Chemical Analysis Report

TLH-ROC-2017-09-19-01

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

Event Description: **SMP 2016 Freshwater Kit A**
Request ID: **RQ-2017-07-17-36**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
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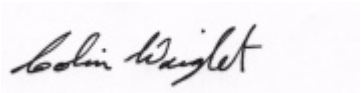
Certified by: Colin Wright, Program Administrator

Date Certified: 05-OCT-2017 09:56



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: TEN MILE POND NORTH **Collection Date/Time: 09/19/2017 10:55**

Field ID: G1TLHR0023-2017-01 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929796	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P331860	
	EPA 300.0 Rev. 2.1	Chloride	2.4		mg Cl/L	P331960	
	SM 2120 B	Color (true)	46	A	PCU	P331850	
	SM 2320 B-97	Total Alkalinity	1.1	I	mg CaCO3/L	P332042	
	SM 2540 C-97	TDS	30		mg/L	P332439	
	SM 2540 D-97	TSS	5	I	mg/L	P332564	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P332044	
1929798	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P332060	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P332039	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332201	
	EPA 365.1 Rev. 2.0	Total-P	0.01		mg P/L	P332141	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P332080	
1929800	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P331979	

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: PIMPLE CREEK @ JULIA ST **Collection Date/Time: 09/19/2017 13:15**

Field ID: G1TLHR0011-2017-4 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929797	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P331860	
	EPA 300.0 Rev. 2.1	Chloride	5.2		mg Cl/L	P331960	
	SM 2120 B	Color (true)	850		PCU	P331850	
	SM 2320 B-97	Total Alkalinity	28		mg CaCO3/L	P332042	
	SM 2540 C-97	TDS	165		mg/L	P332439	
	SM 2540 D-97	TSS	3	I	mg/L	P332564	
	SM 4500 F-C-97	Fluoride	0.059	I	mg F/L	P332044	
1929799	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P332060	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P332283	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332203	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P332141	
	SM 5310 B-00	Organic Carbon	56		mg C/L	P332080	
1929801	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.089		mg P/L	P331979	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P331860

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331960

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332060

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332039

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332283

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332201

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332203

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332141

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331979

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

Reference Method: SM 2120 B
Batch ID: P331850

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P332042

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

Reference Method: SM 2540 C-97
Batch ID: P332439

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P332564

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P332044

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P332080

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: P331960

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	109		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332039

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332283

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332283

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332201

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332203

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332141

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P332042

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P332044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P332080

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.9		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331960

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331960

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929607	Chloride	100		P	90 - 110
1929796	Chloride	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929683	Ammonia-N	105	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332039

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929682	Kjeldahl Nitrogen	109	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929336	NO2NO3-N	105	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929799	NO2NO3-N	96.2	95.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332141

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929812	Total-P	95.6	94.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929819	O-Phosphate-P	95.9	98.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P332044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930126	Fluoride	96.3	99.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P332080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929524	Organic Carbon	98.3	101	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P331860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929606	Turbidity	1.57	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331960

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929607	Chloride	1.41	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929683	Ammonia-N	2.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332039

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929682	Kjeldahl Nitrogen	5.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332283

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930232	Kjeldahl Nitrogen	1.79	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929336	NO2NO3-N	0.281	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929799	NO2NO3-N	0.521	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332141

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929812	Total-P	0.930	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929819	O-Phosphate-P	1.65	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P331850

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929796	Color (true)	0.611	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P332042

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930126	Total Alkalinity	0.143	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P332439

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929809	TDS	6.92	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P332044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930126	Fluoride	2.99	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P332080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929524	Organic Carbon	2.83	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 300.0 Rev. 2.1
Run ID: A78987
Included Lab Sample IDs: 1929796, 1929797

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A79015
Included Lab Sample IDs: 1929796, 1929797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	89.4	104	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A79018
Included Lab Sample IDs: 1929796, 1929797

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: A79053
Included Lab Sample IDs: 1929800, 1929801

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.6	99.0	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A79076
Included Lab Sample IDs: 1929796, 1929797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	98.9	P/P	90 - 110
Total Alkalinity	98.7	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A79076
Included Lab Sample IDs: 1929796, 1929797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110
Fluoride	98.6	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A79083
Included Lab Sample IDs: 1929798, 1929799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	106	P/P	90 - 110
Ammonia-N	106	105	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A79090
Included Lab Sample IDs: 1929798, 1929799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	99.4	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A79133
Included Lab Sample IDs: 1929798

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A79142
Included Lab Sample IDs: 1929798, 1929799

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A79150
Included Lab Sample IDs: 1929799

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A79153
Included Lab Sample IDs: 1929798

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A79199
Included Lab Sample IDs: 1929799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.4	92.7	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					1.57	
EPA 300.0 Rev. 2.1	Chloride	99.3	100	99.1		1.41	
EPA 350.1 Rev. 2.0	Ammonia-N	109	105	103			2.17
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	109	102			5.35
	Kjeldahl Nitrogen	90.6					1.79
EPA 353.2 Rev. 2.0	NO2NO3-N	104	105	104			0.281
	NO2NO3-N	105	96.2	95.7			0.521
EPA 365.1 Rev. 2.0	Total-P	96.2	95.6	94.6			0.930
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	95.9	98.1			1.65
SM 2120 B	Color (true)					0.611	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
SM 2320 B-97	Total Alkalinity	102				0.143	
SM 2540 C-97	TDS					6.92	
SM 4500 F-C-97	Fluoride	96.3	96.3	99.8			2.99
SM 5310 B-00	Organic Carbon	99.9	98.3	101			2.83

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1929796, 1929797
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1929796, 1929797
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1929798, 1929799
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1929798, 1929799
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1929798, 1929799
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1929798, 1929799
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1929800, 1929801
SM 2120 B / E31780	True Color measured at 450 nm	1929796, 1929797
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1929796, 1929797
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1929796, 1929797
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1929796, 1929797
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1929796, 1929797
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1929798, 1929799

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	09/19/2017			09/19/2017 16:12	DeAsia Armster	1929796, 1929797
EPA 300.0 Rev. 2.1	09/19/2017			09/20/2017	Julia Storbeck	1929796
	09/19/2017			09/21/2017	Julia Storbeck	1929797
EPA 350.1 Rev. 2.0	09/19/2017			09/21/2017	Sofia Elnemr	1929798, 1929799
EPA 351.2 Rev. 2.0	09/19/2017	09/22/2017	Adrian Shelby	09/25/2017	Joseph Suarez	1929798
	09/19/2017	09/26/2017	Adrian Shelby	09/27/2017	Joseph Suarez	1929799
EPA 353.2 Rev. 2.0	09/19/2017			09/22/2017	Beverly Y. Sanders	1929798, 1929799
EPA 365.1 Rev. 2.0	09/19/2017	09/25/2017	Sima Feizi	09/26/2017	Lipi Saha	1929798, 1929799
EPA 365.1 Rev. 2.0 dissolved	09/19/2017			09/20/2017 14:30	Megan Treadwell	1929800
	09/19/2017			09/20/2017 14:31	Megan Treadwell	1929801
SM 2120 B	09/19/2017			09/19/2017 16:17	Tanya Welborn	1929796
	09/19/2017			09/19/2017 16:19	Tanya Welborn	1929797
SM 2320 B-97	09/19/2017			09/21/2017	Dale L. Simmons	1929796, 1929797
SM 2540 C-97	09/19/2017			09/25/2017	Yijie Li	1929796, 1929797
SM 2540 D-97	09/19/2017			09/25/2017	Yijie Li	1929796, 1929797
SM 4500 F-C-97	09/19/2017			09/21/2017	Dale L. Simmons	1929796, 1929797
SM 5310 B-00	09/19/2017			09/22/2017	Ping Hua	1929798, 1929799