

Chemical Analysis Report

SE-DIST-2019-11-14-01

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

Event Description: **SMP- Biscayne**
Request ID: **RQ-2019-10-07-30**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

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: 04-DEC-2019 13:26

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: Atlantic Ocean (WBID 8090 ENRG7)

Collection Date/Time: 11/13/2019 10:50

Field ID: G4SE0129

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2136135	EPA 180.1 Rev. 2.0	Turbidity	0.50		NTU	P374248	
	EPA 300.0	Bromide	69		mg Br/L	P375025	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P374662	
	SM 2540 D-97	TSS	4	I	mg/L	P374857	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374664	
2136140	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374441	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24	I	mg N/L	P374615	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374568	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P374709	
	SM 5310 B-00	Organic Carbon	1.3	I	mg C/L	P374430	
2136145	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374275	

Sample Location: Atlantic Ocean (WBID 8090 ENRG6)

Collection Date/Time: 11/13/2019 11:55

Field ID: G4SE0128

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2136136	EPA 180.1 Rev. 2.0	Turbidity	0.25		NTU	P374248	
	EPA 300.0	Bromide	69		mg Br/L	P375025	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P374662	
	SM 2540 D-97	TSS	3	U	mg/L	P374857	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374664	
2136141	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P374441	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P374615	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374568	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P374709	
	SM 5310 B-00	Organic Carbon	1.4	I	mg C/L	P374430	
2136146	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374275	

Sample Location: Atlantic Ocean

Collection Date/Time: 11/13/2019 12:00

Field ID: G4SE0128-DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2136137	EPA 180.1 Rev. 2.0	Turbidity	0.40		NTU	P374248	
	EPA 300.0	Bromide	69		mg Br/L	P375025	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P374662	
	SM 2540 D-97	TSS	3	I	mg/L	P374857	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374664	
2136142	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374441	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P374615	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374568	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P374709	
	SM 5310 B-00	Organic Carbon	1.3	I	mg C/L	P374430	
2136147	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374275	

Sample Location: Atlantic Ocean (WBID 8089 ENRG6)

Collection Date/Time: 11/13/2019 13:30

Field ID: G4SE0105

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2136138	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P374248	
	EPA 300.0	Bromide	69		mg Br/L	P375025	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P374662	
	SM 2540 D-97	TSS	3	U	mg/L	P374857	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374664	
2136143	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P374441	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P374615	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374568	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P374709	
	SM 5310 B-00	Organic Carbon	2.1		mg C/L	P374644	
2136148	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374276	

Sample Location: Atlantic Ocean (WBID 8089 ENRG7)

Collection Date/Time: 11/13/2019 14:00

Field ID: G4SE0104

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2136139	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P374248	
	EPA 300.0	Bromide	69		mg Br/L	P375025	
	SM 2320 B-97	Total Alkalinity	127		mg CaCO3/L	P374662	
	SM 2540 D-97	TSS	4	IA	mg/L	P374858	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P374664	
2136144	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P374460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	I	mg N/L	P374615	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P374568	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I	mg P/L	P374709	
	SM 5310 B-00	Organic Carbon	2.2		mg C/L	P374644	
2136149	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P374276	

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-111 West

Collection Date/Time: 11/13/2019 15:30

Field ID: G4SE0127

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2136132	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P374248	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P374399	
		Sulfate	27		mg SO4/L	P374402	
	SM 2120 B	Color (true)	2.5	U	PCU	P374265	
	SM 2320 B-97	Total Alkalinity	198		mg CaCO3/L	P374495	
	SM 2540 C-97	TDS	312		mg/L	P374860	
	SM 2540 D-97	TSS	2	I	mg/L	P374852	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P374500	
2136133	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P374463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P374609	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.5		mg N/L	P374285	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P374708	
	SM 5310 B-00	Organic Carbon	1.7		mg C/L	P374356	
2136134	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374277	

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-111 West

Collection Date/Time: 11/13/2019 15:35

Field ID: FB-11 13 19

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2136150	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P374248	
	EPA 300.0 Rev. 2.1	Chloride	1.1		mg Cl/L	P374778	
		Sulfate	0.20	U	mg SO4/L	P374779	
	SM 2120 B	Color (true)	2.5	U	PCU	P374265	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P374495	
	SM 2540 C-97	TDS	15	U	mg/L	P374860	
	SM 2540 D-97	TSS	2	U	mg/L	P374852	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374500	
2136151	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P374520	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374286	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P374958	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P374356	
2136152	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374277	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: The result was confirmed on 11/22/2019.

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries and relative percent difference are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-97: 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: P374248

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P375025

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374399

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374402

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374778

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374779

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374441

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374460

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374463

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: P374520

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374609

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374615

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374285

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374286

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374568

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374708

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374709

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374958

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374275

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374276

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374277

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

Reference Method: SM 2120 B
Batch ID: P374265

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P374495

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

Reference Method: SM 2320 B-97
Batch ID: P374662

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

Reference Method: SM 2540 C-97
Batch ID: P374860

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P374852

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P374857

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P374858

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374500

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P374664

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374356

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

Reference Method: SM 5310 B-00
Batch ID: P374430

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

Reference Method: SM 5310 B-00
Batch ID: P374644

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: P375025

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374399

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374402

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374778

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374779

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374441

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: P374460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.1		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374609

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374615

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374285

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: P374286

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374568

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: P374708

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374709

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374958

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374275

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: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374277

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

Reference Method: SM 2120 B
Batch ID: P374265

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P374495

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P374662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.6		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P374664

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P374356

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

Reference Method: SM 5310 B-00
Batch ID: P374430

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P374644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	106		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P375025

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136213	Bromide	92.6	93.5	P/P	90 - 110
2136214	Bromide	92.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374399

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135912	Chloride	97.2		P	90 - 110
2136001	Chloride	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135912	Sulfate	96.8		P	90 - 110
2136001	Sulfate	95.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136671	Chloride	99.8	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136143	Ammonia-N	105	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136144	Ammonia-N	104	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136211	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136194	Kjeldahl Nitrogen	103	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374609

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136211	Kjeldahl Nitrogen	95.3	97.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136140	Kjeldahl Nitrogen	97.7	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135990	NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136191	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136112	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136133	Total-P	90.6	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374709

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136119	Total-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137368	Total-P	98.1	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135905	O-Phosphate-P	95.9	94.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136033	O-Phosphate-P	94.6	95.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136104	O-Phosphate-P	96.0	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P374500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136193	Fluoride	99.4	99.4	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374664

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136607	Fluoride	95.1	95.8	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P374356

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136194	Organic Carbon	102	103	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P374430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135715	Organic Carbon	102	101	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P374644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136609	Organic Carbon	106	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136190	Turbidity	0.899	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P375025

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136213	Bromide	0.791	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374399

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135912	Chloride	2.59	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135912	Sulfate	0.581	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136671	Chloride	0.470	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136143	Ammonia-N	1.37	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136144	Ammonia-N	1.44	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136211	Ammonia-N	0.200	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136194	Kjeldahl Nitrogen	1.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136211	Kjeldahl Nitrogen	1.54	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136140	Kjeldahl Nitrogen	2.28	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135990	NO2NO3-N	0.391	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136191	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136112	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136133	Total-P	10.4	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136119	Total-P	0.529	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137368	Total-P	1.66	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135905	O-Phosphate-P	2.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136033	O-Phosphate-P	0.461	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136104	O-Phosphate-P	1.16	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P374265

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135977	Color (true)	1.88	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P374495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136193	Total Alkalinity	0.393	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P374662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136607	Total Alkalinity	0.607	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P374860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136193	TDS	4.35	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 D-97
Batch ID: P374857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136111	TSS	3.28	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P374500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136193	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P374664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136607	Fluoride	0.473	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P374356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136194	Organic Carbon	0.218	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P374430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135715	Organic Carbon	0.993	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P374644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136609	Organic Carbon	2.50	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95743

Included Lab Sample IDs: 2136132, 2136135, 2136136, 2136137, 2136138, 2136139, 2136150

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	100	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A95748

Included Lab Sample IDs: 2136132, 2136150

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95752

Included Lab Sample IDs: 2136133, 2136151

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95753

Included Lab Sample IDs: 2136134, 2136145, 2136146, 2136147, 2136148, 2136149, 2136152

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	99.7	P/P	90 - 110
O-Phosphate-P	99.7	97.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95765

Included Lab Sample IDs: 2136132

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

Reference Method: SM 5310 B-00

Run ID: A95788

Included Lab Sample IDs: 2136133, 2136151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	106	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A95823

Included Lab Sample IDs: 2136140, 2136141, 2136142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95824

Included Lab Sample IDs: 2136140, 2136141, 2136142, 2136143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95824

Included Lab Sample IDs: 2136140, 2136141, 2136142, 2136143

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95834

Included Lab Sample IDs: 2136133, 2136144, 2136151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	101	P/P	90 - 110
Ammonia-N	99.4	99.9	P/P	90 - 110
Ammonia-N	99.7	99.4	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A95843

Included Lab Sample IDs: 2136132, 2136150

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.4	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95843

Included Lab Sample IDs: 2136132, 2136150

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95875

Included Lab Sample IDs: 2136140, 2136141, 2136142, 2136143, 2136144

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95884

Included Lab Sample IDs: 2136151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	99.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A95899

Included Lab Sample IDs: 2136143, 2136144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A95901

Included Lab Sample IDs: 2136135, 2136136, 2136137, 2136138, 2136139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	98.6	P/P	90 - 110
Total Alkalinity	98.1	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95901

Included Lab Sample IDs: 2136135, 2136136, 2136137, 2136138, 2136139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	99.0	P/P	90 - 110
Fluoride	99.0	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95908

Included Lab Sample IDs: 2136133, 2136140, 2136141, 2136142, 2136143, 2136144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	95.4	P/P	90 - 110
Kjeldahl Nitrogen	97.5	99.1	P/P	90 - 110
Kjeldahl Nitrogen	99.1	98.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95941

Included Lab Sample IDs: 2136150

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95989

Included Lab Sample IDs: 2136133, 2136140, 2136141, 2136142, 2136143, 2136144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.5	99.2	P/P	90 - 110
Total-P	99.2	100	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A96041

Included Lab Sample IDs: 2136135, 2136136, 2136137, 2136138, 2136139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	97.9	98.2	P/P	90 - 110
Bromide	98.2	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96060

Included Lab Sample IDs: 2136151

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

Quality Assurance Report

Calibration Verification

* 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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					0.899	
EPA 300.0	Bromide	96.3	92.6	93.5	92.7		0.791
EPA 300.0 Rev. 2.1	Chloride	98.9	97.2	97.5		2.59	
	Chloride	101	99.8	101			0.470
	Sulfate	98.7	96.8	95.2		0.581	
	Sulfate	100					
EPA 350.1 Rev. 2.0	Ammonia-N	101	105	106			1.37
	Ammonia-N	98.3	104	106			1.44
	Ammonia-N	98.4	100	100			0.200
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.1	103	100			1.84
	Kjeldahl Nitrogen	108	95.3	97.3			1.54
	Kjeldahl Nitrogen	99.9	97.7	100			2.28
EPA 353.2 Rev. 2.0	NO2NO3-N	100	99.0				0.391
	NO2NO3-N	102	102	101			0.494
	NO2NO3-N	100	101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	104	90.6	101			10.4
	Total-P	103	101	101			0.529
	Total-P	102	98.1	100			1.66
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	95.9	94.0			2.00
	O-Phosphate-P	98.0	94.6	95.1			0.461
	O-Phosphate-P	102	96.0	97.2			1.16
SM 2120 B	Color (true)	102				1.88	
SM 2320 B-97	Total Alkalinity	101				0.393	
	Total Alkalinity	101				0.607	
SM 2540 C-97	TDS					4.35	
SM 2540 D-97	TSS					3.28	
SM 4500 F-C-97	Fluoride	98.6	99.4	99.4			0.0
	Fluoride	95.9	95.1	95.8			0.473
SM 5310 B-00	Organic Carbon	103	102	103			0.218
	Organic Carbon	103	102	101			0.993
	Organic Carbon	106	106	103			2.50

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2136132, 2136135, 2136136, 2136137, 2136138, 2136139, 2136150
EPA 300.0 / E31780	Bromide in aqueous matrices	2136135, 2136136, 2136137, 2136138, 2136139
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2136132, 2136150
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2136132, 2136150
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2136133, 2136140, 2136141, 2136142, 2136143, 2136144, 2136151
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2136133, 2136140, 2136141, 2136142, 2136143, 2136144, 2136151
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2136133, 2136140, 2136141, 2136142, 2136143, 2136144, 2136151
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2136133, 2136140, 2136141, 2136142, 2136143, 2136144, 2136151
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2136134, 2136145, 2136146, 2136147, 2136148, 2136149, 2136152
SM 2120 B / E31780	True Color measured at 450 nm	2136132, 2136150

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2136132, 2136135, 2136136, 2136137, 2136138, 2136139, 2136150
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2136132, 2136150
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2136132, 2136135, 2136136, 2136137, 2136138, 2136139, 2136150
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2136132, 2136135, 2136136, 2136137, 2136138, 2136139, 2136150
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2136133, 2136140, 2136141, 2136142, 2136143, 2136144, 2136151

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	11/14/2019			11/14/2019 17:30	Blanca Fach	2136132, 2136135, 2136136, 2136137, 2136138, 2136139, 2136150
EPA 300.0	11/14/2019			11/27/2019 09:17	Julia Storbeck	2136135
	11/14/2019			11/27/2019 09:34	Julia Storbeck	2136136
	11/14/2019			11/27/2019 10:26	Julia Storbeck	2136137
	11/14/2019			11/27/2019 10:43	Julia Storbeck	2136138
	11/14/2019			11/27/2019 11:00	Julia Storbeck	2136139
EPA 300.0 Rev. 2.1	11/14/2019			11/18/2019 20:11	Lipi Saha	2136132
	11/14/2019			11/23/2019 08:15	Julia Storbeck	2136150
EPA 350.1 Rev. 2.0	11/14/2019			11/18/2019 13:42	Ping Hua	2136143
	11/14/2019			11/18/2019 13:46	Ping Hua	2136141
	11/14/2019			11/18/2019 13:48	Ping Hua	2136142
	11/14/2019			11/18/2019 14:04	Ping Hua	2136140
	11/14/2019			11/19/2019 11:06	Ping Hua	2136144
	11/14/2019			11/19/2019 12:46	Ping Hua	2136133
	11/14/2019			11/19/2019 13:01	Ping Hua	2136151
EPA 351.2 Rev. 2.0	11/14/2019	11/20/2019 12:30	Sima Feizi	11/21/2019 17:27	Jhamieka S. Greenwood	2136151
	11/14/2019	11/21/2019 12:25	Sima Feizi	11/22/2019 12:31	Jhamieka S. Greenwood	2136140
	11/14/2019	11/21/2019 12:25	Sima Feizi	11/22/2019 12:46	Jhamieka S. Greenwood	2136141
	11/14/2019	11/21/2019 12:25	Sima Feizi	11/22/2019 12:48	Jhamieka S. Greenwood	2136142
	11/14/2019	11/21/2019 12:25	Sima Feizi	11/22/2019 12:49	Jhamieka S. Greenwood	2136143
	11/14/2019	11/21/2019 12:25	Sima Feizi	11/22/2019 12:51	Jhamieka S. Greenwood	2136144
	11/14/2019	11/21/2019 12:36	Sima Feizi	11/22/2019 13:35	Jhamieka S. Greenwood	2136133
EPA 353.2 Rev. 2.0	11/14/2019			11/15/2019 09:26	Beverly Y. Sanders	2136151
	11/14/2019			11/15/2019 10:05	Beverly Y. Sanders	2136133
	11/14/2019			11/21/2019 10:00	Beverly Y. Sanders	2136141
	11/14/2019			11/21/2019 10:01	Beverly Y. Sanders	2136142
	11/14/2019			11/21/2019 10:02	Beverly Y. Sanders	2136143
	11/14/2019			11/21/2019 10:04	Beverly Y. Sanders	2136144
	11/14/2019			11/21/2019 12:02	Beverly Y. Sanders	2136140
EPA 365.1 Rev. 2.0	11/14/2019	11/22/2019 13:04	Yen Ta	11/26/2019 16:35	Benjamin T. Nordmann	2136133
	11/14/2019	11/22/2019 13:04	Yen Ta	11/26/2019 16:49	Benjamin T. Nordmann	2136140
	11/14/2019	11/22/2019 13:04	Yen Ta	11/26/2019 16:50	Benjamin T. Nordmann	2136141
	11/14/2019	11/22/2019 13:04	Yen Ta	11/26/2019 16:51	Benjamin T. Nordmann	2136142
	11/14/2019	11/22/2019 13:04	Yen Ta	11/26/2019 16:52	Benjamin T. Nordmann	2136143
	11/14/2019	11/22/2019 13:04	Yen Ta	11/26/2019 16:53	Benjamin T. Nordmann	2136144
	11/14/2019	11/27/2019 13:48	Yen Ta	12/02/2019 15:56	Benjamin T. Nordmann	2136151
EPA 365.1 Rev. 2.0 dissolved	11/14/2019			11/14/2019 16:16	Samantha Davila	2136145, 2136146
	11/14/2019			11/14/2019 16:17	Samantha Davila	2136147
	11/14/2019			11/14/2019 16:23	Samantha Davila	2136148

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	11/14/2019			11/14/2019 16:28	Samantha Davila	2136149
	11/14/2019			11/14/2019 16:30	Samantha Davila	2136134
	11/14/2019			11/14/2019 16:31	Samantha Davila	2136152
SM 2120 B	11/14/2019			11/14/2019 16:26	Madeline Funaro	2136132
	11/14/2019			11/14/2019 16:27	Madeline Funaro	2136150
SM 2320 B-97	11/14/2019			11/16/2019 09:58	Dale L. Simmons	2136132
	11/14/2019			11/16/2019 10:22	Dale L. Simmons	2136150
	11/14/2019			11/21/2019 03:13	Dale L. Simmons	2136135
	11/14/2019			11/21/2019 04:16	Dale L. Simmons	2136136
	11/14/2019			11/21/2019 04:28	Dale L. Simmons	2136137
	11/14/2019			11/21/2019 04:40	Dale L. Simmons	2136138
	11/14/2019			11/21/2019 04:52	Dale L. Simmons	2136139
SM 2540 C-97	11/14/2019			11/19/2019 15:21	Yijie Li	2136132, 2136150
SM 2540 D-97	11/14/2019			11/19/2019 15:21	Yijie Li	2136132, 2136135, 2136136, 2136137, 2136138, 2136139, 2136150
SM 4500 F-C-97	11/14/2019			11/16/2019 09:58	Dale L. Simmons	2136132
	11/14/2019			11/16/2019 10:22	Dale L. Simmons	2136150
	11/14/2019			11/21/2019 00:19	Dale L. Simmons	2136135
	11/14/2019			11/21/2019 00:23	Dale L. Simmons	2136136
	11/14/2019			11/21/2019 00:27	Dale L. Simmons	2136137
	11/14/2019			11/21/2019 00:31	Dale L. Simmons	2136138
	11/14/2019			11/21/2019 01:24	Dale L. Simmons	2136139
SM 5310 B-00	11/14/2019			11/15/2019 22:55	Lauren Lees	2136133
	11/14/2019			11/15/2019 23:07	Lauren Lees	2136151
	11/14/2019			11/19/2019 10:06	Lauren Lees	2136140
	11/14/2019			11/19/2019 10:18	Lauren Lees	2136141
	11/14/2019			11/19/2019 10:32	Lauren Lees	2136142
	11/14/2019			11/22/2019 04:27	Lauren Lees	2136143
	11/14/2019			11/22/2019 04:56	Lauren Lees	2136144