Chemical Analysis Report

NE-DIST-2017-10-06-01

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

Event Description: **Gainesville South-9/21/17**
Request ID: **RQ-2017-09-18-20**
Customer: **NE-DIST**
Project ID: **SMP**

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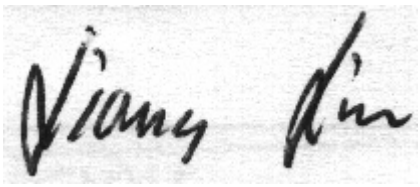
Certified by: Liang Lin, Environmental Administrator

Date Certified: 25-OCT-2017 15:11



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: W. Hawthorne Br. @ Fish Camp Rd. **Collection Date/Time: 10/05/2017 10:15**

Field ID: G1NE0210 10052017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1934934	EPA 180.1 Rev. 2.0	Turbidity	1.8	A	NTU	P332898	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P333113	
		Sulfate	1.3		mg SO4/L	P333116	
	SM 2120 B	Color (true)	670		PCU	P332894	
	SM 2320 B-97	Total Alkalinity	12		mg CaCO3/L	P333347	
	SM 2540 C-97	TDS	148		mg/L	P333156	
	SM 2540 D-97	TSS	2	I	mg/L	P333108	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P333350	
1934937	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P333391	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P333458	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P333228	
	EPA 365.1 Rev. 2.0	Total-P	0.41		mg P/L	P333068	
	SM 5310 B-00	Organic Carbon	48		mg C/L	P333652	
1934940	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.35		mg P/L	P332884	

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: Cross Creek @ SR 325 **Collection Date/Time: 10/05/2017 12:30**

Field ID: G1NE0105 10052017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1934935	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P332898	
	EPA 300.0 Rev. 2.1	Chloride	6.7	A	mg Cl/L	P333113	
		Sulfate	1.5	A	mg SO4/L	P333116	
	SM 2120 B	Color (true)	310		PCU	P332894	
	SM 2320 B-97	Total Alkalinity	14		mg CaCO3/L	P333347	
	SM 2540 C-97	TDS	88		mg/L	P333156	
	SM 2540 D-97	TSS	6	I	mg/L	P333108	
	SM 4500 F-C-97	Fluoride	0.081	I	mg F/L	P333350	
1934938	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P333391	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P333458	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.029		mg N/L	P333228	
	EPA 365.1 Rev. 2.0	Total-P	0.083		mg P/L	P333068	
	SM 5310 B-00	Organic Carbon	28		mg C/L	P333652	
1934941	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.033		mg P/L	P332884	

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: Field Blank **Collection Date/Time: 10/05/2017 13:30**

Field ID: 10052017 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1934936	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P332898	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P333113	
		Sulfate	0.20	U	mg SO4/L	P333116	

Field ID: 10052017 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1934936	SM 2120 B	Color (true)	2.5	U	PCU	P332894	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P333347	
	SM 2540 C-97	TDS	15	U	mg/L	P333156	
	SM 2540 D-97	TSS	2	U	mg/L	P333108	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P333350	
1934939	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P333391	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P333458	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P333228	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P333068	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P333653	
1934942	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332884	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 5310 B-00: 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: P332898

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333113

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333116

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333391

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333458

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333228

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: P333068

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332884

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

Reference Method: SM 2120 B
Batch ID: P332894

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P333347

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

Reference Method: SM 2540 C-97
Batch ID: P333156

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333108

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P333350

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P333652

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00
Batch ID: P333653

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: P333113

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333116

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333391

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333458

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333228

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333068

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332884

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.6		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P333347

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

Reference Method: SM 4500 F-C-97
Batch ID: P333350

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	92 - 103

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P333652

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P333653

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333113

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934883	Chloride	101		P	90 - 110
1934935	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934883	Sulfate	97.1		P	90 - 110
1934935	Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934937	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934954	Kjeldahl Nitrogen	109	98.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333228

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934893	NO2NO3-N	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934953	Total-P	99.7	98.0	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934983	O-Phosphate-P	94.1	96.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P333350

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934698	Fluoride	101	101	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P333652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934769	Organic Carbon	96.2	102	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P332898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934934	Turbidity	0.560	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333113

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934935	Chloride	6.04	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934935	Sulfate	0.699	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934937	Ammonia-N	0.429	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934954	Kjeldahl Nitrogen	5.55	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333228

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934893	NO2NO3-N	0.468	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934953	Total-P	1.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934983	O-Phosphate-P	1.60	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P332894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934950	Color (true)	0.596	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P333347

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934698	Total Alkalinity	0.208	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P333156

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934951	TDS	0.917	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P333350

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934698	Fluoride	0.482	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P333652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934769	Organic Carbon	4.81	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 5310 B-00
Batch ID: P333653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934955	Organic Carbon	1.33	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: A79397
Included Lab Sample IDs: 1934940, 1934941, 1934942

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	98.7	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A79399
Included Lab Sample IDs: 1934934, 1934935, 1934936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115
Color (true)	102	101	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A79400
Included Lab Sample IDs: 1934934, 1934935, 1934936

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A79473
Included Lab Sample IDs: 1934934, 1934935, 1934936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	105	P/P	90 - 110
Chloride	105	104	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A79486
Included Lab Sample IDs: 1934937, 1934938

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A79494
Included Lab Sample IDs: 1934939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A79506
Included Lab Sample IDs: 1934937, 1934938, 1934939

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

Reference Method: SM 2320 B-97
Run ID: A79535
Included Lab Sample IDs: 1934934, 1934935, 1934936

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

Reference Method: SM 4500 F-C-97
Run ID: A79535
Included Lab Sample IDs: 1934934, 1934935, 1934936

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A79555
Included Lab Sample IDs: 1934937, 1934938, 1934939

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A79645
Included Lab Sample IDs: 1934937, 1934938, 1934939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	103	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A79655
Included Lab Sample IDs: 1934937, 1934938, 1934939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	100	P/P	90 - 110
Organic Carbon	98.1	100	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					0.560	
EPA 300.0 Rev. 2.1	Chloride	101	99.7	101		6.04	
	Sulfate	97.1	96.4	97.1		0.699	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	101	101			0.429
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	109	98.9			5.55
EPA 353.2 Rev. 2.0	NO2NO3-N	104	107	106			0.468
EPA 365.1 Rev. 2.0	Total-P	99.2	99.7	98.0			1.46
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.6	94.1	96.5			1.60
SM 2120 B	Color (true)					0.596	
SM 2320 B-97	Total Alkalinity	103				0.208	
SM 2540 C-97	TDS					0.917	
SM 4500 F-C-97	Fluoride	102	101	101			0.482
SM 5310 B-00	Organic Carbon	100	96.2	102			4.81
	Organic Carbon	101					1.33

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1934934, 1934935, 1934936
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1934934, 1934935, 1934936
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1934934, 1934935, 1934936
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1934937, 1934938, 1934939
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1934937, 1934938, 1934939
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1934937, 1934938, 1934939
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1934937, 1934938, 1934939
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1934940, 1934941, 1934942
SM 2120 B / E31780	True Color measured at 450 nm	1934934, 1934935, 1934936
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1934934, 1934935, 1934936
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1934934, 1934935, 1934936
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1934934, 1934935, 1934936
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1934934, 1934935, 1934936
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1934937, 1934938, 1934939

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	10/06/2017			10/06/2017 17:25	Tanya Welborn	1934934, 1934935, 1934936
EPA 300.0 Rev. 2.1	10/06/2017			10/10/2017	Julia Storbeck	1934934, 1934935, 1934936
EPA 350.1 Rev. 2.0	10/06/2017			10/13/2017	Sofia Elnemr	1934937, 1934938, 1934939
EPA 351.2 Rev. 2.0	10/06/2017	10/16/2017	Sofia Elnemr	10/18/2017	Joseph Suarez	1934937, 1934938, 1934939
EPA 353.2 Rev. 2.0	10/06/2017			10/12/2017	Beverly Y. Sanders	1934937, 1934938, 1934939
EPA 365.1 Rev. 2.0	10/06/2017	10/10/2017	Sima Feizi	10/11/2017	Lipi Saha	1934937, 1934938, 1934939
EPA 365.1 Rev. 2.0 dissolved	10/06/2017			10/06/2017 15:16	Megan Treadwell	1934940
	10/06/2017			10/06/2017 15:17	Megan Treadwell	1934941
	10/06/2017			10/06/2017 15:18	Megan Treadwell	1934942
SM 2120 B	10/06/2017			10/06/2017 16:04	Tanya Welborn	1934936
	10/06/2017			10/06/2017 16:18	Tanya Welborn	1934934
	10/06/2017			10/06/2017 16:19	Tanya Welborn	1934935
SM 2320 B-97	10/06/2017			10/13/2017	Dale L. Simmons	1934934, 1934935, 1934936
SM 2540 C-97	10/06/2017			10/09/2017	Yijie Li	1934934, 1934935, 1934936
SM 2540 D-97	10/06/2017			10/09/2017	Yijie Li	1934934, 1934935, 1934936
SM 4500 F-C-97	10/06/2017			10/13/2017	Dale L. Simmons	1934934, 1934935, 1934936
SM 5310 B-00	10/06/2017			10/18/2017	Ping Hua	1934937, 1934938, 1934939