Chemical Analysis Report

SE-DIST-2022-01-25-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Wellington North**
Request ID: **RQ-2022-01-24-30**
Customer: **SE-DIST**
Project ID: **SMP**

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

Date Certified: 11-FEB-2022 09:19

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: ACME (North Sector) East Pond **Collection Date/Time: 01/24/2022 10:15**

Field ID: G3SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301354	DEP SOP: NU-094-1	Color (true)**	34	A	PCU	P408922	
	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P408926	
	EPA 300.0 Rev. 2.1	Chloride	72		mg Cl/L	P409286	
		Sulfate	29		mg SO4/L	P409289	
	SM 2320 B-2011	Total Alkalinity	197		mg CaCO3/L	P409054	
	SM 2540 C-2011	TDS	358		mg/L	P409500	
	SM 2540 D-2011	TSS	4	I	mg/L	P409492	
	SM 4500 F-C-2011	Fluoride	0.14		mg F/L	P409436	
2301357	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P409349	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P409135	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P409061	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P408939	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P409215	
2301360	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P408919	

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: Lake Wellington **Collection Date/Time: 01/24/2022 10:55**

Field ID: G3SE0039 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301355	DEP SOP: NU-094-1	Color (true)**	35		PCU	P408922	
	EPA 180.1 Rev. 2.0	Turbidity	2.7	A	NTU	P408926	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P409286	
		Sulfate	31		mg SO4/L	P409289	
	SM 2320 B-2011	Total Alkalinity	205		mg CaCO3/L	P409054	
	SM 2540 C-2011	TDS	384		mg/L	P409500	
	SM 2540 D-2011	TSS	2	I	mg/L	P409492	
	SM 4500 F-C-2011	Fluoride	0.15		mg F/L	P409057	
2301358	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P409349	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P409135	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P409061	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P408939	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P409215	
2301361	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P408919	

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: ACME (North Sector) West Pond **Collection Date/Time: 01/24/2022 11:25**

Field ID: G3SE0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2301356	DEP SOP: NU-094-1	Color (true)**	37		PCU	P408922	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P408926	
	EPA 300.0 Rev. 2.1	Chloride	74		mg Cl/L	P409286	
		Sulfate	26		mg SO4/L	P409289	
	SM 2320 B-2011	Total Alkalinity	190		mg CaCO3/L	P409054	
	SM 2540 C-2011	TDS	374		mg/L	P409500	
	SM 2540 D-2011	TSS	3	I	mg/L	P409492	
	SM 4500 F-C-2011	Fluoride	0.13		mg F/L	P409057	
2301359	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P409349	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P409136	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.053		mg N/L	P409061	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P408939	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P409214	
2301362	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P408919	

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: P408922

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408926

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409286

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409289

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409349

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409135

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409136

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409061

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408939

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408919

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

Reference Method: SM 2320 B-2011
Batch ID: P409054

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

Reference Method: SM 2540 C-2011
Batch ID: P409500

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P409492

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P409057

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P409436

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P409214

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

Reference Method: SM 5310 B-2011
Batch ID: P409215

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: P408922

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409286

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409289

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409349

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409135

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409136

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409061

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408939

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408919

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P409054

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

Reference Method: SM 4500 F-C-2011
Batch ID: P409057

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P409436

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P409214

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.6		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P409215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.3		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301166	Chloride	96.4		P	90 - 110
2301288	Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409289

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301166	Sulfate	94.7		P	90 - 110
2301288	Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301749	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409135

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301347	Kjeldahl Nitrogen	104	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301562	Kjeldahl Nitrogen	98.6	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301291	NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301297	Total-P	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408919

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301360	O-Phosphate-P	99.6	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P409057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301449	Fluoride	99.2	99.2	P/P	92 - 107

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P409436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2302600	Fluoride	99.2	98.5	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P409214

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301038	Organic Carbon	94.6	94.8	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P409215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2301455	Organic Carbon	96.4	96.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P408922

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301354	Color (true)	0.403	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301355	Turbidity	3.38	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301166	Chloride	0.0827	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409289

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301166	Sulfate	0.348	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301749	Ammonia-N	0.729	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301347	Kjeldahl Nitrogen	3.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301562	Kjeldahl Nitrogen	0.174	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301291	NO2NO3-N	0.382	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301297	Total-P	0.357	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301360	O-Phosphate-P	0.999	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P409054

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301449	Total Alkalinity	0.123	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P409500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301299	TDS	5.45	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P409057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301449	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P409436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2302600	Fluoride	0.480	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P409214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301038	Organic Carbon	0.203	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P409215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2301455	Organic Carbon	0.0	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: A110032
Included Lab Sample IDs: 2301360, 2301361, 2301362

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	100	P/P	90 - 110
O-Phosphate-P	99.8	101	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1
Run ID: A110033
Included Lab Sample IDs: 2301354, 2301355, 2301356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A110034
Included Lab Sample IDs: 2301354, 2301355, 2301356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: SM 2320 B-2011
Run ID: A110068
Included Lab Sample IDs: 2301354, 2301355, 2301356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.4	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A110068
Included Lab Sample IDs: 2301355, 2301356

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A110069
Included Lab Sample IDs: 2301357, 2301358, 2301359

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A110109
Included Lab Sample IDs: 2301357, 2301358, 2301359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	99.5	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A110130
Included Lab Sample IDs: 2301357, 2301358, 2301359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	97.7	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-2011
Run ID: A110130
Included Lab Sample IDs: 2301357, 2301358, 2301359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.7	98.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A110154
Included Lab Sample IDs: 2301354, 2301355, 2301356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.9	P/P	90 - 110
Sulfate	99.3	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A110182
Included Lab Sample IDs: 2301357, 2301358, 2301359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A110188
Included Lab Sample IDs: 2301357, 2301358, 2301359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	94.7	P/P	90 - 110
Kjeldahl Nitrogen	93.7	94.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A110225
Included Lab Sample IDs: 2301354

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	100	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)	98.7				0.403	
EPA 180.1 Rev. 2.0	Turbidity					3.38	
EPA 300.0 Rev. 2.1	Chloride	99.3	96.4	98.6		0.0827	
	Sulfate	97.7	94.7	97.2		0.348	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	100	101			0.729
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.2	104	108			3.08
	Kjeldahl Nitrogen	107	98.6	98.3			0.174
EPA 353.2 Rev. 2.0	NO2NO3-N	102	100	101			0.382
EPA 365.1 Rev. 2.0	Total-P	103	105	105			0.357
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	99.6	101			0.999
SM 2320 B-2011	Total Alkalinity	101				0.123	
SM 2540 C-2011	TDS					5.45	
SM 4500 F-C-2011	Fluoride	99.3	99.2	99.2			0.0
	Fluoride	97.7	99.2	98.5			0.480
SM 5310 B-2011	Organic Carbon	94.6	94.6	94.8			0.203
	Organic Carbon	96.3	96.4	96.4			0.0

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2301354, 2301355, 2301356
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2301354, 2301355, 2301356
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2301354, 2301355, 2301356
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2301354, 2301355, 2301356
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2301357, 2301358, 2301359
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2301357, 2301358, 2301359
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2301357, 2301358, 2301359
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2301357, 2301358, 2301359
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2301360, 2301361, 2301362
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2301354, 2301355, 2301356
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2301354, 2301355, 2301356
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2301354, 2301355, 2301356
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2301354, 2301355, 2301356
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2301357, 2301358, 2301359

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	01/25/2022			01/25/2022 15:23	Blanca Fach	2301354
	01/25/2022			01/25/2022 15:25	Blanca Fach	2301355
	01/25/2022			01/25/2022 15:26	Blanca Fach	2301356
EPA 180.1 Rev. 2.0	01/25/2022			01/25/2022 15:03	Khloe J Berg	2301354, 2301355, 2301356
EPA 300.0 Rev. 2.1	01/25/2022			02/02/2022 01:07	James L Waggerby	2301354
	01/25/2022			02/02/2022 01:19	James L Waggerby	2301355
	01/25/2022			02/02/2022 01:31	James L Waggerby	2301356
EPA 350.1 Rev. 2.0	01/25/2022			02/02/2022 13:48	Ping Hua	2301357
	01/25/2022			02/02/2022 13:49	Ping Hua	2301358
	01/25/2022			02/02/2022 13:50	Ping Hua	2301359
EPA 351.2 Rev. 2.0	01/25/2022	01/31/2022 10:51	Samantha L Bates	02/02/2022 12:18	Alexandra J Mattheus	2301357
	01/25/2022	01/31/2022 10:51	Samantha L Bates	02/02/2022 12:20	Alexandra J Mattheus	2301358
	01/25/2022	01/31/2022 10:51	Samantha L Bates	02/02/2022 12:46	Alexandra J Mattheus	2301359
EPA 353.2 Rev. 2.0	01/25/2022			01/27/2022 10:16	Beverly Y. Sanders	2301357
	01/25/2022			01/27/2022 10:17	Beverly Y. Sanders	2301358
	01/25/2022			01/27/2022 10:18	Beverly Y. Sanders	2301359
EPA 365.1 Rev. 2.0	01/25/2022	01/26/2022 17:15	Simonne.V. Calhoun	01/28/2022 15:56	Shengyu Ding	2301357
	01/25/2022	01/26/2022 17:15	Simonne.V. Calhoun	01/28/2022 15:57	Shengyu Ding	2301358
	01/25/2022	01/26/2022 17:15	Simonne.V. Calhoun	01/28/2022 15:58	Shengyu Ding	2301359
EPA 365.1 Rev. 2.0 dissolved	01/25/2022			01/25/2022 14:42	James L Waggerby	2301360
	01/25/2022			01/25/2022 14:52	James L Waggerby	2301361
	01/25/2022			01/25/2022 14:53	James L Waggerby	2301362
SM 2320 B-2011	01/25/2022			01/27/2022 06:35	Dale L. Simmons	2301354
	01/25/2022			01/27/2022 06:49	Dale L. Simmons	2301355
	01/25/2022			01/27/2022 07:03	Dale L. Simmons	2301356
SM 2540 C-2011	01/25/2022			01/28/2022 14:02	Yijie Li	2301354, 2301355, 2301356
SM 2540 D-2011	01/25/2022			01/28/2022 14:02	Yijie Li	2301354, 2301355, 2301356
SM 4500 F-C-2011	01/25/2022			01/27/2022 06:49	Dale L. Simmons	2301355
	01/25/2022			01/27/2022 07:03	Dale L. Simmons	2301356
	01/25/2022			02/04/2022 02:27	Dale L. Simmons	2301354
SM 5310 B-2011	01/25/2022			01/28/2022 22:01	Nathaniel J Jones	2301359
	01/25/2022			01/29/2022 04:52	Nathaniel J Jones	2301357
	01/25/2022			01/29/2022 05:02	Nathaniel J Jones	2301358