Chemical Analysis Report

SW-DIST-2022-09-14-01

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

Event Description: **Run 4**
Request ID: **RQ-2022-08-22-01**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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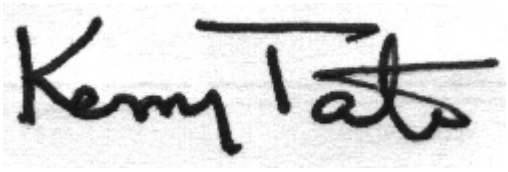
Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 30-SEP-2022 11:46



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: Dowling Lake 2 **Collection Date/Time: 09/13/2022 09:25**

Field ID: G4SW0084 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356358	DEP SOP: NU-094-1	Color (true)	48		PCU	P419567	
	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P419571	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P420087	
		Sulfate	3.9		mg SO4/L	P420092	
	SM 2320 B-2011	Total Alkalinity	11		mg CaCO3/L	P419885	
	SM 2540 C-2011	TDS	76		mg/L	P419890	
	SM 2540 D-2011	TSS	3	I	mg/L	P419846	
	SM 4500-F- C-2011	Fluoride	0.12		mg F/L	P419887	
2356360	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P419789	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P419804	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P420053	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P419690	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P419756	
2356362	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P419562	

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: Mountain Lake @ Center **Collection Date/Time: 09/13/2022 10:20**

Field ID: G4SW0103 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356364	DEP SOP: NU-094-1	Color (true)	79		PCU	P419568	
	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P419571	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P420087	
		Sulfate	0.33	I	mg SO4/L	P420092	
	SM 2320 B-2011	Total Alkalinity	22		mg CaCO3/L	P419885	
	SM 2540 C-2011	TDS	64		mg/L	P419890	
	SM 2540 D-2011	TSS	8	I	mg/L	P419846	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P419887	
2356365	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P419732	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P419804	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P420053	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P419690	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P419756	
2356366	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P419614	

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: Irvin Lake **Collection Date/Time: 09/13/2022 10:55**

Field ID: G4SW0025 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356359	DEP SOP: NU-094-1	Color (true)	51		PCU	P419568	
	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P419571	
	EPA 300.0 Rev. 2.1	Chloride	5.7		mg Cl/L	P420087	
		Sulfate	0.70		mg SO4/L	P420092	
	SM 2320 B-2011	Total Alkalinity	50		mg CaCO3/L	P419885	
	SM 2540 C-2011	TDS	82		mg/L	P419890	
	SM 2540 D-2011	TSS	5	I	mg/L	P419846	
	SM 4500-F- C-2011	Fluoride	0.094	I	mg F/L	P419887	
2356361	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P419790	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P419806	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P420053	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P419690	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P419756	
2356363	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P419614	

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: P419567

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P419568

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419571

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420087

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420092

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419732

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419790

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419804

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420053

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419690

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419562

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419614

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

Reference Method: SM 2320 B-2011
Batch ID: P419885

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

Reference Method: SM 2540 C-2011
Batch ID: P419890

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P419846

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P419887

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P419756

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: P419567

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.5		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P419568

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419571

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420092

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419732

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419790

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: P419804

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.7		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420053

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419690

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419562

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419614

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

Reference Method: SM 2320 B-2011
Batch ID: P419885

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P419887

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.1		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P419756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.7		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356409	Chloride	95.3		P	90 - 110
2356698	Chloride	96.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356409	Sulfate	95.5		P	90 - 110
2356698	Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356365	Ammonia-N	99.2	99.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356068	Ammonia-N	95.2	94.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356361	Ammonia-N	96.0	95.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356264	Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356297	Kjeldahl Nitrogen	103	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420053

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356301	NO2NO3-N	92.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356216	Total-P	106	104	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356172	O-Phosphate-P	93.0	90.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356411	O-Phosphate-P	97.9	95.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P419887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356250	Fluoride	98.1	100	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P419756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356299	Organic Carbon	97.9	97.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P419567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356293	Color (true)	1.19	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P419568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356412	Color (true)	1.07	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356294	Turbidity	2.46	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356409	Chloride	0.0342	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356409	Sulfate	0.0268	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356365	Ammonia-N	0.189	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356068	Ammonia-N	0.880	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356361	Ammonia-N	0.571	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356264	Kjeldahl Nitrogen	0.117	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356297	Kjeldahl Nitrogen	2.42	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420053

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356301	NO2NO3-N	0.716	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356216	Total-P	1.65	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356172	O-Phosphate-P	2.07	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356411	O-Phosphate-P	2.59	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P419885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356250	Total Alkalinity	3.31	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P419890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356250	TDS	7.06	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P419887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356250	Fluoride	1.46	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P419756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356299	Organic Carbon	0.190	Spike	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: A114721
Included Lab Sample IDs: 2356362

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	95.8	97.7	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1
Run ID: A114723
Included Lab Sample IDs: 2356358, 2356359, 2356364

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.4	99.6	P/P	90 - 110
Color (true)	99.6	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A114724
Included Lab Sample IDs: 2356358, 2356359, 2356364

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A114737
Included Lab Sample IDs: 2356363, 2356366

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.9	98.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A114785
Included Lab Sample IDs: 2356365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.8	97.1	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A114799
Included Lab Sample IDs: 2356360, 2356361, 2356365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.3	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A114804
Included Lab Sample IDs: 2356360, 2356361

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.7	P/P	90 - 110
Ammonia-N	99.7	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114815
Included Lab Sample IDs: 2356361, 2356365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114815
Included Lab Sample IDs: 2356361, 2356365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.7	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114829
Included Lab Sample IDs: 2356360

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	96.5	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A114840
Included Lab Sample IDs: 2356358, 2356359, 2356364

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.7	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A114840
Included Lab Sample IDs: 2356358, 2356359, 2356364

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114856
Included Lab Sample IDs: 2356360, 2356361, 2356365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	104	P/P	90 - 110
Kjeldahl Nitrogen	99.6	95.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A114857
Included Lab Sample IDs: 2356358, 2356359, 2356364

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.7	99.2	P/P	90 - 110
Sulfate	98.8	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A114919
Included Lab Sample IDs: 2356360, 2356361, 2356365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	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)	97.5				1.19	
	Color (true)	98.2				1.07	
EPA 180.1 Rev. 2.0	Turbidity	101				2.46	
EPA 300.0 Rev. 2.1	Chloride	99.7	95.3	96.5		0.0342	
	Sulfate	99.7	95.5	97.5		0.0268	
EPA 350.1 Rev. 2.0	Ammonia-N	95.4	99.2	99.4			0.189
	Ammonia-N	98.8	95.2	94.0			0.880
	Ammonia-N	97.2	96.0	95.4			0.571
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.7	102	102			0.117
	Kjeldahl Nitrogen	96.2	103	107			2.42
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	92.2				0.716
EPA 365.1 Rev. 2.0	Total-P	104	106	104			1.65
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.6	93.0	90.9			2.07
	O-Phosphate-P	97.2	97.9	95.4			2.59
SM 2320 B-2011	Total Alkalinity	101				3.31	
SM 2540 C-2011	TDS					7.06	
SM 4500-F- C-2011	Fluoride	99.1	98.1	100			1.46
SM 5310 B-2011	Organic Carbon	95.7	97.9	97.6			0.190

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2356358, 2356359, 2356364
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2356358, 2356359, 2356364
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2356358, 2356359, 2356364
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2356358, 2356359, 2356364
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2356360, 2356361, 2356365
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2356360, 2356361, 2356365
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2356360, 2356361, 2356365
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2356360, 2356361, 2356365
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2356362, 2356363, 2356366
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2356358, 2356359, 2356364
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2356358, 2356359, 2356364
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2356358, 2356359, 2356364
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2356358, 2356359, 2356364
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2356360, 2356361, 2356365

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	09/14/2022			09/14/2022 15:29	Blanca Fach	2356358
	09/14/2022			09/14/2022 15:34	Blanca Fach	2356359, 2356364
EPA 180.1 Rev. 2.0	09/14/2022			09/14/2022 14:31	Khloe J Berg	2356358
	09/14/2022			09/14/2022 14:32	Khloe J Berg	2356359
	09/14/2022			09/14/2022 14:34	Khloe J Berg	2356364
EPA 300.0 Rev. 2.1	09/14/2022			09/22/2022 13:00	Anna M. Plaviak	2356358
	09/14/2022			09/22/2022 13:15	Anna M. Plaviak	2356359
	09/14/2022			09/22/2022 13:30	Anna M. Plaviak	2356364
EPA 350.1 Rev. 2.0	09/14/2022			09/16/2022 12:40	Ping Hua	2356365
	09/14/2022			09/19/2022 12:51	Ping Hua	2356360
	09/14/2022			09/19/2022 13:07	Ping Hua	2356361
EPA 351.2 Rev. 2.0	09/14/2022	09/20/2022 11:51	Alexandra J Mattheus	09/21/2022 10:11	Alexandra J Mattheus	2356360
	09/14/2022	09/20/2022 11:51	Alexandra J Mattheus	09/21/2022 10:12	Alexandra J Mattheus	2356365
	09/14/2022	09/20/2022 11:51	Alexandra J Mattheus	09/21/2022 11:08	Alexandra J Mattheus	2356361
EPA 353.2 Rev. 2.0	09/14/2022			09/23/2022 13:19	Judith K. Clark	2356360
	09/14/2022			09/23/2022 13:20	Judith K. Clark	2356361
	09/14/2022			09/23/2022 13:21	Judith K. Clark	2356365
EPA 365.1 Rev. 2.0	09/14/2022	09/16/2022 15:34	Adam P Silver	09/19/2022 14:40	James L Waggerby	2356361
	09/14/2022	09/16/2022 15:34	Adam P Silver	09/19/2022 14:41	James L Waggerby	2356365
	09/14/2022	09/16/2022 15:34	Adam P Silver	09/20/2022 14:50	Simonne.V. Calhoun	2356360
EPA 365.1 Rev. 2.0 dissolved	09/14/2022			09/14/2022 15:29	Chandler E Cox	2356362
	09/14/2022			09/15/2022 09:57	Chandler E Cox	2356363
	09/14/2022			09/15/2022 09:58	Chandler E Cox	2356366
SM 2320 B-2011	09/14/2022			09/20/2022 23:10	Dale L. Simmons	2356358
	09/14/2022			09/20/2022 23:21	Dale L. Simmons	2356359
	09/14/2022			09/20/2022 23:34	Dale L. Simmons	2356364
SM 2540 C-2011	09/14/2022			09/16/2022 15:56	Yijie Li	2356358, 2356359, 2356364
SM 2540 D-2011	09/14/2022			09/16/2022 15:56	Yijie Li	2356358, 2356359, 2356364
SM 4500-F- C-2011	09/14/2022			09/20/2022 23:10	Dale L. Simmons	2356358
	09/14/2022			09/20/2022 23:21	Dale L. Simmons	2356359
	09/14/2022			09/20/2022 23:34	Dale L. Simmons	2356364
SM 5310 B-2011	09/14/2022			09/16/2022 20:16	Khloe J Berg	2356360
	09/14/2022			09/16/2022 20:30	Khloe J Berg	2356361
	09/14/2022			09/16/2022 20:46	Khloe J Berg	2356365