

Chemical Analysis Report

SE-DIST-2019-11-13-02

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

Event Description: **SMP-SLE Boat**
Request ID: **RQ-2019-10-28-16**
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: Drew Liddick

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: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 04-DEC-2019 16:53



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 groups are included in this report: Metals and 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: South Fork SLR @ Leighton Park

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

Field ID: G2SE0013

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135671	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P374360	
	EPA 300.0	Bromide	20		mg Br/L	P374769	
	SM 2320 B-97	Total Alkalinity	140		mg CaCO3/L	P374290	
	SM 2540 D-97	TSS	10	IA	mg/L	P374823	
	SM 4500 F-C-97	Fluoride	0.46		mg F/L	P374292	
2135674	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P374460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P374511	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P374369	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P374705	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P374272	
2135677	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P374185	

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: South Fork Saint Lucie @ Martin Hwy

Collection Date/Time: 11/12/2019 12:10

Field ID: G2SE0044

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135672	EPA 180.1 Rev. 2.0	Turbidity	6.6		NTU	P374360	
	EPA 300.0	Bromide	18		mg Br/L	P374769	
	SM 2320 B-97	Total Alkalinity	142		mg CaCO3/L	P374290	
	SM 2540 D-97	TSS	10	I	mg/L	P374823	
	SM 4500 F-C-97	Fluoride	0.44		mg F/L	P374292	
2135675	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P374263	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P374503	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P374369	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P374707	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P374272	
2135678	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P374185	

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: South Fork Saint Lucie @ Martin Hwy

Collection Date/Time: 11/12/2019 12:25

Field ID: G2SE0044_DUP

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135673	EPA 180.1 Rev. 2.0	Turbidity	7.7		NTU	P374360	
	EPA 300.0	Bromide	18		mg Br/L	P374769	
	SM 2320 B-97	Total Alkalinity	143		mg CaCO3/L	P374290	
	SM 2540 D-97	TSS	10		mg/L	P374823	
	SM 4500 F-C-97	Fluoride	0.44		mg F/L	P374292	
2135676	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P374263	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P374503	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P374369	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P374707	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P374272	
2135679	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P374185	

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: South Fork SLR @ Gaines Ave

Collection Date/Time: 11/12/2019 14:30

Field ID: G2SE0039

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135668	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P374360	
	EPA 300.0	Bromide	0.18		mg Br/L	P374769	
	SM 2320 B-97	Total Alkalinity	130	A	mg CaCO3/L	P374494	
	SM 2540 D-97	TSS	3	IA	mg/L	P374820	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P374498	
2135669	EPA 350.1 Rev. 2.0	Ammonia-N	0.048		mg N/L	P374438	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P374504	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P374243	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P374706	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P374355	
2135670	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.076		mg P/L	P374193	
2135689	EPA 200.7 Rev. 4.4	Iron	760		ug/L	P374233	
		Manganese	18.6		ug/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	110		ug/L	P374233	
		Antimony	0.061	I	ug/L	P374233	
		Arsenic	1.54		ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	
		Chromium	0.69	I	ug/L	P374233	
		Copper	1.57		ug/L	P374233	
		Lead	0.23	I	ug/L	P374233	
		Nickel	0.69	I	ug/L	P374233	
		Selenium	0.20	U	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

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: IFAS

Collection Date/Time: 11/12/2019 12:30

Field ID: FB_111219

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135694	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P374360	
	EPA 300.0	Bromide	0.013	U	mg Br/L	P374769	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P374494	
	SM 2540 D-97	TSS	2	U	mg/L	P374820	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374498	
2135695	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374438	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P374504	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374243	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P374704	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P374355	
2135696	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374193	
2135697	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P374233	
		Manganese	1.0	U	ug/L	P374233	
		Zinc	5.0	U	ug/L	P374233	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P374233	
		Antimony	0.050	U	ug/L	P374233	
		Arsenic	0.050	U	ug/L	P374233	
		Cadmium	0.020	U	ug/L	P374233	
		Chromium	0.40	U	ug/L	P374233	
		Copper	0.40	U	ug/L	P374233	
		Lead	0.20	U	ug/L	P374233	
		Nickel	0.50	U	ug/L	P374233	
		Selenium	0.20	U	ug/L	P374233	
		Silver	0.010	U	ug/L	P374233	
		Thallium	0.10	U	ug/L	P374233	

Ref. Method and Comment:

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: P374360

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0
Batch ID: P374769

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374263

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374438

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374503

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374511

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374243

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374369

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374704

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374705

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374706

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374707

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: P374185

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374193

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

Reference Method: SM 2320 B-97
Batch ID: P374290

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

Reference Method: SM 2320 B-97
Batch ID: P374494

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

Reference Method: SM 2540 D-97
Batch ID: P374820

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P374823

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P374498

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374272

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P374355

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374360

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	94.3		P	85 - 115
Manganese	100		P	85 - 115
Zinc	98.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.7		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	98.8		P	85 - 115
Cadmium	97.1		P	85 - 115
Chromium	99.0		P	85 - 115
Copper	99.6		P	85 - 115
Lead	93.3		P	85 - 115
Nickel	99.2		P	85 - 115
Selenium	95.5		P	85 - 115
Silver	97.9		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P374769

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374263

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374438

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	100		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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374503

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374511

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374243

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: P374369

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374704

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374705

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374706

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374707

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374185

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374193

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

Reference Method: SM 2320 B-97
Batch ID: P374290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.7		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P374494

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P374498

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

Reference Method: SM 5310 B-00
Batch ID: P374272

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

Reference Method: SM 5310 B-00
Batch ID: P374355

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135411	Iron	93.8		P	80 - 120
2135411	Manganese	98.6		P	80 - 120
2135411	Zinc	98.9		P	80 - 120
2135719	Iron	93.9	96.1	P/P	80 - 120
2135719	Manganese	98.3	96.8	P/P	80 - 120
2135719	Zinc	97.6	95.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135411	Aluminum	92.8		P	80 - 120
2135411	Antimony	102		P	80 - 120
2135411	Arsenic	98.1		P	80 - 120
2135411	Cadmium	97.9		P	80 - 120
2135411	Chromium	95.9		P	80 - 120
2135411	Copper	95.6		P	80 - 120
2135411	Lead	92.9		P	80 - 120
2135411	Nickel	94.6		P	80 - 120
2135411	Selenium	93.3		P	80 - 120
2135411	Silver	97.2		P	80 - 120
2135411	Thallium	101		P	80 - 120
2135719	Aluminum	96.1	97.6	P/P	80 - 120
2135719	Antimony	102	103	P/P	80 - 120
2135719	Arsenic	101	103	P/P	80 - 120
2135719	Cadmium	99.3	99.8	P/P	80 - 120
2135719	Chromium	98.6	100	P/P	80 - 120
2135719	Copper	95.6	98.0	P/P	80 - 120
2135719	Lead	94.1	95.6	P/P	80 - 120
2135719	Nickel	97.8	98.6	P/P	80 - 120
2135719	Selenium	92.9	97.1	P/P	80 - 120
2135719	Silver	96.1	98.6	P/P	80 - 120
2135719	Thallium	112	106	P/P	80 - 120

Reference Method: EPA 300.0
Batch ID: P374769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135473	Bromide	97.8	99.8	P/P	90 - 110
2135668	Bromide	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134787	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135913	Ammonia-N	100	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

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 351.2 Rev. 2.0
Batch ID: P374503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135590	Kjeldahl Nitrogen	102	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135577	Kjeldahl Nitrogen	97.2	96.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374511

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135606	Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135669	NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374369

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135674	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135553	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134270	Total-P	92.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135669	Total-P	100	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374707

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135715	Total-P	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135399	O-Phosphate-P	101	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135670	O-Phosphate-P	100	99.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135714	Fluoride	96.5	98.1	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135668	Fluoride	99.1	99.1	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P374272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135398	Organic Carbon	104	106	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P374355

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135902	Organic Carbon	101	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135558	Turbidity	19.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135719	Iron	2.29	Spike	P	0 - 20
2135719	Manganese	1.55	Spike	P	0 - 20
2135719	Zinc	2.39	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135719	Aluminum	1.47	Spike	P	0 - 20
2135719	Antimony	0.406	Spike	P	0 - 20
2135719	Arsenic	2.15	Spike	P	0 - 20
2135719	Cadmium	0.450	Spike	P	0 - 20
2135719	Chromium	1.41	Spike	P	0 - 20
2135719	Copper	2.32	Spike	P	0 - 20
2135719	Lead	1.60	Spike	P	0 - 20
2135719	Nickel	0.818	Spike	P	0 - 20
2135719	Selenium	4.48	Spike	P	0 - 20
2135719	Silver	2.53	Spike	P	0 - 20
2135719	Thallium	5.92	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P374769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135473	Bromide	1.96	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134787	Ammonia-N	0.452	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135913	Ammonia-N	0.535	Spike	P	0 - 20

Quality Assurance Report Precision

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 351.2 Rev. 2.0
Batch ID: P374503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135590	Kjeldahl Nitrogen	5.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135577	Kjeldahl Nitrogen	0.578	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374511

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135606	Kjeldahl Nitrogen	0.0420	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135669	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135674	NO2NO3-N	0.328	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135553	Total-P	0.610	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134270	Total-P	7.50	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135669	Total-P	0.425	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135715	Total-P	1.38	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135399	O-Phosphate-P	0.729	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135670	O-Phosphate-P	0.342	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P374290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135714	Total Alkalinity	0.195	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P374494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135668	Total Alkalinity	0.253	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-97
Batch ID: P374292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135714	Fluoride	1.01	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P374498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135668	Fluoride	0.0	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P374272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135398	Organic Carbon	1.59	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P374355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135902	Organic Carbon	0.434	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: A95717

Included Lab Sample IDs: 2135670, 2135677, 2135678, 2135679, 2135696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.7	P/P	90 - 110
O-Phosphate-P	98.5	99.1	P/P	90 - 110
O-Phosphate-P	99.1	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95734

Included Lab Sample IDs: 2135669, 2135695

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95747

Included Lab Sample IDs: 2135675, 2135676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.3	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A95750

Included Lab Sample IDs: 2135674, 2135675, 2135676

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

Reference Method: SM 2320 B-97

Run ID: A95757

Included Lab Sample IDs: 2135671, 2135672, 2135673

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.7	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95757

Included Lab Sample IDs: 2135671, 2135672, 2135673

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

Reference Method: SM 5310 B-00

Run ID: A95788

Included Lab Sample IDs: 2135669, 2135695

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95789

Included Lab Sample IDs: 2135668, 2135671, 2135672, 2135673, 2135694

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95794

Included Lab Sample IDs: 2135674, 2135675, 2135676

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95796

Included Lab Sample IDs: 2135689, 2135697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	102	P/P	95 - 105
Iron	102	99.6	P/P	90 - 110
Manganese	104	103	P/P	90 - 110
Manganese	105	104	P/P	95 - 105
Zinc	101	99.9	P/P	95 - 105
Zinc	99.9	98.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95824

Included Lab Sample IDs: 2135669, 2135695

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95834

Included Lab Sample IDs: 2135674

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

Reference Method: SM 2320 B-97

Run ID: A95843

Included Lab Sample IDs: 2135668, 2135694

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	100	P/P	90 - 110
Total Alkalinity	99.9	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95843

Included Lab Sample IDs: 2135668, 2135694

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95873

Included Lab Sample IDs: 2135689, 2135697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	99.7	P/P	90 - 110
Aluminum	101	100	P/P	90 - 110
Antimony	100	101	P/P	90 - 110
Antimony	101	99.6	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Copper	104	104	P/P	90 - 110
Copper	105	104	P/P	90 - 110
Lead	96.2	95.4	P/P	90 - 110
Lead	96.3	96.2	P/P	90 - 110
Nickel	104	103	P/P	90 - 110
Nickel	104	104	P/P	90 - 110
Selenium	101	99.3	P/P	90 - 110
Selenium	99.0	101	P/P	90 - 110
Silver	99.6	100	P/P	90 - 110
Silver	100	99.1	P/P	90 - 110
Thallium	96.8	98.4	P/P	90 - 110
Thallium	98.4	96.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95884

Included Lab Sample IDs: 2135669, 2135674, 2135675, 2135676, 2135695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	97.3	P/P	90 - 110
Kjeldahl Nitrogen	107	105	P/P	90 - 110
Kjeldahl Nitrogen	108	97.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95924

Included Lab Sample IDs: 2135689, 2135697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.7	97.1	P/P	90 - 110
Chromium	96.1	95.7	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A95940

Included Lab Sample IDs: 2135668, 2135671, 2135672, 2135673, 2135694

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	104	106	P/P	90 - 110
Bromide	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95968

Included Lab Sample IDs: 2135669, 2135674, 2135675, 2135676

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95968

Included Lab Sample IDs: 2135669, 2135674, 2135675, 2135676

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	98.7	P/P	90 - 110
Total-P	99.9	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95989

Included Lab Sample IDs: 2135695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	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
EPA 180.1 Rev. 2.0	Turbidity	102					19.0
EPA 200.7 Rev. 4.4	Iron	94.3	93.8	93.9	96.1		2.29
	Manganese	100	98.6	98.3	96.8		1.55
	Zinc	98.7	98.9	97.6	95.3		2.39
EPA 200.8 Rev. 5.4	Aluminum	96.7	92.8	96.1	97.6		1.47
	Antimony	101	102	102	103		0.406
	Arsenic	98.8	98.1	101	103		2.15
	Cadmium	97.1	97.9	99.3	99.8		0.450
	Chromium	99.0	95.9	98.6	100		1.41
	Copper	99.6	95.6	95.6	98.0		2.32
	Lead	93.3	92.9	94.1	95.6		1.60
	Nickel	99.2	94.6	97.8	98.6		0.818
	Selenium	95.5	93.3	92.9	97.1		4.48
	Silver	97.9	97.2	96.1	98.6		2.53
	Thallium	100	101	112	106		5.92
EPA 300.0	Bromide	101	97.8	99.8	97.3		1.96
EPA 350.1 Rev. 2.0	Ammonia-N	97.7	102	103			0.452
	Ammonia-N	100	100	101			0.535
	Ammonia-N	98.3	104	106			1.44
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	102	108			5.06
	Kjeldahl Nitrogen	105	97.2	96.1			0.578
	Kjeldahl Nitrogen	105	101	101			0.0420
EPA 353.2 Rev. 2.0	NO2NO3-N	102	98.0	98.0			0.0
	NO2NO3-N	102	102	102			0.328
EPA 365.1 Rev. 2.0	Total-P	106	103	102			0.610
	Total-P	107	92.9	100			7.50
	Total-P	101	100	101			0.425
	Total-P	100	103	105			1.38
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	101	99.6			0.729
	O-Phosphate-P	103	100	99.7			0.342
SM 2320 B-97	Total Alkalinity	98.7				0.195	
	Total Alkalinity	100				0.253	
SM 4500 F-C-97	Fluoride	96.9	96.5	98.1			1.01
	Fluoride	98.6	99.1	99.1			0.0
SM 5310 B-00	Organic Carbon	104	104	106			1.59
	Organic Carbon	104	101	101			0.434

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2135668, 2135671, 2135672, 2135673, 2135694
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2135689, 2135697
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2135689, 2135697
EPA 300.0 / E31780	Bromide in aqueous matrices	2135668, 2135671, 2135672, 2135673, 2135694
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2135669, 2135674, 2135675, 2135676, 2135695
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2135669, 2135674, 2135675, 2135676, 2135695
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2135669, 2135674, 2135675, 2135676, 2135695

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2135669, 2135674, 2135675, 2135676, 2135695
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2135670, 2135677, 2135678, 2135679, 2135696
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2135668, 2135671, 2135672, 2135673, 2135694
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2135668, 2135671, 2135672, 2135673, 2135694
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2135668, 2135671, 2135672, 2135673, 2135694
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2135669, 2135674, 2135675, 2135676, 2135695

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	11/13/2019			11/13/2019 17:10	Samantha Davila	2135668
	11/13/2019			11/13/2019 17:11	Samantha Davila	2135671
	11/13/2019			11/13/2019 17:12	Samantha Davila	2135672
	11/13/2019			11/13/2019 17:17	Samantha Davila	2135673
	11/13/2019			11/13/2019 17:19	Samantha Davila	2135694
EPA 200.7 Rev. 4.4	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 13:01	Betina Topolski	2135697
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/18/2019 14:10	Betina Topolski	2135689
EPA 200.8 Rev. 5.4	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 03:59	Justin Cutchin	2135697
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/21/2019 05:46	Justin Cutchin	2135689
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 16:00	Robert K Palmer	2135697
	11/13/2019	11/14/2019 15:00	Elliott D. Healy	11/22/2019 17:00	Robert K Palmer	2135689
EPA 300.0	11/13/2019			11/20/2019 23:09	Lipi Saha	2135668
	11/13/2019			11/21/2019 02:34	Lipi Saha	2135671
	11/13/2019			11/21/2019 02:51	Lipi Saha	2135672
	11/13/2019			11/21/2019 03:08	Lipi Saha	2135673
	11/13/2019			11/21/2019 03:26	Lipi Saha	2135694
EPA 350.1 Rev. 2.0	11/13/2019			11/14/2019 14:31	Ping Hua	2135675
	11/13/2019			11/14/2019 14:32	Ping Hua	2135676
	11/13/2019			11/18/2019 12:19	Ping Hua	2135695
	11/13/2019			11/18/2019 12:21	Ping Hua	2135669
	11/13/2019			11/19/2019 11:10	Ping Hua	2135674
EPA 351.2 Rev. 2.0	11/13/2019	11/20/2019 12:20	Sima Feizi	11/21/2019 15:14	Jhamieka S. Greenwood	2135675
	11/13/2019	11/20/2019 12:20	Sima Feizi	11/21/2019 15:15	Jhamieka S. Greenwood	2135676
	11/13/2019	11/20/2019 12:20	Sima Feizi	11/21/2019 15:37	Jhamieka S. Greenwood	2135674
	11/13/2019	11/20/2019 12:30	Sima Feizi	11/21/2019 16:31	Jhamieka S. Greenwood	2135669
	11/13/2019	11/20/2019 12:30	Sima Feizi	11/21/2019 16:33	Jhamieka S. Greenwood	2135695
EPA 353.2 Rev. 2.0	11/13/2019			11/14/2019 12:12	Beverly Y. Sanders	2135669
	11/13/2019			11/14/2019 12:18	Beverly Y. Sanders	2135695
	11/13/2019			11/18/2019 12:25	Beverly Y. Sanders	2135674
	11/13/2019			11/18/2019 12:34	Beverly Y. Sanders	2135675
	11/13/2019			11/18/2019 12:35	Beverly Y. Sanders	2135676
EPA 365.1 Rev. 2.0	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 13:30	Benjamin T. Nordmann	2135674
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 13:33	Benjamin T. Nordmann	2135669
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 13:56	Benjamin T. Nordmann	2135675
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 13:57	Benjamin T. Nordmann	2135676
	11/13/2019	11/22/2019 13:04	Yen Ta	11/26/2019 15:49	Benjamin T. Nordmann	2135695
EPA 365.1 Rev. 2.0 dissolved	11/13/2019			11/13/2019 13:36	Virginia P. Brown	2135670
	11/13/2019			11/13/2019 14:02	Virginia P. Brown	2135677
	11/13/2019			11/13/2019 14:03	Virginia P. Brown	2135678
	11/13/2019			11/13/2019 14:08	Virginia P. Brown	2135679

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 SM 2320 B-97	11/13/2019			11/13/2019 14:11	Virginia P. Brown	2135696
	11/13/2019			11/14/2019 17:56	Dale L. Simmons	2135671
	11/13/2019			11/14/2019 18:09	Dale L. Simmons	2135672
	11/13/2019			11/14/2019 18:22	Dale L. Simmons	2135673
	11/13/2019			11/16/2019 01:56	Dale L. Simmons	2135668
	11/13/2019			11/16/2019 04:27	Dale L. Simmons	2135694
SM 2540 D-97	11/13/2019			11/15/2019 15:21	Yijie Li	2135668, 2135671, 2135672, 2135673, 2135694
SM 4500 F-C-97	11/13/2019			11/14/2019 15:41	Dale L. Simmons	2135671
	11/13/2019			11/14/2019 15:45	Dale L. Simmons	2135672
	11/13/2019			11/14/2019 15:49	Dale L. Simmons	2135673
	11/13/2019			11/16/2019 01:45	Dale L. Simmons	2135668
	11/13/2019			11/16/2019 04:27	Dale L. Simmons	2135694
SM 5310 B-00	11/13/2019			11/15/2019 07:35	Madeline Funaro	2135674
	11/13/2019			11/15/2019 08:24	Madeline Funaro	2135675
	11/13/2019			11/15/2019 08:36	Madeline Funaro	2135676
	11/13/2019			11/15/2019 17:07	Lauren Lees	2135669
	11/13/2019			11/15/2019 17:19	Lauren Lees	2135695