

Chemical Analysis Report

SO-DIST-2018-09-11-02

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

Event Description: **Caloosa Creeks**
Request ID: **RQ-2018-09-03-56**
Customer: **SO-DIST**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
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Fort Myers, FL 33901-3381
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Certified by: Colin Wright, Program Administrator

Date Certified: 20-SEP-2018 09:11

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored rectangular background.

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: Orange River

Collection Date/Time: 09/10/2018 09:00

Field ID: G3SD0128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023610	SM 2120 B	Color (true)	58		PCU	P351432	
	SM 2320 B-97	Total Alkalinity	221		mg CaCO3/L	P351705	
	SM 2540 D-97	TSS	4	I	mg/L	P351732	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P351708	
2023613	SM 5310 B-00 dissolved	Organic Carbon	12		mg C/L	P351875	
2023616	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P351609	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P351567	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P351588	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P351501	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P351875	
2023619	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P351443	

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: Telegraph Creek

Collection Date/Time: 09/10/2018 09:45

Field ID: G3SD0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023611	SM 2120 B	Color (true)	250		PCU	P351432	
	SM 2320 B-97	Total Alkalinity	51		mg CaCO3/L	P351705	
	SM 2540 D-97	TSS	3	I	mg/L	P351732	
	SM 4500 F-C-97	Fluoride	0.085	I	mg F/L	P351708	
2023614	SM 5310 B-00 dissolved	Organic Carbon	23		mg C/L	P351875	
2023617	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P351609	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P351569	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P351588	
	EPA 365.1 Rev. 2.0	Total-P	0.099		mg P/L	P351501	
	SM 5310 B-00	Organic Carbon	23		mg C/L	P351875	
2023620	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.073		mg P/L	P351443	

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: Hancock Creek

Collection Date/Time: 09/10/2018 10:30

Field ID: G3SD0130

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2023612	SM 2120 B	Color (true)	96		PCU	P351432	
	SM 2320 B-97	Total Alkalinity	194		mg CaCO3/L	P351705	
	SM 2540 D-97	TSS	4	I	mg/L	P351732	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P351708	
2023615	SM 5310 B-00 dissolved	Organic Carbon	15		mg C/L	P351875	
2023618	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P351609	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P351569	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.079		mg N/L	P351589	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P351501	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P351875	

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 350.1 Rev. 2.0
Batch ID: P351609

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351567

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351569

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351588

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351589

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351501

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351443

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

Reference Method: SM 2120 B
Batch ID: P351432

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P351705

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P351732

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P351875

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

Reference Method: SM 5310 B-00 dissolved
Batch ID: P351875

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351609

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351567

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351569

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351588

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: P351589

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: P351501

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351443

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

Reference Method: SM 2120 B
Batch ID: P351432

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

Reference Method: SM 2320 B-97
Batch ID: P351705

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P351875

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P351875

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351609

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023616	Ammonia-N	94.2	95.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023580	Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351569

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023694	Kjeldahl Nitrogen	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023573	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023618	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351501

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023616	Total-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023581	O-Phosphate-P	96.8	96.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2024161	Fluoride	96.3	96.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P351875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023178	Organic Carbon	100		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00 dissolved
Batch ID: P351875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023178	Organic Carbon	100		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P351609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023616	Ammonia-N	0.986	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023580	Kjeldahl Nitrogen	0.709	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P351569

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023694	Kjeldahl Nitrogen	0.561	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023573	NO2NO3-N	0.287	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P351589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023618	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P351501

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023616	Total-P	0.0686	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P351443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023581	O-Phosphate-P	0.172	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P351432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023579	Color (true)	4.50	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P351705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024161	Total Alkalinity	1.46	Sample	P	0 - 1.6

Reference Method: SM 4500 F-C-97
Batch ID: P351708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2024161	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P351875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023178	Organic Carbon	0.433	Spike	P	0 - 20

Reference Method: SM 5310 B-00 dissolved
Batch ID: P351875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2023178	Organic Carbon	0.433	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: A86405

Included Lab Sample IDs: 2023610, 2023611, 2023612

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.6	98.7	P/P	90 - 115
Color (true)	99.7	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A86408

Included Lab Sample IDs: 2023619, 2023620

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86451

Included Lab Sample IDs: 2023617, 2023618

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A86459

Included Lab Sample IDs: 2023616

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A86460

Included Lab Sample IDs: 2023616, 2023617, 2023618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	103	P/P	90 - 110
NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A86462

Included Lab Sample IDs: 2023616, 2023617, 2023618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	96.7	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A86511

Included Lab Sample IDs: 2023610, 2023611, 2023612

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

Reference Method: SM 4500 F-C-97

Run ID: A86511

Included Lab Sample IDs: 2023610, 2023611, 2023612

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

Reference Method: SM 4500 F-C-97

Run ID: A86511

Included Lab Sample IDs: 2023610, 2023611, 2023612

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86527

Included Lab Sample IDs: 2023617, 2023618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A86532

Included Lab Sample IDs: 2023616

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

Reference Method: SM 5310 B-00

Run ID: A86572

Included Lab Sample IDs: 2023616, 2023617, 2023618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.1	98.8	P/P	90 - 110

Reference Method: SM 5310 B-00 dissolved

Run ID: A86572

Included Lab Sample IDs: 2023613, 2023614, 2023615

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.1	98.8	P/P	90 - 110
Organic Carbon	99.8	99.1	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 350.1 Rev. 2.0	Ammonia-N	98.6	94.2	95.4		0.986
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	103	104		0.709
	Kjeldahl Nitrogen	95.5	100	101		0.561
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	102	102		0.287
	NO ₂ NO ₃ -N	102	102	102		0.0
EPA 365.1 Rev. 2.0	Total-P	99.8	101	101		0.0686
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	96.8	96.6		0.172
SM 2120 B	Color (true)	101			4.50	
SM 2320 B-97	Total Alkalinity	102			1.46	
SM 4500 F-C-97	Fluoride	96.9	96.3	96.3		0.0
SM 5310 B-00	Organic Carbon	97.1	100			0.433
SM 5310 B-00 dissolved	Organic Carbon	97.1	100			0.433

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2023616, 2023617, 2023618
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2023616, 2023617, 2023618
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2023616, 2023617, 2023618
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2023616, 2023617, 2023618
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2023619, 2023620
SM 2120 B / E31780	True Color measured at 450 nm	2023610, 2023611, 2023612
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2023610, 2023611, 2023612
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2023610, 2023611, 2023612
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2023610, 2023611, 2023612
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2023616, 2023617, 2023618
SM 5310 B-00 dissolved / E31780	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2023613, 2023614, 2023615

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	09/11/2018			09/12/2018 14:27	Ping Hua	2023616
	09/11/2018			09/12/2018 14:32	Ping Hua	2023617
	09/11/2018			09/12/2018 14:33	Ping Hua	2023618
EPA 351.2 Rev. 2.0	09/11/2018	09/13/2018 10:50	Adrian Shelby	09/17/2018 11:38	Joseph Suarez	2023617
	09/11/2018	09/13/2018 10:50	Adrian Shelby	09/17/2018 11:40	Joseph Suarez	2023618
	09/11/2018	09/13/2018 10:50	Adrian Shelby	09/17/2018 15:53	Joseph Suarez	2023616
EPA 353.2 Rev. 2.0	09/11/2018			09/13/2018 13:17	Lauren Bottorf	2023616
	09/11/2018			09/13/2018 13:18	Lauren Bottorf	2023617
	09/11/2018			09/13/2018 13:25	Lauren Bottorf	2023618
EPA 365.1 Rev. 2.0	09/11/2018	09/12/2018 12:10	Sima Feizi	09/13/2018 08:34	Beverly Y. Sanders	2023617
	09/11/2018	09/12/2018 12:10	Sima Feizi	09/13/2018 08:35	Beverly Y. Sanders	2023618
	09/11/2018	09/12/2018 12:10	Sima Feizi	09/13/2018 13:14	Beverly Y. Sanders	2023616
EPA 365.1 Rev. 2.0 dissolved	09/11/2018			09/11/2018 14:38	Lipi Saha	2023619
	09/11/2018			09/11/2018 14:39	Lipi Saha	2023620
SM 2120 B	09/11/2018			09/11/2018 15:26	DeAsia Armster	2023610
	09/11/2018			09/11/2018 15:27	DeAsia Armster	2023612
	09/11/2018			09/11/2018 15:47	DeAsia Armster	2023611
SM 2320 B-97	09/11/2018			09/13/2018 20:05	Dale L. Simmons	2023610
	09/11/2018			09/13/2018 20:16	Dale L. Simmons	2023611
	09/11/2018			09/13/2018 20:27	Dale L. Simmons	2023612
SM 2540 D-97	09/11/2018			09/12/2018 15:16	Yijie Li	2023610, 2023611, 2023612
SM 4500 F-C-97	09/11/2018			09/13/2018 20:05	Dale L. Simmons	2023610
	09/11/2018			09/13/2018 20:16	Dale L. Simmons	2023611
	09/11/2018			09/13/2018 20:27	Dale L. Simmons	2023612
SM 5310 B-00	09/11/2018			09/18/2018 01:02	Megan Treadwell	2023616
	09/11/2018			09/18/2018 01:14	Megan Treadwell	2023617
	09/11/2018			09/18/2018 01:26	Megan Treadwell	2023618
SM 5310 B-00 dissolved	09/11/2018			09/18/2018 12:00	Megan Treadwell	2023613
	09/11/2018			09/18/2018 12:13	Megan Treadwell	2023614
	09/11/2018			09/18/2018 12:50	Megan Treadwell	2023615