

Chemical Analysis Report

CEN-DIST-2020-01-24-02

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

Event Description: **Belle / Gordon / Amoret**

Request ID: **RQ-2020-01-20-16**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

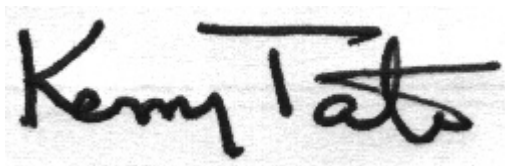
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 13-FEB-2020 11:15

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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 Belle @ Center of W Lobe

Collection Date/Time: 01/23/2020 12:27

Field ID: G3CE0019

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151567	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P377785	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P378150	
		Sulfate	34		mg SO4/L	P378155	
	SM 2120 B-2011	Color (true)	18	A	PCU	P377718	
	SM 2320 B-2011	Total Alkalinity	35		mg CaCO3/L	P378052	
	SM 2540 C-2011	TDS	133	A	mg/L	P378274	
	SM 2540 D-2011	TSS	3	IA	mg/L	P378064	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P378057	
2151570	EPA 350.1 Rev. 2.0	Ammonia-N	0.074		mg N/L	P378180	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P378170	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P378001	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P378027	
	SM 5310 B-2011	Organic Carbon	5.9		mg C/L	P377956	
2151573	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P377758	

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: Lake Amoret 85m SW of Center

Collection Date/Time: 01/23/2020 11:59

Field ID: G4CE0072

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151568	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P377785	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P378150	
		Sulfate	20		mg SO4/L	P378155	
	SM 2120 B-2011	Color (true)	23		PCU	P377718	
	SM 2320 B-2011	Total Alkalinity	30		mg CaCO3/L	P378052	
	SM 2540 C-2011	TDS	97		mg/L	P378274	
	SM 2540 D-2011	TSS	2	I	mg/L	P378064	
	SM 4500 F-C-2011	Fluoride	0.036	I	mg F/L	P378057	
2151571	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P378180	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P378170	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P377937	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P378027	
	SM 5310 B-2011	Organic Carbon	6.4		mg C/L	P377956	
2151574	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P377758	

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: Lake Aurora @ Center of S Lobe

Collection Date/Time: 01/23/2020 11:11

Field ID: G4CE0172

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151569	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P377785	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P378150	
		Sulfate	32		mg SO4/L	P378155	
	SM 2120 B-2011	Color (true)	5.7	I	PCU	P377718	
	SM 2320 B-2011	Total Alkalinity	32		mg CaCO3/L	P378052	
	SM 2540 C-2011	TDS	104		mg/L	P378274	
	SM 2540 D-2011	TSS	2	U	mg/L	P378064	
	SM 4500 F-C-2011	Fluoride	0.048	I	mg F/L	P378057	
2151572	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P378180	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P378170	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.30		mg N/L	P377937	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P378027	
	SM 5310 B-2011	Organic Carbon	4.7		mg C/L	P377956	
2151575	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P377758	

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 180.1 Rev. 2.0
Batch ID: P377785

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378150

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378155

Component	Result	Code	Units
Sulfate	0.20	U	mg SO ₄ /L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378180

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378170

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377937

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378001

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378027

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377758

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: P377718

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P378052

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

Reference Method: SM 2540 C-2011
Batch ID: P378274

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P378064

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P378057

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377956

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: P378150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378155

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378170

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377937

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: P378001

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: P378027

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: P377758

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

Reference Method: SM 2120 B-2011
Batch ID: P377718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.5		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P378052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P378057

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377956

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151408	Chloride	99.8		P	90 - 110
2151539	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151408	Sulfate	101		P	90 - 110
2151539	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151199	Ammonia-N	97.1	95.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151489	Kjeldahl Nitrogen	103	113	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151571	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151262	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151547	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377758

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151490	O-Phosphate-P	96.3	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P378057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151851	Fluoride	104	105	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P377956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151547	Organic Carbon	95.8	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151581	Turbidity	2.67	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151408	Chloride	0.701	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151408	Sulfate	0.930	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151199	Ammonia-N	0.947	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151489	Kjeldahl Nitrogen	9.19	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151571	NO2NO3-N	0.575	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151262	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151547	Total-P	0.391	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151490	O-Phosphate-P	0.718	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
 Batch ID: P377718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151567	Color (true)	2.24	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P378052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151851	Total Alkalinity	0.134	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
 Batch ID: P378274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151567	TDS	9.02	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P378057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151851	Fluoride	0.968	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
 Batch ID: P377956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151547	Organic Carbon	1.12	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A97115

Included Lab Sample IDs: 2151567, 2151568, 2151569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.1	99.3	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97136

Included Lab Sample IDs: 2151573, 2151574, 2151575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.6	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97142

Included Lab Sample IDs: 2151567, 2151568, 2151569

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: A97170

Included Lab Sample IDs: 2151567, 2151568, 2151569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	98.3	P/P	90 - 110
Sulfate	100	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97186

Included Lab Sample IDs: 2151571, 2151572

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

Reference Method: SM 5310 B-2011

Run ID: A97198

Included Lab Sample IDs: 2151570, 2151571, 2151572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97211

Included Lab Sample IDs: 2151570

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

Reference Method: SM 2320 B-2011

Run ID: A97228

Included Lab Sample IDs: 2151567, 2151568, 2151569

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A97228

Included Lab Sample IDs: 2151567, 2151568, 2151569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97280

Included Lab Sample IDs: 2151570, 2151571, 2151572

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97282

Included Lab Sample IDs: 2151570, 2151571, 2151572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	108	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97298

Included Lab Sample IDs: 2151570, 2151571, 2151572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	103	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		LCS	Precision	
						SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					2.67	
EPA 300.0 Rev. 2.1	Chloride	99.4	99.8	101		0.701	
	Sulfate	101	101	101		0.930	
EPA 350.1 Rev. 2.0	Ammonia-N	97.7	97.1	95.5			0.947
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.1	103	113			9.19
EPA 353.2 Rev. 2.0	NO2NO3-N	102	100	102			0.575
	NO2NO3-N	101	101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	104	107	107			0.391
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	96.3	97.2			0.718
SM 2120 B-2011	Color (true)	98.5				2.24	
SM 2320 B-2011	Total Alkalinity	103				0.134	
SM 2540 C-2011	TDS					9.02	
SM 4500 F-C-2011	Fluoride	97.2	104	105			0.968
SM 5310 B-2011	Organic Carbon	99.2	95.8	97.0			1.12

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2151567, 2151568, 2151569
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2151567, 2151568, 2151569
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2151567, 2151568, 2151569
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2151570, 2151571, 2151572
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2151570, 2151571, 2151572
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2151570, 2151571, 2151572
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2151570, 2151571, 2151572
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2151573, 2151574, 2151575
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2151567, 2151568, 2151569
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2151567, 2151568, 2151569
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2151567, 2151568, 2151569
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2151567, 2151568, 2151569
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2151567, 2151568, 2151569
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2151570, 2151571, 2151572

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	01/24/2020			01/24/2020 16:34	Yen Ta	2151567, 2151568, 2151569
EPA 300.0 Rev. 2.1	01/24/2020			01/30/2020 20:33	Lipi Saha	2151567
	01/24/2020			01/30/2020 20:45	Lipi Saha	2151568
	01/24/2020			01/30/2020 20:57	Lipi Saha	2151569
EPA 350.1 Rev. 2.0	01/24/2020			02/03/2020 13:22	Ping Hua	2151570
	01/24/2020			02/03/2020 13:41	Ping Hua	2151571
	01/24/2020			02/03/2020 13:43	Ping Hua	2151572
EPA 351.2 Rev. 2.0	01/24/2020	02/03/2020 11:45	Jhamieka S. Greenwood	02/04/2020 11:19	Jhamieka S. Greenwood	2151570
	01/24/2020	02/03/2020 11:45	Jhamieka S. Greenwood	02/04/2020 11:20	Jhamieka S. Greenwood	2151571
	01/24/2020	02/03/2020 11:45	Jhamieka S. Greenwood	02/04/2020 11:22	Jhamieka S. Greenwood	2151572
EPA 353.2 Rev. 2.0	01/24/2020			01/29/2020 10:04	Beverly Y. Sanders	2151571
	01/24/2020			01/29/2020 10:10	Beverly Y. Sanders	2151572
	01/24/2020			01/30/2020 10:26	Beverly Y. Sanders	2151570
EPA 365.1 Rev. 2.0	01/24/2020	01/30/2020 14:58	Yen Ta	02/03/2020 12:19	Benjamin T. Nordmann	2151570
	01/24/2020	01/30/2020 14:58	Yen Ta	02/03/2020 12:20	Benjamin T. Nordmann	2151571
	01/24/2020	01/30/2020 14:58	Yen Ta	02/03/2020 12:21	Benjamin T. Nordmann	2151572
EPA 365.1 Rev. 2.0 dissolved	01/24/2020			01/24/2020 16:45	Carlos Miranda	2151573
	01/24/2020			01/24/2020 16:46	Carlos Miranda	2151574
	01/24/2020			01/24/2020 16:47	Carlos Miranda	2151575
SM 2120 B-2011	01/24/2020			01/24/2020 17:32	Madeline Funaro	2151567, 2151568
	01/24/2020			01/24/2020 17:33	Madeline Funaro	2151569
SM 2320 B-2011	01/24/2020			01/30/2020 06:49	Dale L. Simmons	2151567
	01/24/2020			01/30/2020 07:03	Dale L. Simmons	2151568
	01/24/2020			01/30/2020 07:16	Dale L. Simmons	2151569
SM 2540 C-2011	01/24/2020			01/29/2020 17:00	Blanca Fach	2151567, 2151568, 2151569
SM 2540 D-2011	01/24/2020			01/29/2020 17:00	Blanca Fach	2151567, 2151568, 2151569
SM 4500 F-C-2011	01/24/2020			01/30/2020 06:49	Dale L. Simmons	2151567
	01/24/2020			01/30/2020 07:03	Dale L. Simmons	2151568
	01/24/2020			01/30/2020 07:16	Dale L. Simmons	2151569
SM 5310 B-2011	01/24/2020			01/29/2020 18:49	Madeline Funaro	2151570
	01/24/2020			01/29/2020 19:02	Madeline Funaro	2151571
	01/24/2020			01/29/2020 19:14	Madeline Funaro	2151572