

Chemical Analysis Report

CEN-DIST-2020-07-01-01

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

Event Description: **Blanket Bay Slough X2**
Request ID: **RQ-2020-04-06-23**
Customer: **CEN-DIST**
Project ID: **SMP**

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

Date Certified: 17-JUL-2020 08:46

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: Blanket Bay Slough @ 0.9 mi. Upstream of Kissimmee River

Collection Date/Time: 06/30/2020 10:58

Field ID: G4CE0179

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179944	EPA 180.1 Rev. 2.0	Turbidity	9.8		NTU	P383941	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P384101	
		Sulfate	1.8		mg SO4/L	P384105	
	SM 2120 B-2011	Color (true)	530		PCU	P383952	
	SM 2320 B-2011	Total Alkalinity	30		mg CaCO3/L	P384130	
	SM 2540 C-2011	TDS	175		mg/L	P384597	
	SM 2540 D-2011	TSS	8	I	mg/L	P384394	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P384139	
2179945	EPA 350.1 Rev. 2.0	Ammonia-N	0.40		mg N/L	P384027	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.6		mg N/L	P383990	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P384069	
	EPA 365.1 Rev. 2.0	Total-P	0.28		mg P/L	P383986	
	SM 5310 B-2011	Organic Carbon	37		mg C/L	P384109	
2179946	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.20		mg P/L	P383948	

Ref. Method and Comment:

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.

Sample Location: Blanket Bay Slough @ SR 60

Collection Date/Time: 06/30/2020 10:14

Field ID: G4CE0180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179941	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P383941	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P384101	
		Sulfate	1.4		mg SO4/L	P384105	
	SM 2120 B-2011	Color (true)	570		PCU	P383952	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P384130	
	SM 2540 C-2011	TDS	162		mg/L	P384597	
	SM 2540 D-2011	TSS	16		mg/L	P384394	
2179942	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P384139	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.35		mg N/L	P384027	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.8		mg N/L	P383990	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P384069	
	EPA 365.1 Rev. 2.0	Total-P	0.29		mg P/L	P383986	
2179943	SM 5310 B-2011	Organic Carbon	38		mg C/L	P384109	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.19		mg P/L	P383948	

Ref. Method and Comment:

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.

Sample Location: Packingham Slough @ 3 km S of SR 60

Collection Date/Time: 06/30/2020 11:18

Field ID: G4CE0186

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179947	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P383941	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P384101	
		Sulfate	6.6		mg SO4/L	P384105	
	SM 2120 B-2011	Color (true)	63	A	PCU	P383952	
	SM 2320 B-2011	Total Alkalinity	29		mg CaCO3/L	P384133	
	SM 2540 C-2011	TDS	105		mg/L	P384597	
	SM 2540 D-2011	TSS	11	I	mg/L	P384394	
	SM 4500 F-C-2011	Fluoride	0.10		mg F/L	P384140	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P384027	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P383990	
2179948	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384069	
	EPA 365.1 Rev. 2.0	Total-P	0.059		mg P/L	P383986	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P384109	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P383948	
	dissolved						

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated because of sample matrix interference.

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: P383941

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384101

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384105

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384027

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383990

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384069

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383986

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383948

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

Reference Method: SM 2120 B-2011
Batch ID: P383952

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P384130

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

Reference Method: SM 2320 B-2011
Batch ID: P384133

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

Reference Method: SM 2540 C-2011
Batch ID: P384597

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384394

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P384139

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P384140

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P384109

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: P384101

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384105

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383990

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384069

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383986

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383948

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

Reference Method: SM 2120 B-2011
Batch ID: P383952

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P384130

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.9		P	93 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P384133

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.7		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P384139

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.1		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P384140

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P384109

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: P384101

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179729	Chloride	99.5		P	90 - 110
2179915	Chloride	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179729	Sulfate	98.1		P	90 - 110
2179915	Sulfate	95.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179948	Ammonia-N	98.2	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384069

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179948	NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179818	Total-P	96.4	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179923	O-Phosphate-P	96.4	97.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P384139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180187	Fluoride	101	98.1	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P384140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180125	Fluoride	101	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P384109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180024	Organic Carbon	101	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P383941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179870	Turbidity	4.11	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384101

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179915	Chloride	0.381	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179915	Sulfate	0.0801	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179948	Ammonia-N	2.77	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179948	Kjeldahl Nitrogen	1.82	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179948	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179818	Total-P	0.382	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179923	O-Phosphate-P	1.29	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
 Batch ID: P383952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179947	Color (true)	0.423	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P384130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180187	Total Alkalinity	0.630	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
 Batch ID: P384133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180125	Total Alkalinity	1.19	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P384597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179966	TDS	3.32	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P384139

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180187	Fluoride	1.41	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
 Batch ID: P384140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180125	Fluoride	0.467	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P384109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180024	Organic Carbon	1.06	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: A99631

Included Lab Sample IDs: 2179943, 2179946, 2179949

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.7	96.4	P/P	90 - 110
O-Phosphate-P	99.0	98.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99632

Included Lab Sample IDs: 2179941, 2179944, 2179947

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A99633

Included Lab Sample IDs: 2179941, 2179944, 2179947

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	90 - 115
Color (true)	102	103	P/P	90 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99659

Included Lab Sample IDs: 2179941, 2179944, 2179947

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	99.7	99.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99664

Included Lab Sample IDs: 2179942, 2179945, 2179948

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99684

Included Lab Sample IDs: 2179942, 2179945, 2179948

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99685

Included Lab Sample IDs: 2179942, 2179945, 2179948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	104	P/P	90 - 110
Kjeldahl Nitrogen	104	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A99701

Included Lab Sample IDs: 2179942, 2179945, 2179948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	99.0	P/P	90 - 110
Organic Carbon	99.1	98.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A99709

Included Lab Sample IDs: 2179941, 2179944, 2179947

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.1	94.7	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A99709

Included Lab Sample IDs: 2179941, 2179944, 2179947

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99717

Included Lab Sample IDs: 2179942, 2179945, 2179948

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.8	98.7	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 180.1 Rev. 2.0	Turbidity				4.11	
EPA 300.0 Rev. 2.1	Chloride	99.9	98.0	99.5	0.381	
	Sulfate	98.5	95.0	98.1	0.0801	
EPA 350.1 Rev. 2.0	Ammonia-N	97.6	98.2	101		2.77
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109				1.82
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	98.5	98.5		0.0
EPA 365.1 Rev. 2.0	Total-P	96.6	96.4	96.0		0.382
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104	96.4	97.9		1.29
SM 2120 B-2011	Color (true)	100			0.423	
SM 2320 B-2011	Total Alkalinity	95.9			0.630	
	Total Alkalinity	95.7			1.19	
SM 2540 C-2011	TDS				3.32	
SM 4500 F-C-2011	Fluoride	98.1	101	98.1		1.41
	Fluoride	100	101	102		0.467
SM 5310 B-2011	Organic Carbon	100	101	103		1.06

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2179941, 2179944, 2179947
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2179941, 2179944, 2179947
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2179941, 2179944, 2179947
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2179942, 2179945, 2179948
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2179942, 2179945, 2179948
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2179942, 2179945, 2179948
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2179942, 2179945, 2179948
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2179943, 2179946, 2179949
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2179941, 2179944, 2179947
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2179941, 2179944, 2179947
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2179941, 2179944, 2179947
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2179941, 2179944, 2179947
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2179941, 2179944, 2179947
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2179942, 2179945, 2179948

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	07/01/2020			07/01/2020 15:56	Yen Ta	2179941, 2179944, 2179947
EPA 300.0 Rev. 2.1	07/01/2020			07/02/2020 23:53	Jhamieka S. Greenwood	2179941
	07/01/2020			07/03/2020 00:05	Jhamieka S. Greenwood	2179944
	07/01/2020			07/03/2020 00:17	Jhamieka S. Greenwood	2179947
EPA 350.1 Rev. 2.0	07/01/2020			07/04/2020 14:20	Ping Hua	2179948
	07/01/2020			07/04/2020 14:24	Ping Hua	2179942
	07/01/2020			07/04/2020 14:26	Ping Hua	2179945
EPA 351.2 Rev. 2.0	07/01/2020	07/02/2020 09:50	Sima Feizi	07/06/2020 10:40	Jhamieka S. Greenwood	2179948
	07/01/2020	07/02/2020 09:50	Sima Feizi	07/06/2020 10:59	Jhamieka S. Greenwood	2179942
	07/01/2020	07/02/2020 09:50	Sima Feizi	07/06/2020 11:01	Jhamieka S. Greenwood	2179945
EPA 353.2 Rev. 2.0	07/01/2020			07/06/2020 09:23	Beverly Y. Sanders	2179948
	07/01/2020			07/06/2020 09:29	Beverly Y. Sanders	2179942
	07/01/2020			07/06/2020 09:30	Beverly Y. Sanders	2179945
EPA 365.1 Rev. 2.0	07/01/2020	07/02/2020 11:42	Yen Ta	07/07/2020 12:26	Benjamin T. Nordmann	2179942
	07/01/2020	07/02/2020 11:42	Yen Ta	07/07/2020 12:27	Benjamin T. Nordmann	2179945
	07/01/2020	07/02/2020 11:42	Yen Ta	07/07/2020 12:28	Benjamin T. Nordmann	2179948
EPA 365.1 Rev. 2.0 dissolved	07/01/2020			07/01/2020 15:28	Jhamieka S. Greenwood	2179943
	07/01/2020			07/01/2020 15:29	Jhamieka S. Greenwood	2179949
	07/01/2020			07/01/2020 16:06	Jhamieka S. Greenwood	2179946
SM 2120 B-2011	07/01/2020			07/01/2020 16:51	Benjamin T. Nordmann	2179947
	07/01/2020			07/01/2020 17:36	Benjamin T. Nordmann	2179941
	07/01/2020			07/01/2020 17:37	Benjamin T. Nordmann	2179944
SM 2320 B-2011	07/01/2020			07/06/2020 21:49	Dale L. Simmons	2179941
	07/01/2020			07/06/2020 22:01	Dale L. Simmons	2179944
	07/01/2020			07/06/2020 23:09	Dale L. Simmons	2179947
SM 2540 C-2011	07/01/2020			07/06/2020 14:02	Yijie Li	2179941, 2179944, 2179947
SM 2540 D-2011	07/01/2020			07/06/2020 14:02	Yijie Li	2179941, 2179944, 2179947
SM 4500 F-C-2011	07/01/2020			07/06/2020 21:49	Dale L. Simmons	2179941
	07/01/2020			07/06/2020 22:01	Dale L. Simmons	2179944
	07/01/2020			07/06/2020 23:09	Dale L. Simmons	2179947
SM 5310 B-2011	07/01/2020			07/06/2020 15:24	Lauren Lees	2179942
	07/01/2020			07/06/2020 15:36	Lauren Lees	2179945
	07/01/2020			07/06/2020 16:14	Lauren Lees	2179948