

Chemical Analysis Report

SW-DIST-2022-01-20-01

Florida Department of Environmental Protection
Central Laboratory
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Tallahassee, FL 32399-2400
DOH Accreditation E31780

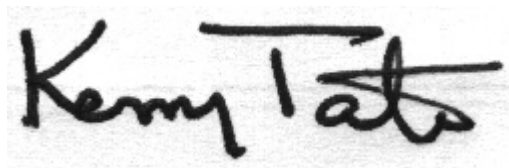
Event Description: **Run 2**
Request ID: **RQ-2022-01-17-19**
Customer: **SW-DIST**
Project ID: **SMP**

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 11-FEB-2022 10:35

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the "T" in "Tate".

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 Otting @ Center

Collection Date/Time: 01/19/2022 13:00

Field ID: G4SW0113

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2300715	DEP SOP: NU-094-1	Color (true)**	19		PCU	P408744	
	EPA 180.1 Rev. 2.0	Turbidity	7.8		NTU	P408768	
	EPA 300.0 Rev. 2.1	Chloride	2.7		mg Cl/L	P409266	
		Sulfate	0.20	U	mg SO4/L	P409269	
	SM 2320 B-2011	Total Alkalinity	70		mg CaCO3/L	P408901	
	SM 2540 C-2011	TDS	101		mg/L	P409305	
	SM 2540 D-2011	TSS	15		mg/L	P409308	
	SM 4500 F-C-2011	Fluoride	0.041	I	mg F/L	P408904	
2300717	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P409272	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P409068	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P408982	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P408764	MS
	SM 5310 B-2011	Organic Carbon	8.9		mg C/L	P409633	
2300719	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P408740	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Citrus Blue Spring Run

Collection Date/Time: 01/19/2022 11:30

Field ID: G4SW0071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2300716	DEP SOP: NU-094-1	Color (true)**	2.5	U	PCU	P408744	
	EPA 180.1 Rev. 2.0	Turbidity	0.15		NTU	P408768	
	EPA 300.0 Rev. 2.1	Chloride	7.5		mg Cl/L	P409266	
		Sulfate	14		mg SO4/L	P409269	
	SM 2320 B-2011	Total Alkalinity	165	A	mg CaCO3/L	P408901	
	SM 2540 C-2011	TDS	200		mg/L	P409305	
	SM 2540 D-2011	TSS	2	U	mg/L	P409308	
	SM 4500 F-C-2011	Fluoride	0.045	I	mg F/L	P408904	
2300718	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P409346	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P409067	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.66		mg N/L	P408982	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P409080	
	SM 5310 B-2011	Organic Carbon	0.66	I	mg C/L	P409633	
2300720	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P408740	

Ref. Method and Comment:

SM 2540 D-2011: 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: P408744

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408768

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409266

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409269

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409272

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409346

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409067

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409068

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408982

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: P408764

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409080

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408740

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

Reference Method: SM 2320 B-2011
Batch ID: P408901

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P409305

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P409308

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P408904

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P409633

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: P408744

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409266

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409269

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409272

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409346

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409067

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409068

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408982

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408764

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409080

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: P408740

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

Reference Method: SM 2320 B-2011
Batch ID: P408901

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P408904

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P409633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300613	Chloride	97.9		P	90 - 110
2300762	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300613	Sulfate	96.6		P	90 - 110
2300762	Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300663	Ammonia-N	95.0	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300718	Ammonia-N	98.4	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300871	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300846	Kjeldahl Nitrogen	104	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300768	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300614	Total-P	111	114	F/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300718	Total-P	102	105	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300719	O-Phosphate-P	98.2	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P408904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300716	Fluoride	101	98.4	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P409633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300717	Organic Carbon	96.6	94.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P408744

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300763	Color (true)	2.19	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300659	Turbidity	0.366	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300613	Chloride	0.129	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300613	Sulfate	0.0644	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300663	Ammonia-N	1.57	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300718	Ammonia-N	0.541	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300871	Kjeldahl Nitrogen	0.186	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300846	Kjeldahl Nitrogen	4.02	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300768	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300614	Total-P	2.33	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300718	Total-P	2.48	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300719	O-Phosphate-P	2.51	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P408901

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300716	Total Alkalinity	0.0427	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P409305

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300675	TDS	1.97	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P408904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300716	Fluoride	2.03	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P409633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300717	Organic Carbon	1.82	Spike	P	0 - 20

Quality Assurance Report Precision

* 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: A109950

Included Lab Sample IDs: 2300719, 2300720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	99.4	100	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A109951

Included Lab Sample IDs: 2300715, 2300716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109963

Included Lab Sample IDs: 2300715, 2300716

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110009

Included Lab Sample IDs: 2300717

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

Reference Method: SM 2320 B-2011

Run ID: A110022

Included Lab Sample IDs: 2300715, 2300716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	98.5	P/P	90 - 110
Total Alkalinity	98.5	97.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A110022

Included Lab Sample IDs: 2300715, 2300716

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110046

Included Lab Sample IDs: 2300717, 2300718

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110152

Included Lab Sample IDs: 2300717, 2300718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.1	95.9	P/P	90 - 110
Kjeldahl Nitrogen	96.2	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110154

Included Lab Sample IDs: 2300715, 2300716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.2	100	P/P	90 - 110
Sulfate	99.0	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110182

Included Lab Sample IDs: 2300718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110199

Included Lab Sample IDs: 2300718

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

Reference Method: SM 5310 B-2011

Run ID: A110312

Included Lab Sample IDs: 2300717, 2300718

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.3	P/P	90 - 110
Organic Carbon	98.3	99.9	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)	97.7				2.19	
EPA 180.1 Rev. 2.0	Turbidity					0.366	
EPA 300.0 Rev. 2.1	Chloride	98.2	97.9	99.7		0.129	
	Sulfate	97.9	96.6	98.8		0.0644	
EPA 350.1 Rev. 2.0	Ammonia-N	96.0	95.0	97.0			1.57
	Ammonia-N	99.6	98.4	99.0			0.541
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.6	106	106			0.186
	Kjeldahl Nitrogen	97.1	104	99.5			4.02
EPA 353.2 Rev. 2.0	NO2NO3-N	101	100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	110	111	114			2.33
	Total-P	105	102	105			2.48
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	98.2	101			2.51
SM 2320 B-2011	Total Alkalinity	99.3				0.0427	
SM 2540 C-2011	TDS					1.97	
SM 4500 F-C-2011	Fluoride	99.0	101	98.4			2.03
SM 5310 B-2011	Organic Carbon	95.2	96.6	94.1			1.82

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2300715, 2300716
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2300715, 2300716
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2300715, 2300716
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2300715, 2300716
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2300717, 2300718
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2300717, 2300718
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2300717, 2300718
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2300717, 2300718
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2300719, 2300720
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2300715, 2300716
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2300715, 2300716
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2300715, 2300716
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2300715, 2300716
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2300717, 2300718

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	01/20/2022			01/20/2022 15:20	Blanca Fach	2300715
	01/20/2022			01/20/2022 15:21	Blanca Fach	2300716
EPA 180.1 Rev. 2.0	01/20/2022			01/20/2022 17:34	Sarah A Nixon	2300715, 2300716
EPA 300.0 Rev. 2.1	01/20/2022			02/01/2022 04:01	James L Waggeberby	2300715
	01/20/2022			02/01/2022 04:13	James L Waggeberby	2300716
EPA 350.1 Rev. 2.0	01/20/2022			02/01/2022 16:02	Roberta Tatti	2300717
	01/20/2022			02/02/2022 12:22	Ping Hua	2300718
EPA 351.2 Rev. 2.0	01/20/2022	01/28/2022 11:05	Samantha L Bates	02/01/2022 13:12	Virginia P. Brown	2300718
	01/20/2022	01/28/2022 11:05	Samantha L Bates	02/01/2022 13:43	Virginia P. Brown	2300717
EPA 353.2 Rev. 2.0	01/20/2022			01/25/2022 14:02	Nathaniel J Jones	2300717
	01/20/2022			01/25/2022 14:03	Nathaniel J Jones	2300718
EPA 365.1 Rev. 2.0	01/20/2022	01/21/2022 15:10	Simonne.V. Calhoun	01/24/2022 12:17	Shengyu Ding	2300717
	01/20/2022	01/28/2022 14:50	Simonne.V. Calhoun	02/02/2022 15:06	Sarah A Nixon	2300718
EPA 365.1 Rev. 2.0 dissolved	01/20/2022			01/20/2022 14:55	James L Waggeberby	2300719
	01/20/2022			01/20/2022 15:03	James L Waggeberby	2300720
SM 2320 B-2011	01/20/2022			01/21/2022 23:09	Dale L. Simmons	2300716
	01/20/2022			01/22/2022 00:31	Dale L. Simmons	2300715
SM 2540 C-2011	01/20/2022			01/25/2022 16:02	Yijie Li	2300715, 2300716
SM 2540 D-2011	01/20/2022			01/25/2022 16:02	Yijie Li	2300715, 2300716
SM 4500 F-C-2011	01/20/2022			01/21/2022 22:59	Dale L. Simmons	2300716
	01/20/2022			01/22/2022 00:31	Dale L. Simmons	2300715
SM 5310 B-2011	01/20/2022			02/08/2022 21:01	Touraj Touran	2300717
	01/20/2022			02/09/2022 00:10	Touraj Touran	2300718