

Chemical Analysis Report

WQAP-2017-06-29-05

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-2017-05-08-45**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
MS #3560
Tallahassee, FL 32399-2400
Attn: Michael Eckles

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 14-JUL-2017 18:00

A handwritten signature in black ink, appearing to read "Liang Lin", is written on a light-colored, textured 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: Rock Creek @ SR51

Collection Date/Time: 06/29/2017 11:05

Field ID: G1TLHR004-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910285	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P327752	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P328148	
	SM 2120 B	Color (true)	92	A	PCU	P327746	
	SM 2320 B-97	Total Alkalinity	188		mg CaCO3/L	P328061	
	SM 2540 C-97	TDS	250		mg/L	P328163	
	SM 2540 D-97	TSS	2	I	mg/L	P328176	
	SM 4500 F-C-97	Fluoride	0.053	I	mg F/L	P328068	
1910287	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P328046	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P327887	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P327928	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P327965	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P327944	
1910289	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327745	

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: Steinhatchee Spring Vent @ SE Wolf Rd.

Collection Date/Time: 06/29/2017 12:05

Field ID: G1TLHR0066-2017-03

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910286	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P327752	
	EPA 300.0 Rev. 2.1	Chloride	5.6	A	mg Cl/L	P328148	
	SM 2120 B	Color (true)	500		PCU	P327746	
	SM 2320 B-97	Total Alkalinity	77		mg CaCO3/L	P328061	
	SM 2540 C-97	TDS	174		mg/L	P328163	
	SM 2540 D-97	TSS	4	I	mg/L	P328176	
	SM 4500 F-C-97	Fluoride	0.099	I	mg F/L	P328068	
1910288	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P327977	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P327887	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P327928	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P327965	
	SM 5310 B-00	Organic Carbon	40		mg C/L	P327944	
1910290	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P327745	

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: P327752

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: P328148

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327977

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327887

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327928

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327965

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327745

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

Reference Method: SM 2120 B
Batch ID: P327746

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P328061

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P328163

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P328176

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P328068

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P327944

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: P328148

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327977

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

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: P327887

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327928

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327928

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: P327965

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327745

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

Reference Method: SM 2320 B-97
Batch ID: P328061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P328068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.6		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P327944

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910279	Chloride	98.7		P	90 - 110
1910286	Chloride	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327977

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910280	Ammonia-N	97.9	98.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910629	Ammonia-N	97.1	97.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910335	Kjeldahl Nitrogen	96.4	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910280	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910299	Total-P	95.6	94.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910289	O-Phosphate-P	97.2	99.0	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P328068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910183	Fluoride	97.4	98.6	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P327944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1909993	Organic Carbon	89.0	92.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P327752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910182	Turbidity	1.68	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910286	Chloride	0.101	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327977

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910280	Ammonia-N	0.436	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910629	Ammonia-N	0.0200	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910335	Kjeldahl Nitrogen	0.666	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910280	NO2NO3-N	0.291	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910299	Total-P	0.727	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910289	O-Phosphate-P	1.83	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P327746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910285	Color (true)	1.15	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P328061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910183	Total Alkalinity	0.359	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P328163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910185	TDS	3.41	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P328068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910183	Fluoride	0.996	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P327944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1909993	Organic Carbon	3.33	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 365.1 Rev. 2.0 dissolved
Run ID: A77433
Included Lab Sample IDs: 1910289, 1910290

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	97.7	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A77434
Included Lab Sample IDs: 1910285, 1910286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.2		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A77435
Included Lab Sample IDs: 1910285, 1910286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.0	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77519

Included Lab Sample IDs: 1910287, 1910288

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

Reference Method: SM 5310 B-00

Run ID: A77524

Included Lab Sample IDs: 1910287, 1910288

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	97.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77531

Included Lab Sample IDs: 1910288

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A77551

Included Lab Sample IDs: 1910285, 1910286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Chloride	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77552

Included Lab Sample IDs: 1910287

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A77557

Included Lab Sample IDs: 1910285, 1910286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.9	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A77557

Included Lab Sample IDs: 1910285, 1910286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.1	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77568

Included Lab Sample IDs: 1910288

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	97.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77573

Included Lab Sample IDs: 1910287

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77618

Included Lab Sample IDs: 1910287, 1910288

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	99.5	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.68	
EPA 300.0 Rev. 2.1	Chloride	97.1	96.7 98.7		0.101	
EPA 350.1 Rev. 2.0	Ammonia-N	98.1	97.9 98.5			0.436
	Ammonia-N	98.6	97.1 97.1			0.0200
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	110	96.4 97.6			0.666
EPA 353.2 Rev. 2.0	NO2NO3-N	102	104 104			0.291
EPA 365.1 Rev. 2.0	Total-P	102	95.6 94.9			0.727
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.2 99.0			1.83
SM 2120 B	Color (true)				1.15	
SM 2320 B-97	Total Alkalinity	101			0.359	
SM 2540 C-97	TDS				3.41	
SM 4500 F-C-97	Fluoride	94.6	97.4 98.6			0.996
SM 5310 B-00	Organic Carbon	98.9	89.0 92.8			3.33

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1910285, 1910286
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1910285, 1910286
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1910287, 1910288
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1910287, 1910288
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1910287, 1910288
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1910287, 1910288
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1910289, 1910290
SM 2120 B / E31780	True Color measured at 450 nm	1910285, 1910286
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1910285, 1910286

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1910285, 1910286
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1910285, 1910286
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1910285, 1910286
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1910287, 1910288

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	06/29/2017			06/29/2017 16:54	DeAsia Armster	1910285, 1910286
EPA 300.0 Rev. 2.1	06/29/2017			07/07/2017	Ping Hua	1910285, 1910286
EPA 350.1 Rev. 2.0	06/29/2017			07/05/2017	Sofia Elnemr	1910288
	06/29/2017			07/06/2017	Sofia Elnemr	1910287
EPA 351.2 Rev. 2.0	06/29/2017	07/05/2017	Adrian Shelby	07/10/2017	Joseph Suarez	1910287, 1910288
EPA 353.2 Rev. 2.0	06/29/2017			07/05/2017	Beverly Y. Sanders	1910287, 1910288
EPA 365.1 Rev. 2.0	06/29/2017	07/06/2017	Adrian Shelby	07/07/2017	Lipi Saha	1910287, 1910288
EPA 365.1 Rev. 2.0 dissolved	06/29/2017			06/29/2017 16:28	Ping Hua	1910289
	06/29/2017			06/29/2017 16:31	Ping Hua	1910290
SM 2120 B	06/29/2017			06/29/2017 17:07	Julia Storbeck	1910285
	06/29/2017			06/29/2017 17:11	Julia Storbeck	1910286
SM 2320 B-97	06/29/2017			07/06/2017	Dale L. Simmons	1910285, 1910286
SM 2540 C-97	06/29/2017			07/03/2017	Sima Feizi	1910285, 1910286
SM 2540 D-97	06/29/2017			07/03/2017	Sima Feizi	1910285, 1910286
SM 4500 F-C-97	06/29/2017			07/06/2017	Dale L. Simmons	1910285, 1910286
SM 5310 B-00	06/29/2017			07/04/2017	Sofia Elnemr	1910287, 1910288