Chemical Analysis Report

CEN-DIST-2020-02-20-01

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

Event Description: **Little Lk Weir / Lk Otting**
Request ID: **RQ-2020-02-17-48**
Customer: **CEN-DIST**
Project ID: **SMP**

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Date Certified: 12-MAR-2020 10:55

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 by the Florida Department of Health Environmental Laboratory Certification Program 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 Otting @ Center of Lake **Collection Date/Time: 02/19/2020 10:30**

Field ID: G4CE0176 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2159578	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P379299	
	EPA 300.0 Rev. 2.1	Chloride	2.2		mg Cl/L	P379814	
		Sulfate	0.20	U	mg SO4/L	P379817	
	SM 2120 B-2011	Color (true)	15		PCU	P379379	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P379788	
	SM 2540 C-2011	TDS	63		mg/L	P379939	
	SM 2540 D-2011	TSS	2	I	mg/L	P379965	
	SM 4500 F-C-2011	Fluoride	0.045	I	mg F/L	P379749	
2159580	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P379732	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.72		mg N/L	P380193	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P380099	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P379894	
	SM 5310 B-2011	Organic Carbon	7.3		mg C/L	P379590	
2159582	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379320	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Little Lake Weir @ Center **Collection Date/Time: 02/19/2020 12:13**

Field ID: G1CE0014 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2159579	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P379299	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P379814	
		Sulfate	5.6		mg SO4/L	P379817	
	SM 2120 B-2011	Color (true)	17		PCU	P379379	
	SM 2320 B-2011	Total Alkalinity	22		mg CaCO3/L	P379788	
	SM 2540 C-2011	TDS	114	A	mg/L	P379940	
	SM 2540 D-2011	TSS	7	I A	mg/L	P379966	
	SM 4500 F-C-2011	Fluoride	0.14		mg F/L	P379749	
2159581	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P379732	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P379586	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P380022	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P379894	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P379590	
2159583	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379320	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P379299

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379814

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379817

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379732

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379586

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380193

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380022

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380099

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379894

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379320

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

Reference Method: SM 2120 B-2011
Batch ID: P379379

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P379788

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

Reference Method: SM 2540 C-2011
Batch ID: P379939

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P379940

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P379965

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P379966

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P379749

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P379590

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: P379814

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379817

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379732

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: P379586

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380193

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380022

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380099

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379894

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379320

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P379379

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.9		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P379788

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

Reference Method: SM 4500 F-C-2011
Batch ID: P379749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P379590

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159548	Chloride	101		P	90 - 110
2159619	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379817

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159619	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159580	Ammonia-N	97.9	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161949	Kjeldahl Nitrogen	95.8	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159556	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380099

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159580	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159417	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159582	O-Phosphate-P	94.2	95.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P379749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159368	Fluoride	99.0	99.0	P/P	89 - 106

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P379590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159449	Organic Carbon	103	103	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P379299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159553	Turbidity	3.00	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159548	Chloride	0.323	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P379817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159548	Sulfate	0.278	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P379732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159580	Ammonia-N	0.553	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159581	Kjeldahl Nitrogen	3.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161949	Kjeldahl Nitrogen	4.69	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159556	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159580	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P379894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159417	Total-P	0.546	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159582	O-Phosphate-P	1.16	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P379379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159613	Color (true)	1.37	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P379788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159368	Total Alkalinity	0.0315	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P379939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159369	TDS	1.80	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P379940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159579	TDS	1.75	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P379749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159368	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P379590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159449	Organic Carbon	0.0	Spike	P	0 - 20

Quality Assurance Report
Precision

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A97689
Included Lab Sample IDs: 2159578, 2159579

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A97691
Included Lab Sample IDs: 2159582, 2159583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.8	97.9	P/P	90 - 110

Reference Method: SM 2120 B-2011
Run ID: A97728
Included Lab Sample IDs: 2159578, 2159579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	90 - 115

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A97771
Included Lab Sample IDs: 2159578, 2159579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.8	99.6	P/P	90 - 110
Sulfate	99.3	99.2	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A97799
Included Lab Sample IDs: 2159580, 2159581

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A97843
Included Lab Sample IDs: 2159580, 2159581

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

Reference Method: SM 4500 F-C-2011
Run ID: A97845
Included Lab Sample IDs: 2159578, 2159579

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A97849
Included Lab Sample IDs: 2159581

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A97849
Included Lab Sample IDs: 2159581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.5	102	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A97872
Included Lab Sample IDs: 2159578, 2159579

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A97974
Included Lab Sample IDs: 2159581

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A98012
Included Lab Sample IDs: 2159580

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A98038
Included Lab Sample IDs: 2159580, 2159581

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A98065
Included Lab Sample IDs: 2159580

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	97.0	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					3.00	
EPA 300.0 Rev. 2.1	Chloride	101	101	101		0.323	
	Sulfate	101	100			0.278	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	97.9	98.7			0.553
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103					3.33
	Kjeldahl Nitrogen	101	95.8	103			4.69
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	101			0.0
	NO2NO3-N	98.5	100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	103	104	105			0.546
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	94.2	95.3			1.16
SM 2120 B-2011	Color (true)	99.9				1.37	
SM 2320 B-2011	Total Alkalinity	102				0.0315	
SM 2540 C-2011	TDS					1.80	
	TDS					1.75	
SM 4500 F-C-2011	Fluoride	99.5	99.0	99.0			0.0
SM 5310 B-2011	Organic Carbon	100	103	103			0.0

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2159578, 2159579
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2159578, 2159579
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2159578, 2159579
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2159580, 2159581
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2159580, 2159581
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2159580, 2159581
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2159580, 2159581
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2159582, 2159583
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2159578, 2159579
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2159578, 2159579
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2159578, 2159579
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2159578, 2159579
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2159578, 2159579
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2159580, 2159581

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	02/20/2020			02/20/2020 17:14	Julia Storbeck	2159578, 2159579
EPA 300.0 Rev. 2.1	02/20/2020			02/28/2020 06:07	Elliott Rodriguez	2159578
	02/20/2020			02/28/2020 06:19	Elliott Rodriguez	2159579
EPA 350.1 Rev. 2.0	02/20/2020			02/26/2020 12:17	Ping Hua	2159580
	02/20/2020			02/26/2020 12:40	Ping Hua	2159581
EPA 351.2 Rev. 2.0	02/20/2020	02/25/2020 15:00	Sima Feizi	02/26/2020 17:41	Jhamieka S. Greenwood	2159581
	02/20/2020	03/06/2020 12:00	Sima Feizi	03/09/2020 12:14	Jhamieka S. Greenwood	2159580
EPA 353.2 Rev. 2.0	02/20/2020			03/03/2020 11:14	Beverly Y. Sanders	2159581
	02/20/2020			03/05/2020 09:48	Beverly Y. Sanders	2159580
EPA 365.1 Rev. 2.0	02/20/2020	03/02/2020 16:52	Yen Ta	03/06/2020 13:27	Benjamin T. Nordmann	2159580
	02/20/2020	03/02/2020 16:52	Yen Ta	03/06/2020 13:28	Benjamin T. Nordmann	2159581
EPA 365.1 Rev. 2.0 dissolved	02/20/2020			02/20/2020 17:28	Samantha Davila	2159582
	02/20/2020			02/20/2020 17:31	Samantha Davila	2159583
SM 2120 B-2011	02/20/2020			02/20/2020 17:35	Madeline Funaro	2159578
	02/20/2020			02/20/2020 17:36	Madeline Funaro	2159579
SM 2320 B-2011	02/20/2020			02/28/2020 01:56	Dale L. Simmons	2159578
	02/20/2020			02/28/2020 02:06	Dale L. Simmons	2159579
SM 2540 C-2011	02/20/2020			02/24/2020 15:24	Yijie Li	2159578, 2159579
SM 2540 D-2011	02/20/2020			02/24/2020 15:24	Yijie Li	2159578, 2159579
SM 4500 F-C-2011	02/20/2020			02/26/2020 19:14	Dale L. Simmons	2159578
	02/20/2020			02/26/2020 19:25	Dale L. Simmons	2159579
SM 5310 B-2011	02/20/2020			02/25/2020 03:53	Madeline Funaro	2159580
	02/20/2020			02/25/2020 04:08	Madeline Funaro	2159581