Chemical Analysis Report

NW-DIST-2016-03-15-01

Florida Department of Environmental Protection
Central Laboratory
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DOH Accreditation E31780

Event Description: **TMDL Bioassessment**
Request ID: **RQ-2016-02-01-57**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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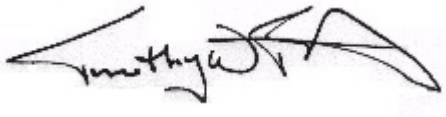
Date Certified: 04-APR-2016 14:31



Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: BEECH TREE CREEK UNNAMED RD **Collection Date/Time: 03/14/2016 11:40**

Field ID: G4NW0330 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779618	EPA 180.1 Rev. 2.0	Turbidity	8.6	A	NTU	P300400	
	EPA 300.0 Rev. 2.1	Chloride	2.2		mg Cl/L	P300558	
		Sulfate	0.81		mg SO4/L	P300560	
	SM 2120 B	Color (true)	45		PCU	P300365	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P300586	
	SM 2540 C-97	TDS	344		mg/L	P301125	
	SM 2540 D-97	TSS	17		mg/L	P300900	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P300589	
1779620	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P300854	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.11	I	mg N/L	P300746	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P300710	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P300700	
	SM 5310 B-00	Organic Carbon	2.8		mg C/L	P300651	
1779622	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P300389	

Ref. Method and Comment:
SM 2540 C-97: The result was confirmed on 03/25/2016.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: POND CREEK @ CR393 **Collection Date/Time: 03/14/2016 14:00**

Field ID: G4NW0195 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779619	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P300400	
	EPA 300.0 Rev. 2.1	Chloride	4.2		mg Cl/L	P300558	
		Sulfate	0.96		mg SO4/L	P300560	
	SM 2120 B	Color (true)	60	A	PCU	P300365	
	SM 2320 B-97	Total Alkalinity	7.6		mg CaCO3/L	P300586	
	SM 2540 C-97	TDS	31		mg/L	P301125	
	SM 2540 D-97	TSS	6	I	mg/L	P300900	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P300589	
1779621	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P300854	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P300746	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P300705	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P300700	
	SM 5310 B-00	Organic Carbon	4.1		mg C/L	P300651	
1779623	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P300389	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300400

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300400

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300558

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300560

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300854

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300746

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300705

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300710

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300700

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300389

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2120 B
Batch ID: P300365

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P300586

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

Reference Method: SM 2540 C-97
Batch ID: P301125

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P300900

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P300651

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300558

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300560

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300854

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300854

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300705

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300710

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300700

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300389

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

Reference Method: SM 2320 B-97
Batch ID: P300586

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	94 - 108

Reference Method: SM 5310 B-00
Batch ID: P300651

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: P300558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779587	Chloride	104		P	90 - 110
1779659	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779587	Sulfate	101		P	90 - 110
1779659	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300854

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779620	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779620	Kjeldahl Nitrogen	97.3	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779646	NO2NO3-N	99.1	98.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779560	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300700

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779594	Total-P	96.0	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779622	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779588	Fluoride	100	98.5	P/P	94 - 107

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P300651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779213	Organic Carbon	99.0		P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779618	Turbidity	1.40	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779587	Chloride	0.0664	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779587	Sulfate	1.80	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300854

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779620	Ammonia-N	0.798	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779620	Kjeldahl Nitrogen	3.69	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779646	NO2NO3-N	0.990	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300710

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779560	NO2NO3-N	1.53	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300700

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779594	Total-P	3.92	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300389

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779622	O-Phosphate-P	0.786	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P300365

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779619	Color (true)	3.76	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P300586

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779588	Total Alkalinity	0.451	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P301125

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779589	TDS	3.97	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779588	Fluoride	1.41	Spike	P	0 - 3.7

Reference Method: SM 5310 B-00
Batch ID: P300651

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779213	Organic Carbon	0.739	Spike	P	0 - 20

Quality Assurance Report
Precision

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A68225
Included Lab Sample IDs: 1779618, 1779619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	99.8	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A68233
Included Lab Sample IDs: 1779622, 1779623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	99.0	P/P	90 - 110
O-Phosphate-P	99.2	98.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68237
Included Lab Sample IDs: 1779618, 1779619

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A68261
Included Lab Sample IDs: 1779618, 1779619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	100	P/P	90 - 110
Sulfate	98.9	96.2	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A68295
Included Lab Sample IDs: 1779618, 1779619

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

Reference Method: SM 4500 F-C-97
Run ID: A68295
Included Lab Sample IDs: 1779618, 1779619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A68315
Included Lab Sample IDs: 1779620, 1779621

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-00
Run ID: A68315
Included Lab Sample IDs: 1779620, 1779621

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A68335
Included Lab Sample IDs: 1779620, 1779621

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A68389
Included Lab Sample IDs: 1779620, 1779621

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A68406
Included Lab Sample IDs: 1779620, 1779621

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A68418
Included Lab Sample IDs: 1779620, 1779621

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.0	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
EPA 180.1 Rev. 2.0	Turbidity					1.40	
EPA 300.0 Rev. 2.1	Chloride	104	104	103		0.0664	
	Sulfate	100	101	101		1.80	
EPA 350.1 Rev. 2.0	Ammonia-N	99.3	103	103			0.798
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.2	97.3	101			3.69
EPA 353.2 Rev. 2.0	NO2NO3-N	103	99.1	98.1			0.990
	NO2NO3-N	104	102	104			1.53
EPA 365.1 Rev. 2.0	Total-P	101	96.0	101			3.92
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	101	102			0.786

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
SM 2120 B	Color (true)					3.76	
SM 2320 B-97	Total Alkalinity	103				0.451	
SM 2540 C-97	TDS					3.97	
SM 4500 F-C-97	Fluoride	99.9	100	98.5			1.41
SM 5310 B-00	Organic Carbon	95.7	99.0				0.739

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1779618, 1779619
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1779618, 1779619
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1779618, 1779619
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1779620, 1779621
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1779620, 1779621
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1779620, 1779621
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1779620, 1779621
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1779622, 1779623
SM 2120 B / E31780	True Color measured at 450 nm	1779618, 1779619
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1779618, 1779619
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1779618, 1779619
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1779618, 1779619
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1779618, 1779619
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1779620, 1779621

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/15/2016			03/15/2016 17:40	Ping Hua	1779618, 1779619
EPA 300.0 Rev. 2.1	03/15/2016			03/16/2016	Ping Hua	1779618, 1779619
EPA 350.1 Rev. 2.0	03/15/2016			03/22/2016	Diana M. Turner	1779620, 1779621
EPA 351.2 Rev. 2.0	03/15/2016	03/22/2016	Sofia Elnemr	03/23/2016	Rochelle Y Jackson	1779620, 1779621
EPA 353.2 Rev. 2.0	03/15/2016			03/18/2016	Diana M. Turner	1779620, 1779621
EPA 365.1 Rev. 2.0	03/15/2016	03/21/2016	Christopher Armour	03/23/2016	Lipi Saha	1779620, 1779621
EPA 365.1 Rev. 2.0 dissolved	03/15/2016			03/15/2016 14:41	Julia Storbeck	1779622
	03/15/2016			03/15/2016 15:24	Julia Storbeck	1779623
SM 2120 B	03/15/2016			03/15/2016 13:25	Rochelle Y Jackson	1779618
	03/15/2016			03/15/2016 13:26	Rochelle Y Jackson	1779619
SM 2320 B-97	03/15/2016			03/16/2016	Dale L. Simmons	1779618, 1779619
SM 2540 C-97	03/15/2016			03/18/2016	Yijie Li	1779618, 1779619
SM 2540 D-97	03/15/2016			03/18/2016	Yijie Li	1779618, 1779619
SM 4500 F-C-97	03/15/2016			03/16/2016	Dale L. Simmons	1779618, 1779619
SM 5310 B-00	03/15/2016			03/18/2016	Sofia Elnemr	1779620, 1779621