

Chemical Analysis Report

SE-DIST-2019-09-26-01

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

Event Description: **SMP-Drum**
Request ID: **RQ-2019-09-23-52**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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2199 South Rock Road
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 11-OCT-2019 10:42

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: Moores Creek @ 7th

Collection Date/Time: 09/25/2019 09:50

Field ID: G2SE0016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122712	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P371420	
	EPA 300.0	Bromide	72		mg Br/L	P371835	
	EPA 300.0 Rev. 2.1	Sulfate	2.4E+03		mg SO4/L	P371982	
	SM 2320 B-97	Total Alkalinity	134		mg CaCO3/L	P371988	
	SM 2540 D-97	TSS	4	I	mg/L	P371976	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P371991	
2122713	EPA 350.1 Rev. 2.0	Ammonia-N	0.090		mg N/L	P371869	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P371545	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P371540	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P371556	MS
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P371644	
2122714	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P371404	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: C-25 Canal West @ Godwin

Collection Date/Time: 09/25/2019 10:25

Field ID: G2SE0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122697	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P371420	
	EPA 300.0 Rev. 2.1	Chloride	230		mg Cl/L	P371977	
		Sulfate	82		mg SO4/L	P371981	
	SM 2120 B	Color (true)	120		PCU	P371414	
	SM 2320 B-97	Total Alkalinity	189		mg CaCO3/L	P371887	
	SM 2540 C-97	TDS	724		mg/L	P371727	
	SM 2540 D-97	TSS	3	I	mg/L	P371564	
	SM 4500 F-C-97	Fluoride	0.33		mg F/L	P371890	
2122698	EPA 350.1 Rev. 2.0	Ammonia-N	0.28		mg N/L	P371868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P371547	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P371449	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P371557	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P371642	
2122699	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.24		mg P/L	P371403	

Ref. Method and Comment:

SM 2540 D-97: 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: Sweetwater Branch @ 441

Collection Date/Time: 09/25/2019 11:20

Field ID: G3SE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122700	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P371420	
	EPA 300.0 Rev. 2.1	Chloride	21	A	mg Cl/L	P371978	
		Sulfate	4.1	A	mg SO4/L	P371982	
	SM 2120 B	Color (true)	150		PCU	P371414	
	SM 2320 B-97	Total Alkalinity	21		mg CaCO3/L	P371887	
	SM 2540 C-97	TDS	102	A	mg/L	P371728	
	SM 2540 D-97	TSS	8	IA	mg/L	P371565	
	SM 4500 F-C-97	Fluoride	0.063	I	mg F/L	P371890	
2122701	EPA 350.1 Rev. 2.0	Ammonia-N	0.057		mg N/L	P371868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P371547	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.076		mg N/L	P371450	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P371557	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P371642	
2122702	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P371403	

Ref. Method and Comment:

SM 2540 D-97: 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: Padgett Branch @ 441

Collection Date/Time: 09/25/2019 11:55

Field ID: G3SE0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122694	EPA 180.1 Rev. 2.0	Turbidity	3.2	A	NTU	P371420	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P371977	
		Sulfate	2.3		mg SO4/L	P371981	
	SM 2120 B	Color (true)	200		PCU	P371414	
	SM 2320 B-97	Total Alkalinity	37		mg CaCO3/L	P371887	
	SM 2540 C-97	TDS	119		mg/L	P371727	
	SM 2540 D-97	TSS	7	I	mg/L	P371564	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P371890	
2122695	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P371868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P371547	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P371449	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P371557	
	SM 5310 B-00	Organic Carbon	23		mg C/L	P371642	
2122696	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.20		mg P/L	P371403	

Ref. Method and Comment:

SM 2540 D-97: 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: Oak Creek @ 68

Collection Date/Time: 09/25/2019 13:40

Field ID: G4SE0080

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122703	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P371420	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P371978	
		Sulfate	1.3		mg SO4/L	P371982	
	SM 2120 B	Color (true)	220		PCU	P371414	
	SM 2320 B-97	Total Alkalinity	12		mg CaCO3/L	P371887	
	SM 2540 C-97	TDS	99		mg/L	P371728	
	SM 2540 D-97	TSS	2	I	mg/L	P371565	
	SM 4500 F-C-97	Fluoride	0.062	I	mg F/L	P371890	
2122704	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P371868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P371547	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.072		mg N/L	P371450	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P371557	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P371642	
2122705	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P371405	

Ref. Method and Comment:

SM 2540 D-97: 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.

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 10/07/2019.

Sample Location: Oak Creek @ 68

Collection Date/Time: 09/25/2019 13:45

Field ID: G4SE0080_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122709	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P371420	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P371978	
		Sulfate	1.3		mg SO4/L	P371982	
	SM 2120 B	Color (true)	220		PCU	P371414	
	SM 2320 B-97	Total Alkalinity	12		mg CaCO3/L	P371887	
	SM 2540 C-97	TDS	101		mg/L	P371728	
	SM 2540 D-97	TSS	2	I	mg/L	P371565	
	SM 4500 F-C-97	Fluoride	0.060	I	mg F/L	P371890	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P371872	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P371547	
2122710	EPA 353.2 Rev. 2.0	NO2NO3-N	0.072		mg N/L	P371450	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P371557	
	SM 5310 B-00	Organic Carbon	28		mg C/L	P371642	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.031		mg P/L	P371405	
	dissolved						

Ref. Method and Comment:

SM 2540 D-97: 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.

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 10/07/2019.

Sample Location: Oak Creek @ 68

Collection Date/Time: 09/25/2019 13:50

Field ID: FB_09252019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2122706	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P371420	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P371978	
		Sulfate	0.20	U	mg SO4/L	P371982	
	SM 2120 B	Color (true)	2.5	U	PCU	P371414	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P371887	
	SM 2540 C-97	TDS	15	U	mg/L	P371728	
	SM 2540 D-97	TSS	2	U	mg/L	P371565	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P371890	
2122707	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P371872	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P371547	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P371450	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P371557	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P371642	
2122708	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P371403	

Ref. Method and Comment:

SM 2540 D-97: 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371420

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P371835

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371977

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371978

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371981

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371982

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371868

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371869

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371872

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371545

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371547

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371449

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371450

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371540

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371556

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371557

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371403

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371404

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371405

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

Reference Method: SM 2120 B
Batch ID: P371414

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P371887

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

Reference Method: SM 2320 B-97
Batch ID: P371988

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

Reference Method: SM 2540 C-97
Batch ID: P371727

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P371728

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P371564

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P371565

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P371976

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P371890

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371991

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P371642

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

Reference Method: SM 5310 B-00
Batch ID: P371644

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
Batch ID: P371835

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371977

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371978

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371982

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371868

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371869

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371872

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: P371545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.3		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371547

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371449

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371450

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371540

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: P371556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	95.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371403

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371405

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P371414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P371887

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

Reference Method: SM 2320 B-97
Batch ID: P371988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P371991

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P371642

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

Reference Method: SM 5310 B-00
Batch ID: P371644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P371835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122392	Bromide	97.4	97.1	P/P	90 - 110
2123040	Bromide	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371977

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122391	Chloride	97.2		P	90 - 110
2122638	Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122700	Chloride	101		P	90 - 110
2122766	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122391	Sulfate	97.9		P	90 - 110
2122638	Sulfate	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122700	Sulfate	102		P	90 - 110
2122766	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371868

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122669	Ammonia-N	94.9	94.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371869

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122488	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371872

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122933	Ammonia-N	93.3	93.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122749	Kjeldahl Nitrogen	99.6	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122537	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122759	NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122713	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122488	Total-P	85.9	88.2	F/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122650	Total-P	94.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122417	O-Phosphate-P	96.2	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122492	O-Phosphate-P	95.2	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122762	O-Phosphate-P	94.8	95.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P371890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123671	Fluoride	98.4	97.0	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P371991

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122805	Fluoride	93.6	92.1	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P371642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122537	Organic Carbon	104	104	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P371644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122491	Organic Carbon	92.3	91.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122694	Turbidity	17.8	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P371835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122392	Bromide	0.319	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371977

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122391	Chloride	0.348	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122700	Chloride	0.286	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122391	Sulfate	2.40	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122700	Sulfate	0.133	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122669	Ammonia-N	0.0630	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122488	Ammonia-N	0.218	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122933	Ammonia-N	0.411	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122749	Kjeldahl Nitrogen	4.62	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122710	Kjeldahl Nitrogen	4.93	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122537	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122759	NO2NO3-N	0.210	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122713	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122488	Total-P	2.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122650	Total-P	6.00	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122417	O-Phosphate-P	0.587	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122492	O-Phosphate-P	1.87	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122762	O-Phosphate-P	1.05	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P371414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122756	Color (true)	0.306	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P371887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123671	Total Alkalinity	0.0291	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P371988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122805	Total Alkalinity	0.730	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P371727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122629	TDS	0.331	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P371728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122700	TDS	2.93	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P371890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123671	Fluoride	0.953	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P371991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122805	Fluoride	0.960	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P371642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122537	Organic Carbon	0.496	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P371644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122491	Organic Carbon	0.570	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: A94535

Included Lab Sample IDs: 2122696, 2122699, 2122702, 2122705, 2122708, 2122711, 2122714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.6	98.6	P/P	90 - 110
O-Phosphate-P	98.6	98.9	P/P	90 - 110
O-Phosphate-P	98.9	99.1	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A94538

Included Lab Sample IDs: 2122694, 2122697, 2122700, 2122703, 2122706, 2122709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115
Color (true)	102	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94539

Included Lab Sample IDs: 2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94552

Included Lab Sample IDs: 2122695, 2122698, 2122701, 2122704, 2122707, 2122710

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94589

Included Lab Sample IDs: 2122713

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94622

Included Lab Sample IDs: 2122695, 2122698, 2122701, 2122704, 2122710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.9	101	P/P	90 - 110
Total-P	99.9	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94623

Included Lab Sample IDs: 2122707, 2122713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.8	P/P	90 - 110
Total-P	98.8	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A94634

Included Lab Sample IDs: 2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	95.6	P/P	90 - 110
Organic Carbon	94.8	99.6	P/P	90 - 110
Organic Carbon	95.6	94.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94637

Included Lab Sample IDs: 2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.2	P/P	90 - 110
Kjeldahl Nitrogen	99.2	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A94686

Included Lab Sample IDs: 2122694, 2122697, 2122700, 2122703, 2122706, 2122709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.8	101	P/P	90 - 110
Chloride	99.9	99.8	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	104	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A94704

Included Lab Sample IDs: 2122712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	105	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94715

Included Lab Sample IDs: 2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	96.0	95.9	P/P	90 - 110
Ammonia-N	96.4	96.0	P/P	90 - 110
Ammonia-N	96.6	97.2	P/P	90 - 110
Ammonia-N	99.9	101	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A94720

Included Lab Sample IDs: 2122694, 2122697, 2122700, 2122703, 2122706, 2122709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A94720

Included Lab Sample IDs: 2122694, 2122697, 2122700, 2122703, 2122706, 2122709

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

Reference Method: SM 2320 B-97

Run ID: A94754

Included Lab Sample IDs: 2122712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94754

Included Lab Sample IDs: 2122712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	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			Precision	
			LCS	SMP	MS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					17.8	
EPA 300.0	Bromide	99.8	97.4	97.1	97.2		0.319
EPA 300.0 Rev. 2.1	Chloride	98.8	97.2	97.7		0.348	
	Chloride	100	101	102		0.286	
	Sulfate	99.7	97.9	103		2.40	
	Sulfate	101	102	103		0.133	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	94.9	94.9			0.0630
	Ammonia-N	101	102	103			0.218
	Ammonia-N	92.0	93.3	93.7			0.411
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.3	99.6	105			4.62
	Kjeldahl Nitrogen	103					4.93
EPA 353.2 Rev. 2.0	NO2NO3-N	100	102	102			0.0
	NO2NO3-N	101	99.0				0.210
	NO2NO3-N	101	102	102			0.0
EPA 365.1 Rev. 2.0	Total-P	97.2	85.9	88.2			2.61
	Total-P	95.1	94.2	100			6.00
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	96.2	97.0			0.587
	O-Phosphate-P	97.4	95.2	97.0			1.87
	O-Phosphate-P	101	94.8	95.8			1.05
SM 2120 B	Color (true)	101				0.306	
SM 2320 B-97	Total Alkalinity	103				0.0291	
	Total Alkalinity	104				0.730	
SM 2540 C-97	TDS					0.331	
	TDS					2.93	
SM 4500 F-C-97	Fluoride	98.7	98.4	97.0			0.953
	Fluoride	98.2	93.6	92.1			0.960
SM 5310 B-00	Organic Carbon	103	104	104			0.496
	Organic Carbon	95.0	92.3	91.7			0.570

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712
EPA 300.0 / E31780	Bromide in aqueous matrices	2122712
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2122694, 2122697, 2122700, 2122703, 2122706, 2122709
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2122696, 2122699, 2122702, 2122705, 2122708, 2122711, 2122714
SM 2120 B / E31780	True Color measured at 450 nm	2122694, 2122697, 2122700, 2122703, 2122706, 2122709
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2122694, 2122697, 2122700, 2122703, 2122706, 2122709

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2122695, 2122698, 2122701, 2122704, 2122707, 2122710, 2122713

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	09/26/2019			09/26/2019 16:38	Rosalyn Ballman	2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712
EPA 300.0	09/26/2019			10/03/2019 12:14	Julia Storbeck	2122712
EPA 300.0 Rev. 2.1	09/26/2019			10/04/2019 17:06	Julia Storbeck	2122694
	09/26/2019			10/04/2019 17:18	Julia Storbeck	2122697
	09/26/2019			10/04/2019 18:32	Julia Storbeck	2122700
	09/26/2019			10/04/2019 19:20	Julia Storbeck	2122703
	09/26/2019			10/04/2019 19:32	Julia Storbeck	2122706
	09/26/2019			10/04/2019 19:45	Julia Storbeck	2122709
	09/26/2019			10/04/2019 21:09	Julia Storbeck	2122712
EPA 350.1 Rev. 2.0	09/26/2019			10/03/2019 12:08	Ping Hua	2122695
	09/26/2019			10/03/2019 12:12	Ping Hua	2122704
	09/26/2019			10/03/2019 12:33	Ping Hua	2122713
	09/26/2019			10/03/2019 14:20	Ping Hua	2122707
	09/26/2019			10/03/2019 15:10	Ping Hua	2122698
	09/26/2019			10/03/2019 15:25	Ping Hua	2122701
	09/26/2019			10/03/2019 15:26	Ping Hua	2122710
EPA 351.2 Rev. 2.0	09/26/2019	09/30/2019 13:30	Jhamieka S. Greenwood	10/01/2019 15:31	Julia Storbeck	2122713
	09/26/2019	09/30/2019 13:30	Jhamieka S. Greenwood	10/01/2019 15:42	Julia Storbeck	2122710
	09/26/2019	09/30/2019 13:30	Jhamieka S. Greenwood	10/01/2019 15:47	Julia Storbeck	2122695
	09/26/2019	09/30/2019 13:30	Jhamieka S. Greenwood	10/01/2019 15:48	Julia Storbeck	2122698
	09/26/2019	09/30/2019 13:30	Jhamieka S. Greenwood	10/01/2019 15:50	Julia Storbeck	2122701
	09/26/2019	09/30/2019 13:30	Jhamieka S. Greenwood	10/01/2019 15:51	Julia Storbeck	2122704
	09/26/2019	09/30/2019 13:30	Jhamieka S. Greenwood	10/01/2019 15:53	Julia Storbeck	2122707
EPA 353.2 Rev. 2.0	09/26/2019			09/27/2019 10:42	Beverly Y. Sanders	2122695
	09/26/2019			09/27/2019 10:44	Beverly Y. Sanders	2122698
	09/26/2019			09/27/2019 10:57	Beverly Y. Sanders	2122701
	09/26/2019			09/27/2019 10:58	Beverly Y. Sanders	2122704
	09/26/2019			09/27/2019 10:59	Beverly Y. Sanders	2122710
	09/26/2019			09/27/2019 11:00	Beverly Y. Sanders	2122707
	09/26/2019			09/30/2019 11:38	Beverly Y. Sanders	2122713
EPA 365.1 Rev. 2.0	09/26/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 11:45	Lipi Saha	2122695
	09/26/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 11:46	Lipi Saha	2122698
	09/26/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 11:47	Lipi Saha	2122701
	09/26/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 11:48	Lipi Saha	2122704
	09/26/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 11:52	Lipi Saha	2122710
	09/26/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 12:50	Lipi Saha	2122713
	09/26/2019	09/30/2019 14:39	Vijayalakshmi Reddy	10/01/2019 13:06	Lipi Saha	2122707
EPA 365.1 Rev. 2.0 dissolved	09/26/2019			09/26/2019 14:41	Ping Hua	2122696
	09/26/2019			09/26/2019 14:46	Ping Hua	2122699

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	09/26/2019			09/26/2019 14:47	Ping Hua	2122702
	09/26/2019			09/26/2019 14:48	Ping Hua	2122708
	09/26/2019			09/26/2019 14:59	Ping Hua	2122714
	09/26/2019			09/26/2019 15:00	Ping Hua	2122705
	09/26/2019			09/26/2019 15:01	Ping Hua	2122711
SM 2120 B	09/26/2019			09/26/2019 15:38	Madeline Funaro	2122697
	09/26/2019			09/26/2019 15:41	Madeline Funaro	2122700
	09/26/2019			09/26/2019 15:42	Madeline Funaro	2122706
	09/26/2019			09/26/2019 16:13	Madeline Funaro	2122694
	09/26/2019			09/26/2019 16:14	Madeline Funaro	2122703
SM 2320 B-97	09/26/2019			09/26/2019 16:15	Madeline Funaro	2122709
	09/26/2019			10/03/2019 02:42	Dale L. Simmons	2122694
	09/26/2019			10/03/2019 02:54	Dale L. Simmons	2122700
	09/26/2019			10/03/2019 03:05	Dale L. Simmons	2122703
	09/26/2019			10/03/2019 03:19	Dale L. Simmons	2122706
SM 2540 C-97	09/26/2019			10/03/2019 03:30	Dale L. Simmons	2122709
	09/26/2019			10/03/2019 04:57	Dale L. Simmons	2122697
	09/26/2019			10/04/2019 11:16	Dale L. Simmons	2122712
	09/26/2019			09/27/2019 17:15	Rosalyn Ballman	2122694, 2122697, 2122700, 2122703, 2122706, 2122709
	09/26/2019			09/27/2019 17:15	Rosalyn Ballman	2122694, 2122697, 2122700, 2122703, 2122706, 2122709, 2122712
SM 4500 F-C-97	09/26/2019			10/03/2019 02:42	Dale L. Simmons	2122694
	09/26/2019			10/03/2019 02:54	Dale L. Simmons	2122700
	09/26/2019			10/03/2019 03:05	Dale L. Simmons	2122703
	09/26/2019			10/03/2019 03:19	Dale L. Simmons	2122706
	09/26/2019			10/03/2019 03:30	Dale L. Simmons	2122709
SM 5310 B-00	09/26/2019			10/03/2019 04:57	Dale L. Simmons	2122697
	09/26/2019			10/04/2019 06:31	Dale L. Simmons	2122712
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	09/26/2019			09/30/2019 21:33	Madeline Funaro	2122698
	09/26/2019			09/30/2019 21:45	Madeline Funaro	2122701
	09/26/2019			09/30/2019 22:21	Madeline Funaro	2122704
	09/26/2019			09/30/2019 22:36	Madeline Funaro	2122707
	09/26/2019			09/30/2019 22:48	Madeline Funaro	2122710
	09/26/2019			10/01/2019 07:26	Madeline Funaro	2122713
	09/26/2019					