Chemical Analysis Report

NW-DIST-2020-08-07-01

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

Event Description: **NW Run**
Request ID: **RQ-2020-08-03-53**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
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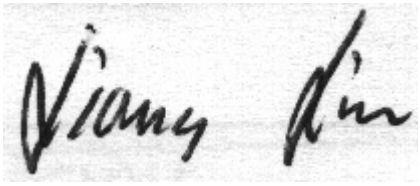
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 27-AUG-2020 13:01



NON-CONFORMANCE REPORT INCLUDED

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: Big Escambia Creek downstream of Fannie Rd **Collection Date/Time: 08/06/2020 09:50**

Field ID: G4NW0421 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189261	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P385794	
	EPA 300.0 Rev. 2.1	Chloride	4.4		mg Cl/L	P385892	
		Sulfate	1.0		mg SO4/L	P385897	
	SM 2120 B-2011	Color (true)	29		PCU	P385797	
	SM 2320 B-2011	Total Alkalinity	5.1		mg CaCO3/L	P385857	
	SM 2540 C-2011	TDS	33		mg/L	P386180	
	SM 2540 D-2011	TSS	2	I	mg/L	P386221	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385859	
2189263	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I Y	mg N/L	P386082	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.13	I Y	mg N/L	P386139	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.50		mg N/L	P385823	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P385871	
	SM 5310 B-2011	Organic Carbon	2.1		mg C/L	P385979	
2189265	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385789	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.
EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

Sample Location: McDavid Creek 100m upstream SR 99 **Collection Date/Time: 08/06/2020 10:45**

Field ID: G5NW0150 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2189262	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P385794	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P385892	
		Sulfate	0.51		mg SO4/L	P385897	
	SM 2120 B-2011	Color (true)	36		PCU	P385797	
	SM 2320 B-2011	Total Alkalinity	1.5	I	mg CaCO3/L	P385857	
	SM 2540 C-2011	TDS	20	I	mg/L	P386180	
	SM 2540 D-2011	TSS	2	I	mg/L	P386221	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385859	
2189264	EPA 350.1 Rev. 2.0	Ammonia-N	0.009	Y	mg N/L	P386082	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I Y	mg N/L	P386139	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P385823	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P385871	
	SM 5310 B-2011	Organic Carbon	2.3		mg C/L	P385979	
2189266	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385790	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.
EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

Non-Conformance Report

NCR ID: 8373

Event(s)	Job(s)	Sample(s)	Test(s)
NW-DIST-2020-08-07-01	TLH-2020-08-07-66	2189263	
NW-DIST-2020-08-07-01	TLH-2020-08-07-66	2189264	

NCR Type: CUSTODY **NCR Category: General**

Observation: Samples were not stored in refrigerator overnight on 08/12/2020.

Resolution: Samples were returned to refrigerator at 10:15 am on 08/13/2020. Data will be qualified as appropriate.

Authorized by/Date: Irina Carbone 8/26/2020

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385794

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385892

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385897

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386082

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386139

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385823

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385871

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385789

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385790

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P385797

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385857

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

Reference Method: SM 2540 C-2011
Batch ID: P386180

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P386221

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385859

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385979

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: P385892

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385897

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386082

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386139

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385823

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385871

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: P385789

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385790

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

Reference Method: SM 2120 B-2011
Batch ID: P385797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P385857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P385859

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P385979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.4		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189197	Chloride	104		P	90 - 110
2189215	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189197	Sulfate	106		P	90 - 110
2189215	Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189219	Ammonia-N	97.4	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189263	Kjeldahl Nitrogen	110	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385823

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189216	NO2NO3-N	99.0	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385871

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189216	Total-P	108	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189174	O-Phosphate-P	94.3	95.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189266	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P385859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189215	Fluoride	98.5	99.6	P/P	94 - 107

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P385979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2189372	Organic Carbon	98.0	98.3	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189215	Turbidity	2.47	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189197	Chloride	0.647	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189197	Sulfate	1.91	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P386082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189219	Ammonia-N	1.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189263	Kjeldahl Nitrogen	3.29	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385823

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189216	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189216	Total-P	3.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189174	O-Phosphate-P	0.828	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189266	O-Phosphate-P	0.592	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P385797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189214	Color (true)	2.88	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P385857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189215	Total Alkalinity	1.18	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P386180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189215	TDS	7.14	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P385859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189215	Fluoride	0.933	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2189372	Organic Carbon	0.243	Spike	P	0 - 20

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A100348
Included Lab Sample IDs: 2189265, 2189266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	98.1	P/P	90 - 110
O-Phosphate-P	98.0	97.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A100349
Included Lab Sample IDs: 2189261, 2189262

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

Reference Method: SM 2120 B-2011
Run ID: A100351
Included Lab Sample IDs: 2189261, 2189262

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	105	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A100367
Included Lab Sample IDs: 2189263, 2189264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	102	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A100379
Included Lab Sample IDs: 2189261, 2189262

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

Reference Method: SM 4500 F-C-2011
Run ID: A100379
Included Lab Sample IDs: 2189261, 2189262

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A100386
Included Lab Sample IDs: 2189261, 2189262

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A100427
Included Lab Sample IDs: 2189263, 2189264

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A100427
Included Lab Sample IDs: 2189263, 2189264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.0	98.0	P/P	90 - 110
Total-P	98.0	97.5	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A100436
Included Lab Sample IDs: 2189263, 2189264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.3	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A100478
Included Lab Sample IDs: 2189263, 2189264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A100512
Included Lab Sample IDs: 2189263, 2189264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	101	P/P	90 - 110
Kjeldahl Nitrogen	104	104	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					2.47	
EPA 300.0 Rev. 2.1	Chloride	103	104	106		0.647	
	Sulfate	104	106	105		1.91	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6	97.4	99.4			1.84
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	110	106			3.29
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	99.0	98.0			1.02
EPA 365.1 Rev. 2.0	Total-P	104	108	105			3.22
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	94.3	95.2			0.828
	O-Phosphate-P	102	101	102			0.592
SM 2120 B-2011	Color (true)	103				2.88	
SM 2320 B-2011	Total Alkalinity	103				1.18	
SM 2540 C-2011	TDS					7.14	
SM 4500 F-C-2011	Fluoride	99.5	98.5	99.6			0.933
SM 5310 B-2011	Organic Carbon	99.4	98.0	98.3			0.243

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2189261, 2189262
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2189261, 2189262
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2189261, 2189262
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2189263, 2189264
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2189263, 2189264
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2189263, 2189264
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2189263, 2189264
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2189265, 2189266
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2189261, 2189262
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2189261, 2189262
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2189261, 2189262
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2189261, 2189262
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2189261, 2189262
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2189263, 2189264

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	08/07/2020			08/07/2020 15:13	Blanca Fach	2189261, 2189262
EPA 300.0 Rev. 2.1	08/07/2020			08/09/2020 03:40	Julia Storbeck	2189261
	08/07/2020			08/09/2020 03:52	Julia Storbeck	2189262
EPA 350.1 Rev. 2.0	08/07/2020			08/15/2020 13:23	Ping Hua	2189263
	08/07/2020			08/15/2020 13:25	Ping Hua	2189264
EPA 351.2 Rev. 2.0	08/07/2020	08/17/2020 14:20	David Boose	08/18/2020 12:16	Jhamieka S. Greenwood	2189263
	08/07/2020	08/17/2020 14:20	David Boose	08/18/2020 12:30	Jhamieka S. Greenwood	2189264
EPA 353.2 Rev. 2.0	08/07/2020			08/10/2020 09:46	Beverly Y. Sanders	2189263
	08/07/2020			08/10/2020 09:47	Beverly Y. Sanders	2189264
EPA 365.1 Rev. 2.0	08/07/2020	08/11/2020 11:28	Yen Ta	08/13/2020 08:51	Lipi Saha	2189263
	08/07/2020	08/11/2020 11:28	Yen Ta	08/13/2020 08:58	Lipi Saha	2189264
EPA 365.1 Rev. 2.0 dissolved	08/07/2020			08/07/2020 15:48	Samantha Davila	2189265
	08/07/2020			08/07/2020 15:55	Samantha Davila	2189266
SM 2120 B-2011	08/07/2020			08/07/2020 19:00	Julia Storbeck	2189261
	08/07/2020			08/07/2020 19:01	Julia Storbeck	2189262
SM 2320 B-2011	08/07/2020			08/10/2020 23:12	Dale L. Simmons	2189261
	08/07/2020			08/10/2020 23:21	Dale L. Simmons	2189262
SM 2540 C-2011	08/07/2020			08/12/2020 15:12	Yijie Li	2189261, 2189262
SM 2540 D-2011	08/07/2020			08/12/2020 15:12	Yijie Li	2189261, 2189262
SM 4500 F-C-2011	08/07/2020			08/10/2020 23:12	Dale L. Simmons	2189261
	08/07/2020			08/10/2020 23:21	Dale L. Simmons	2189262
SM 5310 B-2011	08/07/2020			08/12/2020 18:09	David Boose	2189263
	08/07/2020			08/12/2020 18:21	David Boose	2189264