

Chemical Analysis Report

CEN-DIST-2018-12-04-02

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

Event Description: **Little / Wolf / Crab**
Request ID: **RQ-2018-12-03-50**
Customer: **CEN-DIST**
Project ID: **SMP**

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Date Certified: 26-DEC-2018 11:07



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.

Collection Date/Time: 12/03/2018 10:08

Field ID: G3CE0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2045840	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P355573	
	EPA 300.0 Rev. 2.1	Chloride	19	A	mg Cl/L	P355799	
		Sulfate	4.8	A	mg SO4/L	P355801	
	SM 2120 B	Color (true)	60	A	PCU	P355541	
	SM 2320 B-97	Total Alkalinity	83		mg CaCO3/L	P355716	
	SM 2540 C-97	TDS	152		mg/L	P355997	
	SM 2540 D-97	TSS	3	I	mg/L	P356009	
	SM 4500 F-C-97	Fluoride	0.050	I	mg F/L	P355719	
2045841	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P355767	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P355808	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P355661	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P355743	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P355794	
2045842	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P355553	

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**

Collection Date/Time: 12/03/2018 11:47

Field ID: G3CE0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2045843	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P355573	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P355799	
		Sulfate	1.2		mg SO4/L	P355801	
	SM 2120 B	Color (true)	53		PCU	P355541	
	SM 2320 B-97	Total Alkalinity	129		mg CaCO3/L	P355716	
	SM 2540 C-97	TDS	178		mg/L	P355997	
	SM 2540 D-97	TSS	3	I	mg/L	P356009	
	SM 4500 F-C-97	Fluoride	0.063	I	mg F/L	P355719	
2045844	EPA 350.1 Rev. 2.0	Ammonia-N	0.050		mg N/L	P355767	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P356220	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P355661	
	EPA 365.1 Rev. 2.0	Total-P	0.090		mg P/L	P355743	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P355794	
2045845	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.070		mg P/L	P355553	

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: P355573

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355799

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355801

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355767

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355808

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356220

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355661

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355743

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355553

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: P355541

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P355716

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

Reference Method: SM 2540 C-97
Batch ID: P355997

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P356009

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P355719

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P355794

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: P355799

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355801

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355767

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: P355808

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356220

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355661

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355743

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355553

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

Reference Method: SM 2120 B
Batch ID: P355541

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	105		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P355716

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P355719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P355794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355799

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045840	Chloride	99.6		P	90 - 110
2045843	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045840	Sulfate	97.9		P	90 - 110
2045843	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045913	Ammonia-N	99.4	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045841	Kjeldahl Nitrogen	90.6	92.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2048197	Kjeldahl Nitrogen	94.7	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045646	NO2NO3-N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045646	Total-P	100	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045842	O-Phosphate-P	93.0	94.3	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P355719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045910	Fluoride	99.2	99.8	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P355794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2045586	Organic Carbon	98.5	97.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045908	Turbidity	5.44	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045840	Chloride	1.29	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045840	Sulfate	1.29	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045913	Ammonia-N	0.468	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045841	Kjeldahl Nitrogen	1.29	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P356220

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2048197	Kjeldahl Nitrogen	0.716	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045646	NO2NO3-N	0.651	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045646	Total-P	1.32	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P355553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045842	O-Phosphate-P	1.03	Spike	P	0 - 20

Reference Method: SM 2120 B
 Batch ID: P355541

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045840	Color (true)	2.26	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P355716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045910	Total Alkalinity	0.529	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P355997

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045645	TDS	4.69	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P355719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045910	Fluoride	0.463	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P355794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2045586	Organic Carbon	0.655	Spike	P	0 - 20

* 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: A88127

Included Lab Sample IDs: 2045840, 2045843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	104	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A88131

Included Lab Sample IDs: 2045842, 2045845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.5	P/P	90 - 110
O-Phosphate-P	99.5	99.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A88139

Included Lab Sample IDs: 2045840, 2045843

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88169

Included Lab Sample IDs: 2045841, 2045844

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A88194

Included Lab Sample IDs: 2045840, 2045843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.6	101	P/P	90 - 110
Sulfate	98.8	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A88201

Included Lab Sample IDs: 2045840, 2045843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.8	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A88201

Included Lab Sample IDs: 2045840, 2045843

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88216

Included Lab Sample IDs: 2045841, 2045844

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88216

Included Lab Sample IDs: 2045841, 2045844

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

Reference Method: SM 5310 B-00

Run ID: A88225

Included Lab Sample IDs: 2045841, 2045844

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.4	98.8	P/P	90 - 110
Organic Carbon	98.8	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88230

Included Lab Sample IDs: 2045841, 2045844

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A88273

Included Lab Sample IDs: 2045841

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.7	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A88412

Included Lab Sample IDs: 2045844

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	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	MS
EPA 180.1 Rev. 2.0	Turbidity				5.44	
EPA 300.0 Rev. 2.1	Chloride	99.1	99.6	97.9	1.29	
	Sulfate	98.6	97.9	99.1	1.29	
EPA 350.1 Rev. 2.0	Ammonia-N	101	99.4	98.9		0.468
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.7	90.6	92.5		1.29
	Kjeldahl Nitrogen	102	94.7	95.8		0.716
EPA 353.2 Rev. 2.0	NO2NO3-N	100	100			0.651
EPA 365.1 Rev. 2.0	Total-P	106	100	98.6		1.32
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.9	93.0	94.3		1.03
SM 2120 B	Color (true)	105			2.26	
SM 2320 B-97	Total Alkalinity	100			0.529	
SM 2540 C-97	TDS				4.69	
SM 4500 F-C-97	Fluoride	99.8	99.2	99.8		0.463
SM 5310 B-00	Organic Carbon	99.8	98.5	97.6		0.655

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2045840, 2045843
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2045840, 2045843
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2045840, 2045843
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2045841, 2045844
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2045841, 2045844
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2045841, 2045844
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2045841, 2045844
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2045842, 2045845
SM 2120 B / E31780	True Color measured at 450 nm	2045840, 2045843
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2045840, 2045843
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2045840, 2045843
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2045840, 2045843
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2045840, 2045843
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2045841, 2045844

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	12/04/2018			12/04/2018 17:10	Megan Treadwell	2045840, 2045843
EPA 300.0 Rev. 2.1	12/04/2018			12/06/2018 20:40	Lipi Saha	2045840
	12/04/2018			12/06/2018 21:04	Lipi Saha	2045843
EPA 350.1 Rev. 2.0	12/04/2018			12/06/2018 11:18	Ping Hua	2045841
	12/04/2018			12/06/2018 11:26	Ping Hua	2045844
EPA 351.2 Rev. 2.0	12/04/2018	12/07/2018 11:10	Adrian Shelby	12/11/2018 12:39	Joseph Suarez	2045841
	12/04/2018	12/17/2018 14:00	Adrian Shelby	12/18/2018 10:47	Chelsea Hernandez	2045844
EPA 353.2 Rev. 2.0	12/04/2018			12/05/2018 13:38	Lauren Bottorf	2045841
	12/04/2018			12/05/2018 13:39	Lauren Bottorf	2045844
EPA 365.1 Rev. 2.0	12/04/2018	12/06/2018 12:30	Sima Feizi	12/07/2018 10:23	Beverly Y. Sanders	2045841
	12/04/2018	12/06/2018 12:30	Sima Feizi	12/07/2018 10:25	Beverly Y. Sanders	2045844
EPA 365.1 Rev. 2.0 dissolved	12/04/2018			12/04/2018 14:49	Jhamieka S. Greenwood	2045842
	12/04/2018			12/04/2018 15:08	Jhamieka S. Greenwood	2045845
SM 2120 B	12/04/2018			12/04/2018 14:54	Chelsea Hernandez	2045840
	12/04/2018			12/04/2018 14:55	Chelsea Hernandez	2045843
SM 2320 B-97	12/04/2018			12/06/2018 05:35	Dale L. Simmons	2045840
	12/04/2018			12/06/2018 05:46	Dale L. Simmons	2045843
SM 2540 C-97	12/04/2018			12/06/2018 14:21	Yijie Li	2045840, 2045843
SM 2540 D-97	12/04/2018			12/06/2018 14:08	Yijie Li	2045840, 2045843
SM 4500 F-C-97	12/04/2018			12/06/2018 05:35	Dale L. Simmons	2045840
	12/04/2018			12/06/2018 05:46	Dale L. Simmons	2045843
SM 5310 B-00	12/04/2018			12/06/2018 04:50	Megan Treadwell	2045841
	12/04/2018			12/06/2018 05:27	Megan Treadwell	2045844