

Chemical Analysis Report

NE-DIST-2017-05-18-01

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

Event Description: **Suwannee 4**
Request ID: **RQ-2017-05-08-07**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
NE ROC
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Certified by: Colin Wright, Program Administrator

Date Certified: 15-JUN-2017 13:57

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray 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: LAKE SAMPSON NEAR E. SHORE

Collection Date/Time: 05/17/2017 11:45

Field ID: G1NE051105172017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900073	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P325513	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P326711	
		Sulfate	9.3		mg SO4/L	P326714	
	SM 2120 B	Color (true)	24	A	PCU	P325510	
	SM 2320 B-97	Total Alkalinity	37		mg CaCO3/L	P325737	
	SM 2540 C-97	TDS	129		mg/L	P326026	
	SM 2540 D-97	TSS	2	I	mg/L	P325992	
	SM 4500 F-C-97	Fluoride	0.079	I	mg F/L	P325738	MS, RPD
1900076	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P325662	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.72		mg N/L	P325587	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325550	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P325573	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P325947	
1900079	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325528	

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: LAKE ALTHO CENTER

Collection Date/Time: 05/17/2017 13:30

Field ID: G1NE052805172017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900074	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P325513	
	EPA 300.0 Rev. 2.1	Chloride	15	A	mg Cl/L	P326711	
		Sulfate	5.2	A	mg SO4/L	P326714	
	SM 2120 B	Color (true)	95		PCU	P325510	
	SM 2320 B-97	Total Alkalinity	3.0		mg CaCO3/L	P325737	
	SM 2540 C-97	TDS	63		mg/L	P326026	
	SM 2540 D-97	TSS	4	I	mg/L	P325992	
	SM 4500 F-C-97	Fluoride	0.049	I	mg F/L	P325738	MS, RPD
1900077	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P325662	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P325587	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325550	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P325573	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P325947	
1900080	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325528	

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: LAKE ALTHO CENTER DUPLICATE

Collection Date/Time: 05/17/2017 13:45

Field ID: G1NE052805172017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900075	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P325513	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P326711	
		Sulfate	5.2		mg SO4/L	P326714	

Field ID: G1NE052805172017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900075	SM 2120 B	Color (true)	93		PCU	P325510	
	SM 2320 B-97	Total Alkalinity	3.2		mg CaCO3/L	P325737	
	SM 2540 C-97	TDS	61		mg/L	P326026	
	SM 2540 D-97	TSS	4	I	mg/L	P325992	
	SM 4500 F-C-97	Fluoride	0.049	I	mg F/L	P325738	MS, RPD
1900078	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P325662	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P325587	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325550	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P325574	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P325947	
1900081	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325528	

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: P325513

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P326711

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P326714

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P325662

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P325587

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P325550

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: P325573

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325574

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325528

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

Reference Method: SM 2120 B
Batch ID: P325510

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P325737

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

Reference Method: SM 2540 C-97
Batch ID: P326026

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P325992

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325738

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P325947

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: P326711

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326714

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325662

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325587

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325550

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: P325573

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325574

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325528

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

Reference Method: SM 2320 B-97
Batch ID: P325737

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P325738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P325947

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	90.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900074	Chloride	92.0		P	90 - 110
1900335	Chloride	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900074	Sulfate	91.3		P	90 - 110
1900335	Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900076	Ammonia-N	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900076	Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900077	NO2NO3-N	103	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900024	Total-P	107	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900277	Total-P	105	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899908	O-Phosphate-P	101	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P325738

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900022	Fluoride	100	110	P/F	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P325947

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900024	Organic Carbon	91.8	90.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900022	Turbidity	4.44	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900074	Chloride	2.36	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900074	Sulfate	2.65	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900076	Ammonia-N	1.78	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900076	Kjeldahl Nitrogen	2.24	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900077	NO2NO3-N	2.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900024	Total-P	1.87	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900277	Total-P	2.72	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899908	O-Phosphate-P	1.29	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P325510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900073	Color (true)	9.90	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P325737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900022	Total Alkalinity	0.0422	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P326026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900022	TDS	1.57	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 D-97
Batch ID: P325992

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900022	TSS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P325738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900022	Fluoride	7.63	Spike	F	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P325947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900024	Organic Carbon	1.02	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: A76522
Included Lab Sample IDs: 1900073, 1900074, 1900075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.6	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A76524
Included Lab Sample IDs: 1900073, 1900074, 1900075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A76534
Included Lab Sample IDs: 1900079, 1900080, 1900081

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A76545
Included Lab Sample IDs: 1900076, 1900077, 1900078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76587

Included Lab Sample IDs: 1900076, 1900077, 1900078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76600

Included Lab Sample IDs: 1900076, 1900077, 1900078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	103	103	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76633

Included Lab Sample IDs: 1900073, 1900074, 1900075

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

Reference Method: SM 4500 F-C-97

Run ID: A76633

Included Lab Sample IDs: 1900073, 1900074, 1900075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76648

Included Lab Sample IDs: 1900076, 1900077, 1900078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.6	96.0	P/P	90 - 110
Kjeldahl Nitrogen	97.8	99.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A76726

Included Lab Sample IDs: 1900076, 1900077, 1900078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	92.8	94.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A77052

Included Lab Sample IDs: 1900073, 1900074, 1900075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.8	99.8	P/P	90 - 110
Chloride	97.4	98.8	P/P	90 - 110
Sulfate	94.5	107	P/P	90 - 110
Sulfate	96.3	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

* 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					4.44	
EPA 300.0 Rev. 2.1	Chloride	102	92.0	97.8		2.36	
	Sulfate	99.6	91.3	96.4		2.65	
EPA 350.1 Rev. 2.0	Ammonia-N	101	102	100			1.78
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.3	101	105			2.24
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	103	100			2.46
EPA 365.1 Rev. 2.0	Total-P	97.4	107	105			1.87
	Total-P	104	105	102			2.72
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	101	103			1.29
SM 2120 B	Color (true)					9.90	
SM 2320 B-97	Total Alkalinity	103				0.0422	
SM 2540 C-97	TDS					1.57	
SM 2540 D-97	TSS					0.0	
SM 4500 F-C-97	Fluoride	96.4	100	110			7.63
SM 5310 B-00	Organic Carbon	90.8	91.8	90.6			1.02

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1900073, 1900074, 1900075
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1900073, 1900074, 1900075
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1900073, 1900074, 1900075
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1900076, 1900077, 1900078
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1900076, 1900077, 1900078
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1900076, 1900077, 1900078
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1900076, 1900077, 1900078
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1900079, 1900080, 1900081
SM 2120 B / E31780	True Color measured at 450 nm	1900073, 1900074, 1900075
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1900073, 1900074, 1900075
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1900073, 1900074, 1900075
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1900073, 1900074, 1900075
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1900073, 1900074, 1900075
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1900076, 1900077, 1900078

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	05/18/2017			05/18/2017 15:37	Sima Feizi	1900073, 1900074, 1900075
EPA 300.0 Rev. 2.1	05/18/2017			06/10/2017	Julia Storbeck	1900073, 1900074, 1900075
EPA 350.1 Rev. 2.0	05/18/2017			05/22/2017	Julia Storbeck	1900076, 1900077, 1900078
EPA 351.2 Rev. 2.0	05/18/2017	05/22/2017	Adrian Shelby	05/24/2017	Joseph Suarez	1900076, 1900077, 1900078
EPA 353.2 Rev. 2.0	05/18/2017			05/19/2017	Beverly Y. Sanders	1900076, 1900077, 1900078
EPA 365.1 Rev. 2.0	05/18/2017	05/19/2017	Vijayalakshmi Reddy	05/22/2017	Lipi Saha	1900076, 1900077, 1900078
EPA 365.1 Rev. 2.0 dissolved	05/18/2017			05/18/2017 13:34	Anthony C. Onicha	1900079
	05/18/2017			05/18/2017 13:35	Anthony C. Onicha	1900080, 1900081
SM 2120 B	05/18/2017			05/18/2017 14:31	Tanya Welborn	1900073, 1900074
	05/18/2017			05/18/2017 14:32	Tanya Welborn	1900075
SM 2320 B-97	05/18/2017			05/23/2017	Dale L. Simmons	1900073, 1900074, 1900075
SM 2540 C-97	05/18/2017			05/22/2017	Sima Feizi	1900073, 1900074, 1900075
SM 2540 D-97	05/18/2017			05/22/2017	Sima Feizi	1900073, 1900074, 1900075
SM 4500 F-C-97	05/18/2017			05/23/2017	Dale L. Simmons	1900073, 1900074, 1900075
SM 5310 B-00	05/18/2017			05/25/2017	Christopher Armour	1900076, 1900077, 1900078