Chemical Analysis Report

CEN-DIST-2018-07-25-03

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

Event Description: **Wolf Crk / Crabgrass Crk**
Request ID: **RQ-2018-07-23-37**
Customer: **CEN-DIST**
Project ID: **SMP**

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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: Wolf Creek @ Deer Park Rd (3075) **Collection Date/Time: 07/24/2018 09:43**

Field ID: G3CE0007 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2010735	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P349131	
	EPA 300.0 Rev. 2.1	Chloride	8.5		mg Cl/L	P349411	
		Sulfate	2.3		mg SO4/L	P349413	
	SM 2120 B	Color (true)	310		PCU	P349166	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P349353	
	SM 2540 C-97	TDS	96		mg/L	P349674	
	SM 2540 D-97	TSS	3	I	mg/L	P349367	
	SM 4500 F-C-97	Fluoride	0.040	I	mg F/L	P349357	
2010736	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P349522	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P349386	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.060		mg N/L	P349333	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P349385	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P349457	
2010737	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.16		mg P/L	P349143	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Crabgrass Creek @ 250m south of Highway 192 Bridge (3073) **Collection Date/Time: 07/24/2018 10:18**

Field ID: G3CE0008 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2010738	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P349131	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P349411	
		Sulfate	1.3		mg SO4/L	P349413	
	SM 2120 B	Color (true)	450		PCU	P349166	
	SM 2320 B-97	Total Alkalinity	15		mg CaCO3/L	P349353	
	SM 2540 C-97	TDS	121		mg/L	P349674	
	SM 2540 D-97	TSS	3	I	mg/L	P349367	
	SM 4500 F-C-97	Fluoride	0.048	I	mg F/L	P349357	
2010739	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P349523	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P349386	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P349334	
	EPA 365.1 Rev. 2.0	Total-P	0.29		mg P/L	P349385	
	SM 5310 B-00	Organic Carbon	37		mg C/L	P349733	
2010740	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.24		mg P/L	P349143	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P349131

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349411

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349413

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349522

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349523

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349333

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349334

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349385

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: P349143

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

Reference Method: SM 2120 B
Batch ID: P349166

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P349353

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

Reference Method: SM 2540 C-97
Batch ID: P349674

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P349367

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P349357

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P349457

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

Reference Method: SM 5310 B-00
Batch ID: P349733

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: P349411

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349413

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349522

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349523

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349333

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349334

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: P349385

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349143

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P349166

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P349353

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P349357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P349457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P349733

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.1		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010616	Chloride	109		P	90 - 110
2010787	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010616	Sulfate	108		P	90 - 110
2010787	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010869	Ammonia-N	105	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010789	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010791	Kjeldahl Nitrogen	101	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010682	NO2NO3-N	99.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010762	NO2NO3-N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010791	Total-P	90.8	92.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010792	O-Phosphate-P	98.4	97.8	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P349357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010787	Fluoride	101	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P349457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2010631	Organic Carbon	94.6	92.2	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P349733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2012158	Organic Carbon	98.3	96.8	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P349131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010624	Turbidity	6.56	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010616	Chloride	0.338	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P349413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010616	Sulfate	0.344	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010869	Ammonia-N	1.01	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P349523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010789	Ammonia-N	0.918	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P349386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010791	Kjeldahl Nitrogen	2.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010682	NO2NO3-N	0.437	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P349334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010762	NO2NO3-N	0.204	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P349385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010791	Total-P	2.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P349143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010792	O-Phosphate-P	0.445	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P349166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010615	Color (true)	0.931	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P349353

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010787	Total Alkalinity	0.845	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P349674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010624	TDS	3.50	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P349357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010787	Fluoride	0.511	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P349457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2010631	Organic Carbon	1.58	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P349733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2012158	Organic Carbon	1.22	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: EPA 180.1 Rev. 2.0
Run ID: A85472
Included Lab Sample IDs: 2010735, 2010738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A85473
Included Lab Sample IDs: 2010737, 2010740

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	97.0	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A85480
Included Lab Sample IDs: 2010735, 2010738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	105	P/P	90 - 115
Color (true)	105	106	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A85538
Included Lab Sample IDs: 2010736, 2010739

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

Reference Method: SM 2320 B-97
Run ID: A85546
Included Lab Sample IDs: 2010735, 2010738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.5	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A85546
Included Lab Sample IDs: 2010735, 2010738

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A85560
Included Lab Sample IDs: 2010735, 2010738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	105	106	P/P	90 - 110
Sulfate	105	108	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A85574
Included Lab Sample IDs: 2010736, 2010739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.6	98.6	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A85590
Included Lab Sample IDs: 2010736

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	97.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A85615
Included Lab Sample IDs: 2010736, 2010739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A85621
Included Lab Sample IDs: 2010736, 2010739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	101	P/P	90 - 110
Ammonia-N	100	102	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A85729
Included Lab Sample IDs: 2010739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	99.2	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					6.56	
EPA 300.0 Rev. 2.1	Chloride	105	109	103		0.338	
	Sulfate	105	108	101		0.344	
EPA 350.1 Rev. 2.0	Ammonia-N	102	105	104			1.01
	Ammonia-N	101	101	103			0.918
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	101	98.6			2.06
EPA 353.2 Rev. 2.0	NO2NO3-N	102	99.8				0.437
	NO2NO3-N	102	100				0.204
EPA 365.1 Rev. 2.0	Total-P	95.2	90.8	92.9			2.16
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	98.4	97.8			0.445
SM 2120 B	Color (true)	103				0.931	
SM 2320 B-97	Total Alkalinity	103				0.845	
SM 2540 C-97	TDS					3.50	
SM 4500 F-C-97	Fluoride	97.4	101	100			0.511
SM 5310 B-00	Organic Carbon	92.8	94.6	92.2			1.58
	Organic Carbon	96.1	98.3	96.8			1.22

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2010735, 2010738
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2010735, 2010738
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2010735, 2010738
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2010736, 2010739
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2010736, 2010739
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2010736, 2010739
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2010736, 2010739
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2010737, 2010740
SM 2120 B / E31780	True Color measured at 450 nm	2010735, 2010738
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2010735, 2010738
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2010735, 2010738
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2010735, 2010738
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2010735, 2010738
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2010736, 2010739

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	07/25/2018			07/25/2018 16:44	William L. Brown IV	2010735, 2010738
EPA 300.0 Rev. 2.1	07/25/2018			07/30/2018 21:45	Lipi Saha	2010735
	07/25/2018			07/30/2018 21:57	Lipi Saha	2010738
EPA 350.1 Rev. 2.0	07/25/2018			08/01/2018 11:52	Ping Hua	2010736
	07/25/2018			08/01/2018 12:22	Ping Hua	2010739
EPA 351.2 Rev. 2.0	07/25/2018	07/30/2018 10:15	Adrian Shelby	08/01/2018 13:32	Joseph Suarez	2010736
	07/25/2018	07/30/2018 10:15	Adrian Shelby	08/01/2018 13:34	Joseph Suarez	2010739
EPA 353.2 Rev. 2.0	07/25/2018			07/27/2018 13:44	Lauren Bottorf	2010736
	07/25/2018			07/27/2018 13:57	Lauren Bottorf	2010739
EPA 365.1 Rev. 2.0	07/25/2018	07/30/2018 11:20	Sima Feizi	07/31/2018 09:46	Beverly Y. Sanders	2010736
	07/25/2018	07/30/2018 11:20	Sima Feizi	07/31/2018 09:47	Beverly Y. Sanders	2010739
EPA 365.1 Rev. 2.0 dissolved	07/25/2018			07/25/2018 17:24	Julia Storbeck	2010737
	07/25/2018			07/25/2018 17:25	Julia Storbeck	2010740
SM 2120 B	07/25/2018			07/25/2018 17:24	Tanya Welborn	2010735
	07/25/2018			07/25/2018 17:26	Tanya Welborn	2010738
SM 2320 B-97	07/25/2018			07/27/2018 03:32	Dale L. Simmons	2010735
	07/25/2018			07/27/2018 03:42	Dale L. Simmons	2010738
SM 2540 C-97	07/25/2018			07/28/2018 20:08	Yijie Li	2010735, 2010738
SM 2540 D-97	07/25/2018			07/28/2018 23:02	Yijie Li	2010735, 2010738
SM 4500 F-C-97	07/25/2018			07/27/2018 03:32	Dale L. Simmons	2010735
	07/25/2018			07/27/2018 03:42	Dale L. Simmons	2010738
SM 5310 B-00	07/25/2018			07/30/2018 20:12	Megan Treadwell	2010736
	07/25/2018			08/06/2018 20:51	Megan Treadwell	2010739