

Chemical Analysis Report

SO-DIST-2020-10-30-01

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

Event Description: **ENP**
Request ID: **RQ-2020-10-19-19**
Customer: **SO-DIST**
Project ID: **SMP**

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: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 24-NOV-2020 10:36

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: 8068 @ Enre5 - Middle

Collection Date/Time: 10/29/2020 12:50

Field ID: G5SD0037

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2205574	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P389574	
	EPA 300.0 Rev. 2.1	Bromide	73		mg Br/L	P389912	
	SM 2320 B-2011	Total Alkalinity	115		mg CaCO3/L	P389777	
	SM 2540 D-2011	TSS	3	I	mg/L	P390000	
	SM 4500 F-C-2011	Fluoride	1.3		mg F/L	P389779	
2205579	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P389578	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P389723	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P389792	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P389934	
	SM 5310 B-2011	Organic Carbon	3.8		mg C/L	P389655	
2205584	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P389565	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: 8066 @ Enre5

Collection Date/Time: 10/29/2020 10:45

Field ID: G5SD0039

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2205575	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P389574	
	EPA 300.0 Rev. 2.1	Bromide	59		mg Br/L	P389912	
	SM 2320 B-2011	Total Alkalinity	110		mg CaCO3/L	P389777	
	SM 2540 D-2011	TSS	3	U	mg/L	P390000	
	SM 4500 F-C-2011	Fluoride	1.0		mg F/L	P389779	
2205580	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P389578	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38	I	mg N/L	P389723	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P389792	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P389934	
	SM 5310 B-2011	Organic Carbon	4.2		mg C/L	P389655	
2205585	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389565	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Enre14 Harney River

Collection Date/Time: 10/29/2020 12:00

Field ID: G5SD0077

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2205576	EPA 180.1 Rev. 2.0	Turbidity	4.9		NTU	P389574	
	EPA 300.0 Rev. 2.1	Bromide	19		mg Br/L	P389912	
	SM 2320 B-2011	Total Alkalinity	152	A	mg CaCO3/L	P389777	
	SM 2540 D-2011	TSS	8	I	mg/L	P390000	
	SM 4500 F-C-2011	Fluoride	0.44		mg F/L	P389779	
2205581	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P389578	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P389723	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P389792	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P389934	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P389655	
2205586	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P389565	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: 8069 - Enre13

Collection Date/Time: 10/29/2020 12:35

Field ID: G5SD0076

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2205577	EPA 180.1 Rev. 2.0	Turbidity	3.2	A	NTU	P389575	
	EPA 300.0 Rev. 2.1	Bromide	67		mg Br/L	P389912	
	SM 2320 B-2011	Total Alkalinity	130		mg CaCO3/L	P389777	
	SM 2540 D-2011	TSS	5	I	mg/L	P390000	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P389779	
2205582	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P389578	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P389723	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P389792	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P389934	
	SM 5310 B-2011	Organic Carbon	5.6		mg C/L	P389655	
2205587	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389565	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: 8067 Enre 9 Near First Bay

Collection Date/Time: 10/29/2020 13:45

Field ID: G5SD0107

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2205578	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P389575	
	EPA 300.0 Rev. 2.1	Bromide	48		mg Br/L	P389912	
	SM 2320 B-2011	Total Alkalinity	118		mg CaCO3/L	P389777	
	SM 2540 D-2011	TSS	4	IA	mg/L	P390000	
	SM 4500 F-C-2011	Fluoride	0.87		mg F/L	P389779	
2205583	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P389578	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P389723	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P389792	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P389934	
	SM 5310 B-2011	Organic Carbon	6.6		mg C/L	P389655	
2205588	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389565	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389574

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389575

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389912

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389578

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389723

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389792

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389934

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389565

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

Reference Method: SM 2320 B-2011
Batch ID: P389777

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P390000

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P389779

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P389655

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: P389912

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389578

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389723

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389792

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389934

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: P389565

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

Reference Method: SM 2320 B-2011
Batch ID: P389777

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P389779

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.5		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P389655

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P389912

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205470	Bromide	103		P	90 - 110
2205479	Bromide	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P389578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204753	Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P389723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205581	Kjeldahl Nitrogen	110	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P389792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205580	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P389934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205579	Total-P	96.2	93.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P389565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205586	O-Phosphate-P	98.8	97.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
 Batch ID: P389779

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205576	Fluoride	103	104	P/P	94 - 107

Reference Method: SM 5310 B-2011
 Batch ID: P389655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205582	Organic Carbon	99.3	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205478	Turbidity	7.82	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205577	Turbidity	8.81	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204753	Ammonia-N	0.181	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205581	Kjeldahl Nitrogen	2.18	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205580	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205579	Total-P	3.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205586	O-Phosphate-P	0.851	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P389777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205576	Total Alkalinity	1.59	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P389779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205576	Fluoride	0.487	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P389655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205582	Organic Carbon	1.05	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: A101885

Included Lab Sample IDs: 2205584, 2205585, 2205586, 2205587, 2205588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	99.6	P/P	90 - 110
O-Phosphate-P	99.6	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101889

Included Lab Sample IDs: 2205574, 2205575, 2205576, 2205577, 2205578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101890

Included Lab Sample IDs: 2205579, 2205580, 2205581, 2205582, 2205583

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

Reference Method: SM 5310 B-2011

Run ID: A101919

Included Lab Sample IDs: 2205579, 2205580, 2205581, 2205582, 2205583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	99.8	P/P	90 - 110
Organic Carbon	104	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101958

Included Lab Sample IDs: 2205579, 2205580, 2205581, 2205582, 2205583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	P/P	90 - 110
Kjeldahl Nitrogen	98.6	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A101970

Included Lab Sample IDs: 2205574, 2205575, 2205576, 2205577, 2205578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	99.1	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A101970

Included Lab Sample IDs: 2205574, 2205575, 2205576, 2205577, 2205578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110
Fluoride	95.4	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101978

Included Lab Sample IDs: 2205579, 2205580, 2205581, 2205582, 2205583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101986

Included Lab Sample IDs: 2205574, 2205575, 2205576, 2205577, 2205578

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A102136

Included Lab Sample IDs: 2205579, 2205580, 2205581, 2205582, 2205583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.5	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					7.82	
	Turbidity					8.81	
EPA 300.0 Rev. 2.1	Bromide	103	103	104			
EPA 350.1 Rev. 2.0	Ammonia-N	102	105	105			0.181
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	110	107			2.18
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	102	101			0.494
EPA 365.1 Rev. 2.0	Total-P	106	96.2	93.2			3.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	98.8	97.9			0.851
SM 2320 B-2011	Total Alkalinity	99.3				1.59	
SM 4500 F-C-2011	Fluoride	94.5	103	104			0.487
SM 5310 B-2011	Organic Carbon	105	99.3	100			1.05

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2205574, 2205575, 2205576, 2205577, 2205578
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2205574, 2205575, 2205576, 2205577, 2205578
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2205579, 2205580, 2205581, 2205582, 2205583
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2205579, 2205580, 2205581, 2205582, 2205583
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2205579, 2205580, 2205581, 2205582, 2205583
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2205579, 2205580, 2205581, 2205582, 2205583
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2205584, 2205585, 2205586, 2205587, 2205588
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2205574, 2205575, 2205576, 2205577, 2205578
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2205574, 2205575, 2205576, 2205577, 2205578
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2205574, 2205575, 2205576, 2205577, 2205578
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2205579, 2205580, 2205581, 2205582, 2205583

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	10/30/2020			10/30/2020 14:42	Yen Ta	2205574, 2205575, 2205576, 2205577, 2205578
EPA 300.0 Rev. 2.1	10/30/2020			11/06/2020 20:43	Lipi Saha	2205574
	10/30/2020			11/06/2020 21:01	Lipi Saha	2205575
	10/30/2020			11/06/2020 21:19	Lipi Saha	2205576
	10/30/2020			11/06/2020 21:37	Lipi Saha	2205577
	10/30/2020			11/06/2020 21:56	Lipi Saha	2205578
EPA 350.1 Rev. 2.0	10/30/2020			10/31/2020 14:47	Ping Hua	2205579
	10/30/2020			10/31/2020 14:48	Ping Hua	2205580
	10/30/2020			10/31/2020 14:50	Ping Hua	2205581
	10/30/2020			10/31/2020 14:51	Ping Hua	2205582
	10/30/2020			10/31/2020 14:53	Ping Hua	2205583
EPA 351.2 Rev. 2.0	10/30/2020	11/02/2020 13:39	David Boose	11/04/2020 15:25	Elliott Rodriguez	2205581
	10/30/2020	11/02/2020 13:39	David Boose	11/04/2020 15:30	Elliott Rodriguez	2205579
	10/30/2020	11/02/2020 13:39	David Boose	11/04/2020 15:32	Elliott Rodriguez	2205580
	10/30/2020	11/02/2020 13:39	David Boose	11/04/2020 15:34	Elliott Rodriguez	2205582
	10/30/2020	11/02/2020 13:39	David Boose	11/04/2020 15:38	Elliott Rodriguez	2205583
EPA 353.2 Rev. 2.0	10/30/2020			11/05/2020 10:03	Beverly Y. Sanders	2205580
	10/30/2020			11/05/2020 10:10	Beverly Y. Sanders	2205579
	10/30/2020			11/05/2020 10:11	Beverly Y. Sanders	2205581
	10/30/2020			11/05/2020 10:12	Beverly Y. Sanders	2205582
	10/30/2020			11/05/2020 10:13	Beverly Y. Sanders	2205583
EPA 365.1 Rev. 2.0	10/30/2020	11/09/2020 12:24	Yen Ta	11/13/2020 13:59	Shengyu Wang	2205579
	10/30/2020	11/09/2020 12:24	Yen Ta	11/13/2020 14:00	Shengyu Wang	2205580
	10/30/2020	11/09/2020 12:24	Yen Ta	11/13/2020 14:01	Shengyu Wang	2205581
	10/30/2020	11/09/2020 12:24	Yen Ta	11/13/2020 14:02	Shengyu Wang	2205582
	10/30/2020	11/09/2020 12:24	Yen Ta	11/13/2020 14:03	Shengyu Wang	2205583
EPA 365.1 Rev. 2.0 dissolved	10/30/2020			10/30/2020 15:28	Blanca Fach	2205586
	10/30/2020			10/30/2020 15:30	Blanca Fach	2205584
	10/30/2020			10/30/2020 15:31	Blanca Fach	2205585
	10/30/2020			10/30/2020 15:36	Blanca Fach	2205587
	10/30/2020			10/30/2020 15:37	Blanca Fach	2205588
SM 2320 B-2011	10/30/2020			11/05/2020 03:11	Samantha Davila	2205576
	10/30/2020			11/05/2020 04:15	Samantha Davila	2205574
	10/30/2020			11/05/2020 04:28	Samantha Davila	2205575
	10/30/2020			11/05/2020 04:40	Samantha Davila	2205577
	10/30/2020			11/05/2020 04:53	Samantha Davila	2205578
SM 2540 D-2011	10/30/2020			11/04/2020 14:21	Yijie Li	2205574, 2205575, 2205576, 2205577, 2205578
SM 4500 F-C-2011	10/30/2020			11/04/2020 23:45	Samantha Davila	2205576

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-2011	10/30/2020			11/05/2020 01:41	Samantha Davila	2205574
	10/30/2020			11/05/2020 01:46	Samantha Davila	2205575
	10/30/2020			11/05/2020 01:51	Samantha Davila	2205577
	10/30/2020			11/05/2020 01:57	Samantha Davila	2205578
SM 5310 B-2011	10/30/2020			11/02/2020 21:09	Touraj Touran	2205582
	10/30/2020			11/02/2020 22:32	Touraj Touran	2205579
	10/30/2020			11/02/2020 22:56	Touraj Touran	2205580
	10/30/2020			11/02/2020 23:10	Touraj Touran	2205581
	10/30/2020			11/02/2020 23:22	Touraj Touran	2205583