422339	
	SM 4500-F- C-2011	Fluoride	0.20		mg F/L	P422896	
2367777	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P422437	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P422243	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P422145	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P422194	
	SM 5310 B-2011	Organic Carbon	6.4		mg C/L	P422603	
2367780	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P421942	

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 Ida @ Center

Collection Date/Time: 11/03/2022 11:20

Field ID: G3SW0043

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2367775	DEP SOP: NU-094-1	Color (true)	26	A	PCU	P421985	
	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P421961	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P422648	
		Sulfate	16		mg SO4/L	P422651	
	SM 2320 B-2011	Total Alkalinity	77		mg CaCO3/L	P422255	
	SM 2540 C-2015	TDS	154		mg/L	P422521	
	SM 2540 D-2015	TSS	3	I	mg/L	P422339	
	SM 4500-F- C-2011	Fluoride	0.14		mg F/L	P422897	
2367778	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P422437	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.72		mg N/L	P422244	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P422145	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P422194	
	SM 5310 B-2011	Organic Carbon	7.7		mg C/L	P422611	
2367781	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P421942	

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 Gordon-Center

Collection Date/Time: 11/03/2022 12:10

Field ID: G3SW0095

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2367776	DEP SOP: NU-094-1	Color (true)	19		PCU	P421985	
	EPA 180.1 Rev. 2.0	Turbidity	0.90	I	NTU	P421961	
	EPA 300.0 Rev. 2.1	Chloride	9.9		mg Cl/L	P422648	
		Sulfate	6.9		mg SO4/L	P422651	
	SM 2320 B-2011	Total Alkalinity	38		mg CaCO3/L	P422255	
	SM 2540 C-2015	TDS	60		mg/L	P422521	
	SM 2540 D-2015	TSS	2	I	mg/L	P422339	
	SM 4500-F- C-2011	Fluoride	0.079	I	mg F/L	P422897	
2367779	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P422437	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P422242	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P422145	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P422194	
	SM 5310 B-2011	Organic Carbon	4.5		mg C/L	P422611	
2367782	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P421942	

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: P421985

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421961

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422648

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422437

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422242

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422243

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422244

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422145

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: P422194

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P421942

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

Reference Method: SM 2320 B-2011
Batch ID: P422255

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

Reference Method: SM 2540 C-2015
Batch ID: P422521

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P422339

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422896

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422897

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P422603

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

Reference Method: SM 5310 B-2011
Batch ID: P422611

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: P421985

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: P421961

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422648

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422437

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422243

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422244

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422145

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P422194

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P421942

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

Reference Method: SM 2320 B-2011

Batch ID: P422255

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.9		P	94 - 106

Reference Method: SM 2540 C-2015

Batch ID: P422521

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

Reference Method: SM 2540 D-2015

Batch ID: P422339

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	98.1		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P422896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 4500-F- C-2011

Batch ID: P422897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P422603

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Reference Method: SM 5310 B-2011

Batch ID: P422611

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: P422648

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367774	Chloride	92.7		P	90 - 110
2367995	Chloride	95.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367774	Sulfate	93.8		P	90 - 110
2367995	Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422437

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367777	Ammonia-N	98.6	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367475	Kjeldahl Nitrogen	93.4	95.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367676	Kjeldahl Nitrogen	99.0	95.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367582	Kjeldahl Nitrogen	102	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367680	NO2NO3-N	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422194

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367680	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P421942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367781	O-Phosphate-P	98.1	98.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P422896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367774	Fluoride	101	102	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P422897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367775	Fluoride	101	101	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368438	Organic Carbon	96.0	97.0	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P422611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367614	Organic Carbon	98.4		P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P421985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367775	Color (true)	1.57	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367640	Turbidity	2.87	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367774	Chloride	0.383	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367774	Sulfate	0.654	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367777	Ammonia-N	0.188	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367475	Kjeldahl Nitrogen	1.56	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367676	Kjeldahl Nitrogen	2.41	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367582	Kjeldahl Nitrogen	4.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P422145

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367680	NO2NO3-N	1.28	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P422194

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367680	Total-P	0.590	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P421942

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367781	O-Phosphate-P	0.715	Spike	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P422255

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367578	Total Alkalinity	0.734	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P422521

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367474	TDS	6.61	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P422896

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367774	Fluoride	0.972	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011

Batch ID: P422897

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367775	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P422603

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368438	Organic Carbon	0.551	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P422611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367614	Organic Carbon	1.60	Sample	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A115753

Included Lab Sample IDs: 2367780, 2367781, 2367782

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	102	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A115758

Included Lab Sample IDs: 2367774, 2367775, 2367776

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: A115768

Included Lab Sample IDs: 2367774, 2367775, 2367776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A115831

Included Lab Sample IDs: 2367777, 2367778, 2367779

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

Reference Method: SM 2320 B-2011

Run ID: A115885

Included Lab Sample IDs: 2367774, 2367775, 2367776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.0	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A115901

Included Lab Sample IDs: 2367777, 2367778, 2367779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	98.8	P/P	90 - 110
Total-P	98.8	98.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A115939

Included Lab Sample IDs: 2367774, 2367775, 2367776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.6	96.8	P/P	90 - 110
Chloride	96.8	97.1	P/P	90 - 110
Sulfate	96.8	97.6	P/P	90 - 110
Sulfate	97.6	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115946

Included Lab Sample IDs: 2367779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.2	94.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115958

Included Lab Sample IDs: 2367777, 2367778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	107	P/P	90 - 110
Kjeldahl Nitrogen	107	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115966

Included Lab Sample IDs: 2367777, 2367778, 2367779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	98.4	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116039

Included Lab Sample IDs: 2367777

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116047

Included Lab Sample IDs: 2367778, 2367779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.8	P/P	90 - 110
Organic Carbon	98.8	98.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116180

Included Lab Sample IDs: 2367774, 2367775, 2367776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	P/P	90 - 110
Fluoride	103	103	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			1.57	
EPA 180.1 Rev. 2.0	Turbidity	101			2.87	
EPA 300.0 Rev. 2.1	Chloride	95.5	92.7	95.4	0.383	
	Sulfate	97.1	93.8	97.1	0.654	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	98.6	98.8		0.188
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.6	93.4	95.1		1.56
	Kjeldahl Nitrogen	101	99.0	95.3		2.41
	Kjeldahl Nitrogen	99.8	102	96.0		4.12
EPA 353.2 Rev. 2.0	NO2NO3-N	106	103	105		1.28
EPA 365.1 Rev. 2.0	Total-P	105	102	103		0.590
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	98.1	98.9		0.715
SM 2320 B-2011	Total Alkalinity	96.9			0.734	
SM 2540 C-2015	TDS	104			6.61	
SM 2540 D-2015	TSS	98.1				
SM 4500-F- C-2011	Fluoride	100	101	102		0.972
	Fluoride	99.9	101	101		0.0
SM 5310 B-2011	Organic Carbon	96.2	96.0	97.0		0.551
	Organic Carbon	97.0	98.4		1.60	

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2367774, 2367775, 2367776
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2367774, 2367775, 2367776
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2367774, 2367775, 2367776
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2367774, 2367775, 2367776
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2367777, 2367778, 2367779
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2367777, 2367778, 2367779
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2367777, 2367778, 2367779
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2367777, 2367778, 2367779
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2367780, 2367781, 2367782
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2367774, 2367775, 2367776
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2367774, 2367775, 2367776
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2367774, 2367775, 2367776
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2367774, 2367775, 2367776
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2367777, 2367778, 2367779

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	11/04/2022			11/04/2022 16:19	Chandler E Cox	2367774
	11/04/2022			11/04/2022 16:20	Chandler E Cox	2367775
	11/04/2022			11/04/2022 16:21	Chandler E Cox	2367776
EPA 180.1 Rev. 2.0	11/04/2022			11/04/2022 14:38	Khloe J Berg	2367774
	11/04/2022			11/04/2022 14:39	Khloe J Berg	2367775
	11/04/2022			11/04/2022 14:42	Khloe J Berg	2367776
EPA 300.0 Rev. 2.1	11/04/2022			11/18/2022 15:08	Anna M. Plaviak	2367774
	11/04/2022			11/18/2022 19:24	Anna M. Plaviak	2367775
	11/04/2022			11/18/2022 19:39	Anna M. Plaviak	2367776
EPA 350.1 Rev. 2.0	11/04/2022			11/16/2022 15:01	Ping Hua	2367777
	11/04/2022			11/16/2022 15:10	Ping Hua	2367778
	11/04/2022			11/16/2022 15:11	Ping Hua	2367779
EPA 351.2 Rev. 2.0	11/04/2022	11/14/2022 12:38	Alexandra J Mattheus	11/15/2022 16:43	Alexandra J Mattheus	2367779
	11/04/2022	11/14/2022 12:45	Alexandra J Mattheus	11/16/2022 12:31	Samantha L Bates	2367777
	11/04/2022	11/14/2022 12:45	Alexandra J Mattheus	11/16/2022 12:53	Samantha L Bates	2367778
EPA 353.2 Rev. 2.0	11/04/2022			11/09/2022 11:40	Beverly Y. Sanders	2367777
	11/04/2022			11/09/2022 11:41	Beverly Y. Sanders	2367778
	11/04/2022			11/09/2022 11:42	Beverly Y. Sanders	2367779
EPA 365.1 Rev. 2.0	11/04/2022	11/10/2022 11:40	Simonne.V. Calhoun	11/14/2022 16:30	James L Waggeberby	2367777
	11/04/2022	11/10/2022 11:40	Simonne.V. Calhoun	11/14/2022 16:38	James L Waggeberby	2367778
	11/04/2022	11/10/2022 11:40	Simonne.V. Calhoun	11/14/2022 16:39	James L Waggeberby	2367779
EPA 365.1 Rev. 2.0 dissolved	11/04/2022			11/04/2022 13:24	Elise M. Gillis	2367781
	11/04/2022			11/04/2022 13:29	Elise M. Gillis	2367780, 2367782
SM 2320 B-2011	11/04/2022			11/10/2022 05:37	Adam P Silver	2367774
	11/04/2022			11/10/2022 05:49	Adam P Silver	2367775
	11/04/2022			11/10/2022 06:01	Adam P Silver	2367776
SM 2540 C-2015	11/04/2022			11/09/2022 16:35	Yijie Li	2367774, 2367775, 2367776
SM 2540 D-2015	11/04/2022			11/09/2022 16:35	Yijie Li	2367774, 2367775, 2367776
SM 4500-F- C-2011	11/04/2022			11/30/2022 05:55	Dale L. Simmons	2367774
	11/04/2022			11/30/2022 08:51	Dale L. Simmons	2367775
	11/04/2022			11/30/2022 09:27	Dale L. Simmons	2367776
SM 5310 B-2011	11/04/2022			11/17/2022 23:24	Khloe J Berg	2367777
	11/04/2022			11/18/2022 09:13	Khloe J Berg	2367778
	11/04/2022			11/18/2022 11:09	Khloe J Berg	2367779