

Chemical Analysis Report

SO-DIST-2020-09-11-03

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

Event Description: **Caloosa Creeks**
Request ID: **RQ-2020-07-06-04**
Customer: **SO-DIST**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Gary Snorek

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 06-OCT-2020 12:08



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: Telegraph Creek

Collection Date/Time: 09/10/2020 09:30

Field ID: G3SD0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2195756	SM 2120 B-2011	Color (true)	420		PCU	P387287	
	SM 2320 B-2011	Total Alkalinity	69		mg CaCO3/L	P387364	
	SM 2540 D-2011	TSS	2	I	mg/L	P387634	
	SM 4500 F-C-2011	Fluoride	0.084	I	mg F/L	P387366	
2195759	SM 5310 B-2011 dissolved	Organic Carbon	36		mg C/L	P387425	
2195762	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P387310	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P388103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.051		mg N/L	P387468	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P387808	
	SM 5310 B-2011	Organic Carbon	37		mg C/L	P387425	
2195765	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P387283	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BeeBranch@LoblollyBayRd

Collection Date/Time: 09/10/2020 10:15

Field ID: G3SD0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2195757	SM 2120 B-2011	Color (true)	390		PCU	P387287	
	SM 2320 B-2011	Total Alkalinity	15		mg CaCO3/L	P387364	
	SM 2540 D-2011	TSS	3	I	mg/L	P387634	
	SM 4500 F-C-2011	Fluoride	0.078	I	mg F/L	P387366	
2195760	SM 5310 B-2011 dissolved	Organic Carbon	33		mg C/L	P387425	
2195763	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P387310	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P387781	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P387469	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P387809	
	SM 5310 B-2011	Organic Carbon	33		mg C/L	P387425	
2195766	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.097		mg P/L	P387283	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Nine Mile Canal @ SR 80

Collection Date/Time: 09/10/2020 11:30

Field ID: G3SD0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2195758	SM 2120 B-2011	Color (true)	85		PCU	P387287	
	SM 2320 B-2011	Total Alkalinity	205	A	mg CaCO3/L	P387364	
	SM 2540 D-2011	TSS	3	I	mg/L	P387634	
	SM 4500 F-C-2011	Fluoride	0.38		mg F/L	P387366	
2195761	SM 5310 B-2011 dissolved	Organic Carbon	18		mg C/L	P387425	
2195764	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P387310	MS
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P387478	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P387469	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P387809	
	SM 5310 B-2011	Organic Carbon	19		mg C/L	P387425	
2195767	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P387283	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387310

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387478

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387781

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P388103

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387468

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387469

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387808

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387809

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387283

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: P387287

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P387364

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-2011
Batch ID: P387634

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387366

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387425

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

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P387425

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	92.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387478

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: P387781

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P388103

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: P387468

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387469

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387808

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387283

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P387287

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.3		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P387364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.7		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P387366

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P387425

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.0		P	85 - 115

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P387425

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195742	Ammonia-N	90.7	89.0	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195912	Kjeldahl Nitrogen	108	114	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196572	Kjeldahl Nitrogen	103	110	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P388103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198678	Kjeldahl Nitrogen	102	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195726	NO2NO3-N	98.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195764	NO2NO3-N	98.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195702	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195763	Total-P	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387283

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195767	O-Phosphate-P	98.4	98.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P387366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195758	Fluoride	98.3	99.2	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P387425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195512	Organic Carbon	101	105	P/P	85 - 115

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P387425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195512	Organic Carbon	101	105	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195742	Ammonia-N	1.76	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195912	Kjeldahl Nitrogen	3.64	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196572	Kjeldahl Nitrogen	3.37	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P388103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198678	Kjeldahl Nitrogen	1.93	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195726	NO2NO3-N	0.220	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195764	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195702	Total-P	0.430	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195763	Total-P	0.0711	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387283

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195767	O-Phosphate-P	0.303	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P387287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195741	Color (true)	0.583	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P387364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195758	Total Alkalinity	2.82	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P387366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195758	Fluoride	0.451	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P387425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195512	Organic Carbon	3.46	Spike	P	0 - 20

Reference Method: SM 5310 B-2011 dissolved
Batch ID: P387425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195512	Organic Carbon	3.46	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: A100940

Included Lab Sample IDs: 2195765, 2195766, 2195767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.8	97.5	P/P	90 - 110
O-Phosphate-P	97.5	97.5	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A100942

Included Lab Sample IDs: 2195756, 2195757, 2195758

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	98.0	P/P	90 - 115
Color (true)	99.9	100	P/P	90 - 115

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100948

Included Lab Sample IDs: 2195762, 2195763, 2195764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	93.8	94.0	P/P	90 - 110
Ammonia-N	94.0	94.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100975

Included Lab Sample IDs: 2195756, 2195757, 2195758

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100975

Included Lab Sample IDs: 2195756, 2195757, 2195758

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

Reference Method: SM 5310 B-2011

Run ID: A101004

Included Lab Sample IDs: 2195762, 2195763, 2195764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	101	P/P	90 - 110

Reference Method: SM 5310 B-2011 dissolved

Run ID: A101004

Included Lab Sample IDs: 2195759, 2195760, 2195761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.6	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101029

Included Lab Sample IDs: 2195762, 2195763, 2195764

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101067

Included Lab Sample IDs: 2195764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	109	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101190

Included Lab Sample IDs: 2195763

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.4	93.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101204

Included Lab Sample IDs: 2195762, 2195763, 2195764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	102	P/P	85 - 115

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101338

Included Lab Sample IDs: 2195762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.8	97.1	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	MS
EPA 350.1 Rev. 2.0	Ammonia-N	92.0	90.7	89.0		1.76
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	108	114		3.64
	Kjeldahl Nitrogen	101	103	110		3.37
	Kjeldahl Nitrogen	105	102	106		1.93
	Kjeldahl Nitrogen	102	98.8			0.220
EPA 353.2 Rev. 2.0	NO2NO3-N	101	98.8			0.0
	NO2NO3-N	105	104	104		0.430
EPA 365.1 Rev. 2.0	Total-P	106	105	105		0.0711
	Total-P	102	98.4	98.8		0.303
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.3			0.583	
SM 2120 B-2011	Color (true)	98.7			2.82	
SM 2320 B-2011	Total Alkalinity	101	99.2	98.3		0.451
SM 4500 F-C-2011	Fluoride	99.0	101	105		3.46
SM 5310 B-2011	Organic Carbon	99.0	101	105		3.46
SM 5310 B-2011 dissolved	Organic Carbon					

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2195762, 2195763, 2195764
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2195762, 2195763, 2195764
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2195762, 2195763, 2195764
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2195762, 2195763, 2195764
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2195765, 2195766, 2195767
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2195756, 2195757, 2195758
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2195756, 2195757, 2195758
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2195756, 2195757, 2195758
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2195756, 2195757, 2195758
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2195762, 2195763, 2195764
SM 5310 B-2011 dissolved	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2195759, 2195760, 2195761

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	09/11/2020			09/13/2020 16:46	Ping Hua	2195762
	09/11/2020			09/13/2020 16:54	Ping Hua	2195763
	09/11/2020			09/13/2020 16:57	Ping Hua	2195764
EPA 351.2 Rev. 2.0	09/11/2020	09/16/2020 12:40	David Boose	09/17/2020 15:36	Virginia P. Brown	2195764
	09/11/2020	09/22/2020 11:40	David Boose	09/24/2020 18:59	Elliott Rodriguez	2195763
	09/11/2020	10/01/2020 13:30	David Boose	10/02/2020 11:51	Elliott Rodriguez	2195762
EPA 353.2 Rev. 2.0	09/11/2020			09/16/2020 11:22	Beverly Y. Sanders	2195762
	09/11/2020			09/16/2020 11:32	Beverly Y. Sanders	2195764
	09/11/2020			09/16/2020 11:38	Beverly Y. Sanders	2195763
EPA 365.1 Rev. 2.0	09/11/2020	09/24/2020 11:57	Yen Ta	09/25/2020 14:26	Benjamin T. Nordmann	2195762
	09/11/2020	09/24/2020 11:57	Yen Ta	09/25/2020 14:29	Benjamin T. Nordmann	2195763
	09/11/2020	09/24/2020 11:57	Yen Ta	09/25/2020 14:32	Benjamin T. Nordmann	2195764
EPA 365.1 Rev. 2.0 dissolved	09/11/2020			09/11/2020 15:49	Samantha Davila	2195767
	09/11/2020			09/11/2020 16:00	Samantha Davila	2195765, 2195766
SM 2120 B-2011	09/11/2020			09/11/2020 16:08	Madeline Gruver	2195758
	09/11/2020			09/11/2020 16:33	Madeline Gruver	2195756
	09/11/2020			09/11/2020 16:34	Madeline Gruver	2195757
SM 2320 B-2011	09/11/2020			09/15/2020 00:07	Dale L. Simmons	2195758
	09/11/2020			09/15/2020 01:13	Dale L. Simmons	2195756
	09/11/2020			09/15/2020 01:26	Dale L. Simmons	2195757
SM 2540 D-2011	09/11/2020			09/16/2020 15:09	Yijie Li	2195756, 2195757, 2195758
SM 4500 F-C-2011	09/11/2020			09/14/2020 23:56	Dale L. Simmons	2195758
	09/11/2020			09/15/2020 01:13	Dale L. Simmons	2195756
	09/11/2020			09/15/2020 01:26	Dale L. Simmons	2195757
SM 5310 B-2011	09/11/2020			09/15/2020 19:15	David Boose	2195762
	09/11/2020			09/15/2020 19:28	David Boose	2195763
	09/11/2020			09/15/2020 19:40	David Boose	2195764
SM 5310 B-2011 dissolved	09/11/2020			09/15/2020 16:04	David Boose	2195759
	09/11/2020			09/15/2020 16:18	David Boose	2195760
	09/11/2020			09/15/2020 16:30	David Boose	2195761