

Chemical Analysis Report

CEN-DIST-2019-08-15-02

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

Event Description: **Haw / Deep / Lil Haw**
Request ID: **RQ-2019-08-12-43**
Customer: **CEN-DIST**
Project ID: **SMP**

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Date Certified: 05-SEP-2019 11:12



Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Little Haw Creek @ 25m DS of SR40

Collection Date/Time: 08/14/2019 12:08

Field ID: G2CE0128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2112015	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P369130	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P369533	
		Sulfate	0.21	I	mg SO4/L	P369536	
	SM 2120 B	Color (true)	670		PCU	P369149	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P369587	
	SM 2540 C-97	TDS	200		mg/L	P369424	
	SM 2540 D-97	TSS	2	I	mg/L	P369270	
	SM 4500 F-C-97	Fluoride	0.036	I	mg F/L	P369590	
2112017	EPA 350.1 Rev. 2.0	Ammonia-N	0.043		mg N/L	P369694	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P369428	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P369416	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P369311	
	SM 5310 B-00	Organic Carbon	65		mg C/L	P369285	
2112019	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P369133	

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: Deep Creek @ 400m S of SR40

Collection Date/Time: 08/14/2019 12:40

Field ID: G2CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2112016	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P369130	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P369533	
		Sulfate	0.27	I	mg SO4/L	P369536	
	SM 2120 B	Color (true)	1.1E+03		PCU	P369149	
	SM 2320 B-97	Total Alkalinity	4.0		mg CaCO3/L	P369587	
	SM 2540 C-97	TDS	231		mg/L	P369971	
	SM 2540 D-97	TSS	2	U	mg/L	P369270	
	SM 4500 F-C-97	Fluoride	0.054	I	mg F/L	P369590	
2112018	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P369694	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.3		mg N/L	P369428	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P369416	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P369311	
	SM 5310 B-00	Organic Carbon	79		mg C/L	P369285	
2112020	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P369133	

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: P369130

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369533

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369536

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P369694

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369428

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369416

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369311

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369133

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

Reference Method: SM 2120 B
Batch ID: P369149

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P369587

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

Reference Method: SM 2540 C-97
Batch ID: P369424

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P369971

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P369270

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P369590

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P369285

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: P369533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369536

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P369694

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369428

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369311

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369133

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

Reference Method: SM 2120 B
Batch ID: P369149

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

Reference Method: SM 2320 B-97
Batch ID: P369587

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P369590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P369285

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2111865	Chloride	95.6		P	90 - 110
2111936	Chloride	96.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2111865	Sulfate	99.2		P	90 - 110
2111936	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P369694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2111948	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369428

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2112158	Kjeldahl Nitrogen	99.9	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2112017	NO2NO3-N	90.5	92.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2112018	Total-P	105	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2112041	O-Phosphate-P	94.3	96.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P369590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2112156	Fluoride	94.9	96.5	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P369285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2112038	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P369130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112031	Turbidity	6.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2111865	Chloride	0.933	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P369536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2111865	Sulfate	0.712	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P369694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2111948	Ammonia-N	0.628	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P369428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112158	Kjeldahl Nitrogen	1.61	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P369416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112017	NO2NO3-N	1.64	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P369311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112018	Total-P	3.38	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P369133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112041	O-Phosphate-P	2.06	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P369149

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2111760	Color (true)	7.69	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P369587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112156	Total Alkalinity	0.0854	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
 Batch ID: P369424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112031	TDS	7.32	Sample	P	0 - 10

Reference Method: SM 2540 C-97
 Batch ID: P369971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112157	TDS	2.86	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P369590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112156	Fluoride	1.47	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
 Batch ID: P369285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112038	Organic Carbon	0.0744	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: EPA 180.1 Rev. 2.0

Run ID: A93540

Included Lab Sample IDs: 2112015, 2112016

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A93541

Included Lab Sample IDs: 2112019, 2112020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	99.3	P/P	90 - 110
O-Phosphate-P	99.3	99.3	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A93551

Included Lab Sample IDs: 2112015, 2112016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	90 - 115

Reference Method: SM 5310 B-00

Run ID: A93620

Included Lab Sample IDs: 2112017, 2112018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A93679

Included Lab Sample IDs: 2112017, 2112018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	99.2	P/P	90 - 110
Total-P	98.2	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A93684

Included Lab Sample IDs: 2112017, 2112018

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A93717

Included Lab Sample IDs: 2112015, 2112016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.2	97.5	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A93722

Included Lab Sample IDs: 2112017, 2112018

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

Reference Method: SM 2320 B-97

Run ID: A93749

Included Lab Sample IDs: 2112015, 2112016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A93749

Included Lab Sample IDs: 2112015, 2112016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	98.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A93798

Included Lab Sample IDs: 2112017, 2112018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	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		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					6.15	
EPA 300.0 Rev. 2.1	Chloride	96.7	95.6	96.0		0.933	
	Sulfate	100	99.2	100		0.712	
EPA 350.1 Rev. 2.0	Ammonia-N	102	102	103			0.628
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.2	99.9	102			1.61
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	90.5	92.0			1.64
EPA 365.1 Rev. 2.0	Total-P	105	105	109			3.38
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.8	94.3	96.4			2.06
SM 2120 B	Color (true)	98.7				7.69	
SM 2320 B-97	Total Alkalinity	103				0.0854	
SM 2540 C-97	TDS					7.32	
	TDS					2.86	
SM 4500 F-C-97	Fluoride	95.3	94.9	96.5			1.47
SM 5310 B-00	Organic Carbon	101	103				0.0744

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2112015, 2112016
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2112015, 2112016
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2112015, 2112016
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2112017, 2112018
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2112017, 2112018
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2112017, 2112018
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2112017, 2112018
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2112019, 2112020
SM 2120 B / E31780	True Color measured at 450 nm	2112015, 2112016
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2112015, 2112016
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2112015, 2112016
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2112015, 2112016
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2112015, 2112016
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2112017, 2112018

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	08/15/2019			08/15/2019 16:59	Rosalyn Ballman	2112015, 2112016
EPA 300.0 Rev. 2.1	08/15/2019			08/21/2019 23:57	Julia Storbeck	2112015
	08/15/2019			08/22/2019 00:09	Julia Storbeck	2112016
EPA 350.1 Rev. 2.0	08/15/2019			08/26/2019 12:54	Ping Hua	2112017
	08/15/2019			08/26/2019 12:56	Ping Hua	2112018
EPA 351.2 Rev. 2.0	08/15/2019	08/21/2019 13:20	Jhamieka S. Greenwood	08/22/2019 12:17	Joseph Suarez	2112017
	08/15/2019	08/21/2019 13:20	Jhamieka S. Greenwood	08/22/2019 12:19	Joseph Suarez	2112018
EPA 353.2 Rev. 2.0	08/15/2019			08/21/2019 10:22	Beverly Y. Sanders	2112017
	08/15/2019			08/21/2019 10:23	Beverly Y. Sanders	2112018
EPA 365.1 Rev. 2.0	08/15/2019	08/20/2019 12:45	Lipi Saha	08/21/2019 12:37	Lipi Saha	2112018
	08/15/2019	08/20/2019 12:45	Lipi Saha	08/21/2019 12:46	Lipi Saha	2112017
EPA 365.1 Rev. 2.0 dissolved	08/15/2019			08/15/2019 14:47	Jhamieka S. Greenwood	2112019
	08/15/2019			08/15/2019 14:55	Jhamieka S. Greenwood	2112020
SM 2120 B	08/15/2019			08/15/2019 16:37	Madeline Funaro	2112015, 2112016
SM 2320 B-97	08/15/2019			08/23/2019 02:16	Dale L. Simmons	2112015
	08/15/2019			08/23/2019 02:27	Dale L. Simmons	2112016
SM 2540 C-97	08/15/2019			08/16/2019 17:15	Rosalyn Ballman	2112015
	08/15/2019			08/20/2019 16:00	Rosalyn Ballman	2112016
SM 2540 D-97	08/15/2019			08/16/2019 17:15	Rosalyn Ballman	2112015, 2112016
SM 4500 F-C-97	08/15/2019			08/23/2019 02:16	Dale L. Simmons	2112015
	08/15/2019			08/23/2019 02:27	Dale L. Simmons	2112016
SM 5310 B-00	08/15/2019			08/20/2019 00:49	Madeline Funaro	2112017
	08/15/2019			08/20/2019 01:01	Madeline Funaro	2112018