

Chemical Analysis Report

WQAP-2016-09-19-01

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

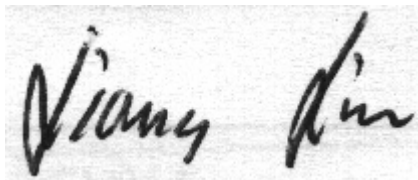
Event Description: **Godby Ditch, Soapstone Branch and Munson Slough**
Request ID: **RQ-2016-09-19-42**
Customer: **WQAP**
Project ID: **SMP**

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

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 17-OCT-2016 16:32

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored 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: ALFORD ARM TRIB. @ BUCK LAKE RD.

Collection Date/Time: 09/19/2016 09:21

Field ID: G1WA0017-09192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1832543	EPA 180.1 Rev. 2.0	Turbidity	2.6	A	NTU	P311551	
	EPA 300.0 Rev. 2.1	Chloride	2.7		mg Cl/L	P312186	
	SM 2120 B	Color (true)	52		PCU	P311538	
	SM 2320 B-97	Total Alkalinity	13		mg CaCO3/L	P311736	
	SM 2540 C-97	TDS	32		mg/L	P311824	
	SM 2540 D-97	TSS	4	I	mg/L	P311890	
	SM 4500 F-C-97	Fluoride	0.041	I	mg F/L	P311740	MS
1832546	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P311580	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P311838	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P312047	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P312015	
	SM 5310 B-00	Organic Carbon	9.7		mg C/L	P311728	
1832549	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.039		mg P/L	P311525	

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: GODBY DRAINAGE DITCH @ VEGA DR.

Collection Date/Time: 09/19/2016 10:15

Field ID: G1WA0025-09192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1832544	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P311551	
	EPA 300.0 Rev. 2.1	Chloride	2.6		mg Cl/L	P312184	
	SM 2120 B	Color (true)	26	A	PCU	P311538	
	SM 2320 B-97	Total Alkalinity	38		mg CaCO3/L	P311736	
	SM 2540 C-97	TDS	38		mg/L	P311824	
	SM 2540 D-97	TSS	3	I	mg/L	P311890	
	SM 4500 F-C-97	Fluoride	0.070	I	mg F/L	P311740	MS
1832547	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P311580	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P311838	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P312047	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P312015	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P311728	
1832550	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.098		mg P/L	P311525	

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: SOAPSTONE BRAND 100M UPSTREAM SR 375

Collection Date/Time: 09/19/2016 11:15

Field ID: G1WA0012-09192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1832545	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P311551	
	EPA 300.0 Rev. 2.1	Chloride	4.3		mg Cl/L	P312186	
	SM 2120 B	Color (true)	320		PCU	P311538	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P311736	
	SM 2540 C-97	TDS	74		mg/L	P311824	

Field ID: G1WA0012-09192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1832545	SM 2540 D-97	TSS	4	I	mg/L	P311890	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P311740	MS
1832548	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P311580	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.72		mg N/L	P311838	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P312047	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P312015	
	SM 5310 B-00	Organic Carbon	33		mg C/L	P311728	
1832551	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P311525	

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: P311551

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P312184

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P312186

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P311580

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P311838

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P312047

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P312015

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P311525

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

Reference Method: SM 2120 B
Batch ID: P311538

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P311736

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

Reference Method: SM 2540 C-97
Batch ID: P311824

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P311890

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P311740

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P311728

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: P312184

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P312184

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P312186

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P311580

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: P311838

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P312047

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: P312015

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: P311525

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.9		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P311736

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P311740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P311728

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P312184

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832544	Chloride	98.6		P	90 - 110
1832853	Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P312186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832854	Chloride	93.2		P	90 - 110
1832855	Chloride	99.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P311580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832546	Ammonia-N	101	98.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P311838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832497	Kjeldahl Nitrogen	103	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P312047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832497	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P312015

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832495	Total-P	98.7	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P311525

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832790	O-Phosphate-P	94.3	94.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P311740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832112	Fluoride	105	107	P/F	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P311728

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1832546	Organic Carbon	98.7	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P311551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832543	Turbidity	2.33	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P312184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832853	Chloride	0.551	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P312186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832855	Chloride	0.338	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P311580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832546	Ammonia-N	2.04	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P311838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832497	Kjeldahl Nitrogen	1.40	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P312047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P312047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832497	NO2NO3-N	0.411	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P312015

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832495	Total-P	1.90	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P311525

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832790	O-Phosphate-P	0.423	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P311538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832544	Color (true)	5.84	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P311736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832112	Total Alkalinity	0.347	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P311824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832577	TDS	5.62	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P311740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832112	Fluoride	1.97	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P311728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1832546	Organic Carbon	1.52	Spike	P	0 - 20

Quality Assurance Report Precision

* 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: A71736

Included Lab Sample IDs: 1832549, 1832550, 1832551

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.6	P/P	90 - 110
O-Phosphate-P	101	100	P/P	90 - 110
O-Phosphate-P	99.6	100	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A71739

Included Lab Sample IDs: 1832543, 1832544, 1832545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.2	96.4	P/P	85 - 115
Color (true)	98.0	96.5	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A71743

Included Lab Sample IDs: 1832546, 1832547, 1832548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.5	97.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A71745

Included Lab Sample IDs: 1832543, 1832544, 1832545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 5310 B-00

Run ID: A71797

Included Lab Sample IDs: 1832546, 1832547, 1832548

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

Reference Method: SM 2320 B-97

Run ID: A71798

Included Lab Sample IDs: 1832543, 1832544, 1832545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A71798

Included Lab Sample IDs: 1832543, 1832544, 1832545

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A71861

Included Lab Sample IDs: 1832546, 1832547, 1832548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A71882

Included Lab Sample IDs: 1832543, 1832544, 1832545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.2	97.0	P/P	90 - 110
Chloride	97.7	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A71890

Included Lab Sample IDs: 1832546, 1832547, 1832548

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	98.2	P/P	90 - 110
Kjeldahl Nitrogen	106	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A71947

Included Lab Sample IDs: 1832548

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A71968

Included Lab Sample IDs: 1832546, 1832547

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	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		Precision SMP	MS
			LCS			
EPA 180.1 Rev. 2.0	Turbidity				2.33	
EPA 300.0 Rev. 2.1	Chloride	96.9	98.3	98.6	0.551	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 300.0 Rev. 2.1	Chloride	97.4	99.0	93.2	0.338	
EPA 350.1 Rev. 2.0	Ammonia-N	102	101	98.1		2.04
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.1	103	101		1.40
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	102			0.411
EPA 365.1 Rev. 2.0	Total-P	102	98.7	101		1.90
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.9	94.3	94.7		0.423
SM 2120 B	Color (true)				5.84	
SM 2320 B-97	Total Alkalinity	103			0.347	
SM 2540 C-97	TDS				5.62	
SM 4500 F-C-97	Fluoride	98.8	105	107		1.97
SM 5310 B-00	Organic Carbon	99.2	98.7	101		1.52

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1832543, 1832544, 1832545
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1832543, 1832544, 1832545
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1832546, 1832547, 1832548
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1832546, 1832547, 1832548
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1832546, 1832547, 1832548
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1832546, 1832547, 1832548
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1832549, 1832550, 1832551
SM 2120 B / E31780	True Color measured at 450 nm	1832543, 1832544, 1832545
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1832543, 1832544, 1832545
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1832543, 1832544, 1832545
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1832543, 1832544, 1832545
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1832543, 1832544, 1832545
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1832546, 1832547, 1832548

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	09/19/2016			09/20/2016 17:03	Blanca Fach	1832543, 1832544, 1832545
EPA 300.0 Rev. 2.1	09/19/2016			09/29/2016	Ping Hua	1832544
	09/19/2016			09/30/2016	Ping Hua	1832543, 1832545
EPA 350.1 Rev. 2.0	09/19/2016			09/20/2016	Joseph Suarez	1832546, 1832547, 1832548
EPA 351.2 Rev. 2.0	09/19/2016	09/26/2016	Adrian Shelby	09/28/2016	Christopher Armour	1832546, 1832547, 1832548
EPA 353.2 Rev. 2.0	09/19/2016			09/27/2016	Beverly Y. Sanders	1832546, 1832547, 1832548
EPA 365.1 Rev. 2.0	09/19/2016	09/28/2016	Lipi Saha	09/29/2016	Lipi Saha	1832546, 1832547
	09/19/2016	09/28/2016	Lipi Saha	09/30/2016	Lipi Saha	1832548
EPA 365.1 Rev. 2.0 dissolved	09/19/2016			09/20/2016 15:22	Julia Storbeck	1832549
	09/19/2016			09/20/2016 15:30	Julia Storbeck	1832551
	09/19/2016			09/20/2016 15:41	Julia Storbeck	1832550
SM 2120 B	09/19/2016			09/20/2016 16:51	Julie Michelle Frank	1832543
	09/19/2016			09/20/2016 16:53	Julie Michelle Frank	1832544
	09/19/2016			09/20/2016 17:30	Julie Michelle Frank	1832545
SM 2320 B-97	09/19/2016			09/23/2016	Dale L. Simmons	1832543, 1832544, 1832545
SM 2540 C-97	09/19/2016			09/22/2016	Yijie Li	1832543, 1832544, 1832545
SM 2540 D-97	09/19/2016			09/22/2016	Yijie Li	1832543, 1832544, 1832545
SM 4500 F-C-97	09/19/2016			09/23/2016	Dale L. Simmons	1832543, 1832544, 1832545
SM 5310 B-00	09/19/2016			09/22/2016	Julie Michelle Frank	1832546, 1832547, 1832548