

Chemical Analysis Report

WAS-SECT-2019-06-13-02

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

Event Description: **Merrit's Mill Pond BMAP**

Request ID: **RQ-2019-06-10-22**

Customer: **WAS-SECT**

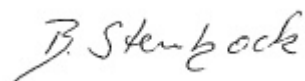
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Curtis Musson

For additional information please contact
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 27-JUN-2019 14:43



NON-CONFORMANCE REPORT INCLUDED

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: Merritt's Mill Pond 600 meters downstream of Jackson Blue Sp

Collection Date/Time: 06/12/2019 10:26

Field ID: G2WA0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2095059	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P365607	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P365811	
		Sulfate	1.3		mg SO4/L	P365814	
		Color (true)	2.5	U	PCU	P365603	
	SM 2320 B-97	Total Alkalinity	120	A	mg CaCO3/L	P366009	
	SM 2540 C-97	TDS	158		mg/L	P366001	
	SM 2540 D-97	TSS	2	U	mg/L	P365902	
	SM 4500 F-C-97	Fluoride	0.040	I	mg F/L	P366012	
2095062	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P365957	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P365792	
	EPA 353.2 Rev. 2.0	NO2NO3-N	3.6		mg N/L	P365818	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P365834	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P365745	
2095065	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018		mg P/L	P365613	
2095079	EPA 200.7 Rev. 4.4	Barium	6.4		ug/L	P365782	
		Calcium	51.9		mg/L	P365782	
		Iron	30	U	ug/L	P365782	
		Magnesium	2.71		mg/L	P365782	
		Potassium	0.40	I	mg/L	P365782	
		Sodium	2.0	I	mg/L	P365782	
		Zinc	5.0	U	ug/L	P365782	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P365782	
		Antimony	0.050	U	ug/L	P365782	
		Arsenic	0.32		ug/L	P365782	
		Boron**	8.4		ug/L	P365782	
		Cadmium	0.020	U	ug/L	P365782	
		Chromium	1.1	I	ug/L	P365782	
		Copper	0.40	U	ug/L	P365782	
		Lead	0.20	U	ug/L	P365782	
		Nickel	0.50	U	ug/L	P365782	
		Selenium	0.20	U	ug/L	P365782	
		Silver	0.010	U	ug/L	P365782	
		Thallium	0.10	U	ug/L	P365782	

Sample Location: Merritt's Mill Pond mid under powerlines

Collection Date/Time: 06/12/2019 09:52

Field ID: G2WA0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2095060	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P365607	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P365811	
		Sulfate	1.3		mg SO4/L	P365814	
		Color (true)	2.5	U	PCU	P365603	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P366009	
	SM 2540 C-97	TDS	151		mg/L	P366001	
	SM 2540 D-97	TSS	2	U	mg/L	P365902	
	SM 4500 F-C-97	Fluoride	0.044	I	mg F/L	P366012	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.063		mg N/L	P365957	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P365792	
2095063	EPA 353.2 Rev. 2.0	NO2NO3-N	2.8		mg N/L	P365818	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P365834	
	SM 5310 B-00	Organic Carbon	0.53	I	mg C/L	P365745	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P365613	
2095080	EPA 200.7 Rev. 4.4	Barium	7.6		ug/L	P365782	
		Calcium	50.5		mg/L	P365782	
		Iron	30	U	ug/L	P365782	
		Magnesium	3.02		mg/L	P365782	
		Potassium	0.44	I	mg/L	P365782	
		Sodium	2.1		mg/L	P365782	
		Zinc	5.0	U	ug/L	P365782	
		Aluminum	5.8	I	ug/L	P365782	
		Antimony	0.050	U	ug/L	P365782	
		Arsenic	0.36		ug/L	P365782	
	EPA 200.8 Rev. 5.4	Boron**	8.8		ug/L	P365782	
		Cadmium	0.020	U	ug/L	P365782	
		Chromium	0.97	I	ug/L	P365782	
		Copper	0.40	U	ug/L	P365782	
		Lead	0.20	U	ug/L	P365782	
		Nickel	0.50	U	ug/L	P365782	
		Selenium	0.20	U	ug/L	P365782	
		Silver	0.010	U	ug/L	P365782	
		Thallium	0.10	U	ug/L	P365782	

Sample Location: Merritt's Mill Pond 500 meters upstream of dam Collection Date/Time: 06/12/2019 09:38

Field ID: G2WA0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2095061	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P365607	
	EPA 300.0 Rev. 2.1	Chloride	4.8		mg Cl/L	P365811	
		Sulfate	1.4		mg SO4/L	P365814	
		SM 2120 B	Color (true)	3.1	I	PCU	P365603
	SM 2320 B-97	Total Alkalinity	114		mg CaCO3/L	P366009	
	SM 2540 C-97	TDS	145		mg/L	P366001	
	SM 2540 D-97	TSS	2	I	mg/L	P365902	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P366012	
2095064	EPA 350.1 Rev. 2.0	Ammonia-N	0.065		mg N/L	P366163	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P365792	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.4		mg N/L	P365818	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P365834	
	SM 5310 B-00	Organic Carbon	0.84	I	mg C/L	P365745	
2095067	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P365613	
2095081	EPA 200.7 Rev. 4.4	Barium	8.3		ug/L	P365782	
		Calcium	46.5		mg/L	P365782	
		Iron	38	I	ug/L	P365782	
		Magnesium	2.87		mg/L	P365782	
		Potassium	0.46	I	mg/L	P365782	
		Sodium	2.0		mg/L	P365782	
		Zinc	5.0	U	ug/L	P365782	
	EPA 200.8 Rev. 5.4	Aluminum	17	I	ug/L	P365782	
		Antimony	0.050	U	ug/L	P365782	
		Arsenic	0.38		ug/L	P365782	
		Boron**	8.6		ug/L	P365782	
		Cadmium	0.020	U	ug/L	P365782	
		Chromium	0.78	I	ug/L	P365782	
		Copper	0.40	U	ug/L	P365782	
		Lead	0.20	U	ug/L	P365782	
		Nickel	0.50	U	ug/L	P365782	
		Selenium	0.20	U	ug/L	P365782	
		Silver	0.010	U	ug/L	P365782	
		Thallium	0.10	U	ug/L	P365782	

Sample Location: Merritt's Mill Pond mid under powerlines

Collection Date/Time: 06/12/2019 09:58

Field ID: G2WA0008_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2095071	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P365607	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P365811	
		Sulfate	1.3		mg SO4/L	P365814	
		Color (true)	2.5	U	PCU	P365603	
	SM 2320 B-97	Total Alkalinity	122		mg CaCO3/L	P366009	
	SM 2540 C-97	TDS	149		mg/L	P366001	
	SM 2540 D-97	TSS	2	U	mg/L	P365902	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P366012	
2095072	EPA 350.1 Rev. 2.0	Ammonia-N	0.069	Y	mg N/L	P365957	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen		O	mg N/L	P365792	
	EPA 353.2 Rev. 2.0	NO2NO3-N		O	mg N/L	P365818	
	EPA 365.1 Rev. 2.0	Total-P	0.016	Y	mg P/L	P365834	
	SM 5310 B-00	Organic Carbon	0.65	IY	mg C/L	P365745	
2095073	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P365613	
2095083	EPA 200.7 Rev. 4.4	Barium	7.4		ug/L	P365782	
		Calcium	50.8		mg/L	P365782	
		Iron	30	U	ug/L	P365782	
		Magnesium	3.08		mg/L	P365782	
		Potassium	0.44	I	mg/L	P365782	
		Sodium	2.1		mg/L	P365782	
		Zinc	5.0	U	ug/L	P365782	
		Aluminum	5.0	I	ug/L	P365782	
		Antimony	0.050	U	ug/L	P365782	
		Arsenic	0.36		ug/L	P365782	
	EPA 200.8 Rev. 5.4	Boron**	9.1	Y	ug/L	P365782	
		Cadmium	0.020	U	ug/L	P365782	
		Chromium	0.93	I	ug/L	P365782	
		Copper	0.40	U	ug/L	P365782	
		Lead	0.20	U	ug/L	P365782	
		Nickel	0.50	U	ug/L	P365782	
		Selenium	0.20	U	ug/L	P365782	
		Silver	0.010	U	ug/L	P365782	
		Thallium	0.10	U	ug/L	P365782	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: Sample appears to have been preserved with nitric acid.
EPA 351.2 Rev. 2.0: Sample appears to have been preserved with nitric acid.
EPA 353.2 Rev. 2.0: Sample appears to have been preserved with nitric acid.
EPA 365.1 Rev. 2.0: Total-P: Sample appears to have been preserved with nitric acid.
SM 5310 B-00: Sample appears to have been preserved with nitric acid.
EPA 200.8 Rev. 5.4: The sample was preserved improperly for boron.

Sample Location: Merritt's Mill Pond mid under powerlines

Collection Date/Time: 06/12/2019 10:01

Field ID: FB_06122019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2095068	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P365607	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P365811	
		Sulfate	0.20	U	mg SO4/L	P365814	
		Color (true)	2.5	U	PCU	P365603	
	SM 2120 B	Total Alkalinity	0.65	U	mg CaCO3/L	P366009	
	SM 2540 C-97	TDS	15	U	mg/L	P366001	
	SM 2540 D-97	TSS	2	U	mg/L	P365902	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P366012	
2095069	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P366166	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P365792	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P365818	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P365834	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P365745	
2095070	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P365613	
2095082	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P365782	
		Calcium	0.075	U	mg/L	P365782	
		Iron	30	U	ug/L	P365782	
		Magnesium	0.040	U	mg/L	P365782	
		Potassium	0.30	U	mg/L	P365782	
		Sodium	0.50	U	mg/L	P365782	
		Zinc	5.0	U	ug/L	P365782	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P365782	
		Antimony	0.050	U	ug/L	P365782	
		Arsenic	0.050	U	ug/L	P365782	
		Boron**	2.0	U	ug/L	P365782	
		Cadmium	0.020	U	ug/L	P365782	
		Chromium	0.40	U	ug/L	P365782	
		Copper	0.40	U	ug/L	P365782	
		Lead	0.20	U	ug/L	P365782	
		Nickel	0.50	U	ug/L	P365782	
		Selenium	0.20	U	ug/L	P365782	
		Silver	0.010	U	ug/L	P365782	
		Thallium	0.10	U	ug/L	P365782	

Non-Conformance Report

NCR ID: 7731

Event(s)

WAS-SECT-2019-06-13-02

Job(s)

TLH-2019-06-13-09

Sample(s)

2095083

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved to pH < 2.

Resolution: Sample preserved in the laboratory with nitric acid 06/13/2019 at 09:40.
HNO3 Lot# NA8197080 | Expiration Date: 07/16/2019
Data will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 6/17/2019

NCR ID: 7737

Event(s)

WAS-SECT-2019-06-13-02

Job(s)

TLH-2019-06-13-07

Sample(s)

2095072

Test(s)

NCR Type: SAMPLING

NCR Category: General

Observation: Sample 2095072 appears to be preserved with nitric acid. It has a nitrite/nitrate concentration of 450 mg N/L and there is approximately 3.0 mg N/L in the unpreserved aliquot (laboratory ID 2095071).

Resolution: Results for the NO₂NO₃-N and Kjeldahl Nitrogen components were reported as the non numeric qualifier O.
Results for the other affected components were qualified with a Y qualifier for incorrect preservation.

Authorized by/Date: Peter D. Kaus 6/25/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365607

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365782

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365782

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	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 Rev. 2.1
Batch ID: P365811

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365814

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365957

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366163

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366166

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365792

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365818

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365834

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365613

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

Reference Method: SM 2120 B
Batch ID: P365603

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P366009

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

Reference Method: SM 2540 C-97
Batch ID: P366001

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97

Batch ID: P365902

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97

Batch ID: P366012

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00

Batch ID: P365745

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P365782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	104		P	85 - 115
Iron	104		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	101		P	85 - 115
Sodium	101		P	85 - 115
Zinc	99.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P365782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.5		P	85 - 115
Antimony	99.6		P	85 - 115
Arsenic	102		P	85 - 115
Boron	101		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.3		P	85 - 115
Copper	99.0		P	85 - 115
Lead	101		P	85 - 115
Nickel	100		P	85 - 115
Selenium	99.2		P	85 - 115
Silver	99.6		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P365811

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P365814

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P365957

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P366163

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P366166

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P365792

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P365818

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: P365834

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P365613

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

Reference Method: SM 2120 B
 Batch ID: P365603

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.9		P	85 - 115

Reference Method: SM 2320 B-97
 Batch ID: P366009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-97
 Batch ID: P366012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P365745

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P365782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095081	Barium	98.3		P	80 - 120
2095081	Calcium	99.5		P	80 - 120
2095081	Iron	105		P	80 - 120
2095081	Magnesium	106		P	80 - 120
2095081	Potassium	104		P	80 - 120
2095081	Sodium	103		P	80 - 120
2095081	Zinc	97.3		P	80 - 120
2095101	Barium	101	102	P/P	80 - 120
2095101	Calcium	106	104	P/P	80 - 120
2095101	Iron	106	105	P/P	80 - 120
2095101	Magnesium	110	108	P/P	80 - 120
2095101	Potassium	111	110	P/P	80 - 120
2095101	Sodium	103	102	P/P	80 - 120
2095101	Zinc	99.2	99.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P365782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095081	Aluminum	98.5		P	80 - 120
2095081	Antimony	102		P	80 - 120
2095081	Arsenic	103		P	80 - 120
2095081	Boron	101		P	80 - 120
2095081	Cadmium	103		P	80 - 120
2095081	Chromium	99.4		P	80 - 120
2095081	Copper	96.4		P	80 - 120
2095081	Lead	102		P	80 - 120
2095081	Nickel	98.2		P	80 - 120
2095081	Selenium	100		P	80 - 120
2095081	Silver	101		P	80 - 120
2095081	Thallium	105		P	80 - 120
2095101	Aluminum	98.4	98.5	P/P	80 - 120
2095101	Antimony	101	100	P/P	80 - 120
2095101	Arsenic	103	102	P/P	80 - 120
2095101	Boron	98.4	98.8	P/P	80 - 120
2095101	Cadmium	101	98.9	P/P	80 - 120
2095101	Chromium	102	101	P/P	80 - 120
2095101	Copper	101	101	P/P	80 - 120
2095101	Lead	103	103	P/P	80 - 120
2095101	Nickel	100	100	P/P	80 - 120
2095101	Selenium	100	99.5	P/P	80 - 120
2095101	Silver	100	98.4	P/P	80 - 120
2095101	Thallium	105	105	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P365811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095051	Chloride	99.7		P	90 - 110
2095133	Chloride	100		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095051	Sulfate	101		P	90 - 110
2095133	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365957

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094831	Ammonia-N	107	108	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095106	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366166

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094681	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095062	Kjeldahl Nitrogen	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365818

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095134	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095062	Total-P	107	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095053	O-Phosphate-P	91.6	91.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P366012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095059	Fluoride	97.6	97.6	P/P	89 - 106

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-00

Batch ID: P365745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095062	Organic Carbon	96.2	96.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095133	Turbidity	0.583	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095101	Barium	0.201	Spike	P	0 - 20
2095101	Calcium	1.77	Spike	P	0 - 20
2095101	Iron	1.43	Spike	P	0 - 20
2095101	Magnesium	1.93	Spike	P	0 - 20
2095101	Potassium	0.914	Spike	P	0 - 20
2095101	Sodium	0.420	Spike	P	0 - 20
2095101	Zinc	0.466	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095101	Aluminum	0.0628	Spike	P	0 - 20
2095101	Antimony	1.22	Spike	P	0 - 20
2095101	Arsenic	0.272	Spike	P	0 - 20
2095101	Boron	0.389	Spike	P	0 - 20
2095101	Cadmium	1.91	Spike	P	0 - 20
2095101	Chromium	1.33	Spike	P	0 - 20
2095101	Copper	0.517	Spike	P	0 - 20
2095101	Lead	0.714	Spike	P	0 - 20
2095101	Nickel	0.00899	Spike	P	0 - 20
2095101	Selenium	0.478	Spike	P	0 - 20
2095101	Silver	1.86	Spike	P	0 - 20
2095101	Thallium	0.182	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095133	Chloride	0.958	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095133	Sulfate	1.29	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094831	Ammonia-N	1.34	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095106	Ammonia-N	0.560	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094681	Ammonia-N	0.00443	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095062	Kjeldahl Nitrogen	0.971	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095134	NO2NO3-N	0.985	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095062	Total-P	6.41	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095053	O-Phosphate-P	0.109	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P365603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095108	Color (true)	1.86	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P366009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095059	Total Alkalinity	1.15	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
 Batch ID: P366001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095133	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 2540 D-97
 Batch ID: P365902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095133	TSS	3.45	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P366012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095059	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
 Batch ID: P365745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095062	Organic Carbon	0.0520	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
 Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A92083

Included Lab Sample IDs: 2095059, 2095060, 2095061, 2095068, 2095071

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.4	100	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A92084

Included Lab Sample IDs: 2095059, 2095060, 2095061, 2095068, 2095071

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A92086

Included Lab Sample IDs: 2095065, 2095066, 2095067, 2095070, 2095073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.6	96.3	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A92138

Included Lab Sample IDs: 2095062, 2095063, 2095064, 2095069, 2095072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.0	95.5	P/P	90 - 110
Organic Carbon	95.4	95.0	P/P	90 - 110
Organic Carbon	95.5	95.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A92171

Included Lab Sample IDs: 2095059, 2095060, 2095061, 2095068, 2095071

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	93.4	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	94.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92173

Included Lab Sample IDs: 2095062, 2095063, 2095064, 2095069, 2095072

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92192

Included Lab Sample IDs: 2095079, 2095080, 2095081, 2095082, 2095083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	102	P/P	95 - 105
Barium	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92192

Included Lab Sample IDs: 2095079, 2095080, 2095081, 2095082, 2095083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Calcium	102	102	P/P	95 - 105
Iron	103	103	P/P	95 - 105
Iron	103	104	P/P	90 - 110
Magnesium	103	104	P/P	95 - 105
Magnesium	104	104	P/P	90 - 110
Potassium	101	102	P/P	95 - 105
Potassium	102	103	P/P	90 - 110
Sodium	100	101	P/P	95 - 105
Sodium	101	102	P/P	90 - 110
Zinc	101	102	P/P	95 - 105
Zinc	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92208

Included Lab Sample IDs: 2095062, 2095063, 2095064, 2095069, 2095072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.9	96.6	P/P	90 - 110
Kjeldahl Nitrogen	96.6	95.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92212

Included Lab Sample IDs: 2095062, 2095063, 2095072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	109	109	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A92228

Included Lab Sample IDs: 2095059, 2095060, 2095061, 2095068, 2095071

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A92228

Included Lab Sample IDs: 2095059, 2095060, 2095061, 2095068, 2095071

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92231

Included Lab Sample IDs: 2095062, 2095063, 2095069, 2095072

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92255

Included Lab Sample IDs: 2095064

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92264

Included Lab Sample IDs: 2095079, 2095080, 2095081, 2095082, 2095083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	97.1	P/P	90 - 110
Antimony	99.4	100	P/P	90 - 110
Arsenic	101	99.5	P/P	90 - 110
Boron	100	96.7	P/P	90 - 110
Cadmium	98.8	99.1	P/P	90 - 110
Chromium	97.4	99.9	P/P	90 - 110
Copper	99.5	98.5	P/P	90 - 110
Lead	102	101	P/P	90 - 110
Nickel	100	98.2	P/P	90 - 110
Selenium	100	98.9	P/P	90 - 110
Silver	96.9	96.5	P/P	90 - 110
Thallium	98.8	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92295

Included Lab Sample IDs: 2095064, 2095069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	103	P/P	90 - 110
Ammonia-N	104	105	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery			MS % Recovery			Precision	
								LCS	MS
EPA 180.1 Rev. 2.0	Turbidity							0.583	
EPA 200.7 Rev. 4.4	Barium	101			98.3	101	102		0.201
	Calcium	104			99.5	106	104		1.77
	Iron	104			105	106	105		1.43
	Magnesium	108			106	110	108		1.93
	Potassium	101			104	111	110		0.914
	Sodium	101			103	103	102		0.420
	Zinc	99.8			97.3	99.2	99.7		0.466
EPA 200.8 Rev. 5.4	Aluminum	99.5			98.5	98.4	98.5		0.0628
	Antimony	99.6			102	101	100		1.22
	Arsenic	102			103	103	102		0.272
	Boron	101			101	98.4	98.8		0.389
	Cadmium	101			103	101	98.9		1.91
	Chromium	99.3			99.4	102	101		1.33
	Copper	99.0			96.4	101	101		0.517
	Lead	101			102	103	103		0.714
	Nickel	100			98.2	100	100		0.0089
	Selenium	99.2			100	100	99.5		0.478
	Silver	99.6			101	100	98.4		1.86
	Thallium	104			105	105	105		0.182
EPA 300.0 Rev. 2.1	Chloride	100			100	99.7		0.958	
	Sulfate	100			101	101		1.29	
EPA 350.1 Rev. 2.0	Ammonia-N	107			107	108			1.34
	Ammonia-N	101			103	103			0.560
	Ammonia-N	104			103	103			0.0044
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.5			102	101			0.971
EPA 353.2 Rev. 2.0	NO2NO3-N	100			101	102			0.985
EPA 365.1 Rev. 2.0	Total-P	103			107	99.7			6.41
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.0			91.6	91.7			0.109
SM 2120 B	Color (true)	99.9						1.86	
SM 2320 B-97	Total Alkalinity	102						1.15	
SM 2540 C-97	TDS							3.92	
SM 2540 D-97	TSS							3.45	
SM 4500 F-C-97	Fluoride	98.5			97.6	97.6			0.0
SM 5310 B-00	Organic Carbon	95.7			96.2	96.2			0.0520

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2095059, 2095060, 2095061, 2095068, 2095071
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2095079, 2095080, 2095081, 2095082, 2095083
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2095079, 2095080, 2095081, 2095082, 2095083
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2095059, 2095060, 2095061, 2095068, 2095071
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2095059, 2095060, 2095061, 2095068, 2095071
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2095062, 2095063, 2095064, 2095069, 2095072
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2095062, 2095063, 2095064, 2095069, 2095072
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2095062, 2095063, 2095064, 2095069, 2095072

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	2095062, 2095063, 2095064, 2095069, 2095072
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2095065, 2095066, 2095067, 2095070, 2095073
SM 2120 B / E31780	True Color measured at 450 nm	2095059, 2095060, 2095061, 2095068, 2095071
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2095059, 2095060, 2095061, 2095068, 2095071
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2095059, 2095060, 2095061, 2095068, 2095071
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2095059, 2095060, 2095061, 2095068, 2095071
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2095059, 2095060, 2095061, 2095068, 2095071
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2095062, 2095063, 2095064, 2095069, 2095072

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	06/13/2019			06/13/2019 15:49	Julia Storbeck	2095059, 2095060, 2095061, 2095068, 2095071
EPA 200.7 Rev. 4.4	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/18/2019 13:18	Betina Topolski	2095082
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/18/2019 13:52	Betina Topolski	2095081
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/18/2019 14:11	Betina Topolski	2095079
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/18/2019 14:43	Betina Topolski	2095080
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/18/2019 14:50	Betina Topolski	2095083
EPA 200.8 Rev. 5.4	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/20/2019 19:40	Robert K Palmer	2095082
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/20/2019 20:18	Robert K Palmer	2095079
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/20/2019 20:28	Robert K Palmer	2095080
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/20/2019 20:37	Robert K Palmer	2095081
	06/13/2019	06/17/2019 16:15	Elliott D. Healy	06/20/2019 20:56	Robert K Palmer	2095083
EPA 300.0 Rev. 2.1	06/13/2019			06/17/2019 23:50	Lipi Saha	2095059
	06/13/2019			06/18/2019 00:03	Lipi Saha	2095060
	06/13/2019			06/18/2019 00:15	Lipi Saha	2095061
	06/13/2019			06/18/2019 00:51	Lipi Saha	2095068
	06/13/2019			06/18/2019 01:03	Lipi Saha	2095071
EPA 350.1 Rev. 2.0	06/13/2019			06/19/2019 13:54	Ping Hua	2095062
	06/13/2019			06/19/2019 13:55	Ping Hua	2095063
	06/13/2019			06/19/2019 13:57	Ping Hua	2095072
	06/13/2019			06/21/2019 11:49	Ping Hua	2095064
	06/13/2019			06/21/2019 13:40	Ping Hua	2095069
EPA 351.2 Rev. 2.0	06/13/2019	06/18/2019 10:31	Sima Feizi	06/19/2019 09:57	Joseph Suarez	2095062
	06/13/2019	06/18/2019 10:31	Sima Feizi	06/19/2019 10:01	Joseph Suarez	2095063
	06/13/2019	06/18/2019 10:31	Sima Feizi	06/19/2019 10:03	Joseph Suarez	2095064
	06/13/2019	06/18/2019 10:31	Sima Feizi	06/19/2019 10:08	Joseph Suarez	2095069
	06/13/2019	06/18/2019 10:31	Sima Feizi	06/19/2019 10:09	Joseph Suarez	2095072
EPA 353.2 Rev. 2.0	06/13/2019			06/18/2019 11:45	Beverly Y. Sanders	2095062
	06/13/2019			06/18/2019 11:46	Beverly Y. Sanders	2095063
	06/13/2019			06/18/2019 11:47	Beverly Y. Sanders	2095064
	06/13/2019			06/18/2019 11:53	Beverly Y. Sanders	2095069
	06/13/2019			06/18/2019 12:33	Beverly Y. Sanders	2095072
EPA 365.1 Rev. 2.0	06/13/2019	06/18/2019 12:55	Sima Feizi	06/20/2019 12:23	Lipi Saha	2095062
	06/13/2019	06/18/2019 12:55	Sima Feizi	06/20/2019 12:24	Lipi Saha	2095063
	06/13/2019	06/18/2019 12:55	Sima Feizi	06/20/2019 12:25	Lipi Saha	2095069
	06/13/2019	06/18/2019 12:55	Sima Feizi	06/20/2019 12:26	Lipi Saha	2095072
	06/13/2019	06/18/2019 12:55	Sima Feizi	06/21/2019 08:30	Lipi Saha	2095064
EPA 365.1 Rev. 2.0 dissolved	06/13/2019			06/13/2019 15:38	Jhamieka S. Greenwood	2095070
	06/13/2019			06/13/2019 15:39	Jhamieka S. Greenwood	2095066
	06/13/2019			06/13/2019 15:40	Jhamieka S. Greenwood	2095065, 2095073

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 2120 B	06/13/2019			06/13/2019 15:41	Jhamieka S. Greenwood	2095067
	06/13/2019			06/13/2019 15:31	Mariam Hanna	2095059
	06/13/2019			06/13/2019 15:32	Mariam Hanna	2095060
	06/13/2019			06/13/2019 15:33	Mariam Hanna	2095061
	06/13/2019			06/13/2019 15:34	Mariam Hanna	2095068, 2095071
SM 2320 B-97	06/13/2019			06/19/2019 09:41	Dale L. Simmons	2095059
	06/13/2019			06/19/2019 10:34	Dale L. Simmons	2095060
	06/13/2019			06/19/2019 10:46	Dale L. Simmons	2095061
	06/13/2019			06/19/2019 11:01	Dale L. Simmons	2095068
	06/13/2019			06/19/2019 11:13	Dale L. Simmons	2095071
SM 2540 C-97	06/13/2019			06/14/2019 17:01	Rosalyn Ballman	2095059, 2095060, 2095061, 2095068, 2095071
SM 2540 D-97	06/13/2019			06/14/2019 17:01	Rosalyn Ballman	2095059, 2095060, 2095061, 2095068, 2095071
SM 4500 F-C-97	06/13/2019			06/19/2019 09:31	Dale L. Simmons	2095059
	06/13/2019			06/19/2019 10:34	Dale L. Simmons	2095060
	06/13/2019			06/19/2019 10:46	Dale L. Simmons	2095061
	06/13/2019			06/19/2019 11:01	Dale L. Simmons	2095068
	06/13/2019			06/19/2019 11:13	Dale L. Simmons	2095071
SM 5310 B-00	06/13/2019			06/14/2019 07:49	Julia Storbeck	2095062
	06/13/2019			06/14/2019 10:16	Julia Storbeck	2095063
	06/13/2019			06/14/2019 10:29	Julia Storbeck	2095064
	06/13/2019			06/14/2019 10:45	Julia Storbeck	2095069
	06/13/2019			06/14/2019 11:25	Julia Storbeck	2095072