

Chemical Analysis Report

NE-DIST-2020-01-23-02

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

Event Description: **Nassau North 2 2020**
Request ID: **RQ-2020-01-20-17**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 14-FEB-2020 11:31

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: Little St. Marys at White Oak Rd.

Collection Date/Time: 01/22/2020 10:25

Field ID: G4NE0289

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151192	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P377644	
	EPA 300.0 Rev. 2.1	Sulfate	18		mg SO4/L	P378046	
	SM 2120 B-2011	Color (true)	380		PCU	P377637	
	SM 2320 B-2011	Total Alkalinity	6.9		mg CaCO3/L	P377765	
	SM 2540 C-2011	TDS	305		mg/L	P378245	
	SM 2540 D-2011	TSS	7	I	mg/L	P377863	
	SM 4500 F-C-2011	Fluoride	0.055	I	mg F/L	P377768	
2151193	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P378179	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P377991	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P377935	
	EPA 365.1 Rev. 2.0	Total-P	0.045		mg P/L	P377914	
	SM 5310 B-2011	Organic Carbon	35		mg C/L	P377836	
2151194	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P377647	
2151207	EPA 200.7 Rev. 4.4	Barium	17.7		ug/L	P377724	
		Calcium	7.53		mg/L	P377724	
		Iron	1.01E+03		ug/L	P377724	
		Magnesium	9.04		mg/L	P377724	
		Potassium	2.9		mg/L	P377724	
		Sodium	66.1		mg/L	P377724	
		Zinc	43		ug/L	P377724	
	EPA 200.8 Rev. 5.4	Aluminum	708		ug/L	P377724	
		Antimony	0.052	I	ug/L	P377724	
		Arsenic	0.73		ug/L	P377724	
		Boron**	48.6		ug/L	P377724	
		Cadmium	0.020	U	ug/L	P377724	
		Chromium	1.3	I	ug/L	P377724	
		Copper	2.00		ug/L	P377724	
		Lead	0.81		ug/L	P377724	
		Nickel	1.9	I	ug/L	P377724	
		Selenium	0.20	U	ug/L	P377724	
		Silver	0.010	U	ug/L	P377724	
		Thallium	0.10	U	ug/L	P377724	
	SM 2340B	Hardness	56.0		mg/L	P377724	

Ref. Method and Comment:

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

Sample Location: Lofton CR @ A1A

Collection Date/Time: 01/22/2020 11:15

Field ID: 19020003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151198	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P377645	
	EPA 300.0 Rev. 2.1	Chloride	140		mg Cl/L	P378043	
		Sulfate	25		mg SO4/L	P378046	
	SM 2120 B-2011	Color (true)	420		PCU	P377638	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P377765	
	SM 2540 C-2011	TDS	368		mg/L	P378245	
	SM 2540 D-2011	TSS	4	I	mg/L	P377863	
	SM 4500 F-C-2011	Fluoride	0.078	I	mg F/L	P377768	
2151199	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P378180	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P377991	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P377844	
	EPA 365.1 Rev. 2.0	Total-P	0.096		mg P/L	P377914	
	SM 5310 B-2011	Organic Carbon	35		mg C/L	P377836	
2151200	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.054		mg P/L	P377647	

Ref. Method and Comment:

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

Sample Location: Egans Creek at N. 14th

Collection Date/Time: 01/22/2020 11:55

Field ID: G4NE0290

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2151195	EPA 180.1 Rev. 2.0	Turbidity	11	A	NTU	P377645	
	EPA 300.0 Rev. 2.1	Bromide	59		mg Br/L	P378843	
	SM 2320 B-2011	Total Alkalinity	116		mg CaCO3/L	P377766	
	SM 2540 D-2011	TSS	21		mg/L	P377865	
	SM 4500 F-C-2011	Fluoride	1.1		mg F/L	P377769	
2151196	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P378016	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P378168	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P378076	
	EPA 365.1 Rev. 2.0	Total-P	0.070		mg P/L	P377682	
	SM 5310 B-2011	Organic Carbon	5.2		mg C/L	P377830	
2151197	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P377648	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377644

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377645

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377724

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: P377724

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: P378043

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378046

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378843

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378016

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378179

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378180

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377991

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378168

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377844

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377935

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378076

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377682

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377914

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377647

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377648

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

Reference Method: SM 2120 B-2011
Batch ID: P377637

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P377638

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P377765

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

Reference Method: SM 2320 B-2011
Batch ID: P377766

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

Reference Method: SM 2540 C-2011
Batch ID: P378245

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P377863

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377865

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377768

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377769

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377830

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

Reference Method: SM 5310 B-2011
Batch ID: P377836

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: P377724

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	100		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	101		P	85 - 115
Sodium	99.8		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377724

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	80 - 120
Antimony	106		P	80 - 120
Arsenic	104		P	80 - 120
Boron	98.5		P	80 - 120
Cadmium	104		P	80 - 120
Chromium	103		P	80 - 120
Copper	105		P	80 - 120
Lead	107		P	80 - 120
Nickel	103		P	80 - 120
Selenium	103		P	80 - 120
Silver	104		P	80 - 120
Thallium	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378043

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378046

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378843

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378016

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378179

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378180

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377991

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378168

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377844

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: P377935

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378076

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377682

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: P377914

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377647

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377648

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.2		P	90 - 110

Reference Method: SM 2120 B-2011
Batch ID: P377637

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

Reference Method: SM 2120 B-2011
Batch ID: P377638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P377765

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

Reference Method: SM 2320 B-2011
Batch ID: P377766

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

Reference Method: SM 4500 F-C-2011
Batch ID: P377768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P377769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377830

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P377836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377724

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151147	Barium	102	102	P/P	80 - 120
2151147	Calcium	101		P	80 - 120
2151147	Iron	103	103	P/P	80 - 120
2151147	Magnesium	97.8	96.5	P/P	80 - 120
2151147	Potassium	95.2	96.1	P/P	80 - 120
2151147	Sodium	98.4		P	80 - 120
2151147	Zinc	103	103	P/P	80 - 120
2151559	Barium	105		P	80 - 120
2151559	Calcium	105		P	80 - 120
2151559	Iron	106		P	80 - 120
2151559	Magnesium	108		P	80 - 120
2151559	Potassium	111		P	80 - 120
2151559	Sodium	103		P	80 - 120
2151559	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377724

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151147	Aluminum	104	102	P/P	80 - 120
2151147	Antimony	108	107	P/P	80 - 120
2151147	Arsenic	106	106	P/P	80 - 120
2151147	Boron	101	100	P/P	80 - 120
2151147	Cadmium	106	106	P/P	80 - 120
2151147	Chromium	107	106	P/P	80 - 120
2151147	Copper	105	105	P/P	80 - 120
2151147	Lead	110	109	P/P	80 - 120
2151147	Nickel	104	103	P/P	80 - 120
2151147	Selenium	102	101	P/P	80 - 120
2151147	Silver	103	101	P/P	80 - 120
2151147	Thallium	105	105	P/P	80 - 120
2151559	Aluminum	100		P	80 - 120
2151559	Antimony	102		P	80 - 120
2151559	Arsenic	104		P	80 - 120
2151559	Boron	100		P	80 - 120
2151559	Cadmium	102		P	80 - 120
2151559	Chromium	103		P	80 - 120
2151559	Copper	106		P	80 - 120
2151559	Lead	108		P	80 - 120
2151559	Nickel	104		P	80 - 120
2151559	Selenium	99.8		P	80 - 120
2151559	Silver	102		P	80 - 120
2151559	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151149	Chloride	100		P	90 - 110
2151244	Chloride	101		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P378046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151149	Sulfate	99.5		P	90 - 110
2151244	Sulfate	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P378843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151911	Bromide	98.7	98.1	P/P	90 - 110
2152919	Bromide	97.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P378016

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152281	Ammonia-N	96.6	97.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P378179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151171	Ammonia-N	99.3	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P378180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151199	Ammonia-N	97.1	95.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P377991

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151193	Kjeldahl Nitrogen	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P378168

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151511	Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377844

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151139	NO2NO3-N	97.5	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150778	NO2NO3-N	97.9	98.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151196	NO2NO3-N	99.4	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149952	Total-P	99.9	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151171	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151173	O-Phosphate-P	98.0	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377648

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151197	O-Phosphate-P	93.0	95.1	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P377768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151043	Fluoride	98.6	98.6	P/P	89 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P377769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151215	Fluoride	97.0	98.3	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P377830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151217	Organic Carbon	89.7	89.1	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P377836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151410	Organic Carbon	98.6	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151124	Turbidity	1.50	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377645

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151195	Turbidity	13.2	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377724

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151147	Barium	0.00280	Spike	P	0 - 20
2151147	Calcium	0.113	Spike	P	0 - 20
2151147	Iron	0.403	Spike	P	0 - 20
2151147	Magnesium	0.690	Spike	P	0 - 20
2151147	Potassium	0.554	Spike	P	0 - 20
2151147	Sodium	0.783	Spike	P	0 - 20
2151147	Zinc	0.550	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377724

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151147	Aluminum	1.70	Spike	P	0 - 20
2151147	Antimony	1.40	Spike	P	0 - 20
2151147	Arsenic	0.173	Spike	P	0 - 20
2151147	Boron	0.593	Spike	P	0 - 20
2151147	Cadmium	0.0883	Spike	P	0 - 20
2151147	Chromium	0.716	Spike	P	0 - 20
2151147	Copper	0.225	Spike	P	0 - 20
2151147	Lead	1.07	Spike	P	0 - 20
2151147	Nickel	0.490	Spike	P	0 - 20
2151147	Selenium	0.830	Spike	P	0 - 20
2151147	Silver	1.40	Spike	P	0 - 20
2151147	Thallium	0.451	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151149	Chloride	0.722	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151149	Sulfate	0.936	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151911	Bromide	0.320	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378016

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152281	Ammonia-N	0.912	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151171	Ammonia-N	2.36	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151199	Ammonia-N	0.947	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151193	Kjeldahl Nitrogen	0.641	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151511	Kjeldahl Nitrogen	2.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151139	NO2NO3-N	1.42	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150778	NO2NO3-N	0.402	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151196	NO2NO3-N	0.475	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149952	Total-P	0.628	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151171	Total-P	0.735	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151173	O-Phosphate-P	0.102	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151197	O-Phosphate-P	1.61	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P377637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151170	Color (true)	0.989	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P377638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151414	Color (true)	1.76	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
 Batch ID: P377765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151043	Total Alkalinity	0.451	Sample	P	0 - 2.8

Reference Method: SM 2320 B-2011
 Batch ID: P377766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151244	Total Alkalinity	0.0269	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
 Batch ID: P378245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151433	TDS	0.317	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P377768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151043	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-2011
 Batch ID: P377769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151215	Fluoride	0.972	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
 Batch ID: P377830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151217	Organic Carbon	0.534	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P377836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151410	Organic Carbon	0.642	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: A97076

Included Lab Sample IDs: 2151194, 2151197, 2151200

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.4	98.4	P/P	90 - 110
O-Phosphate-P	98.4	98.3	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A97077

Included Lab Sample IDs: 2151192, 2151198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.7	99.0	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97078

Included Lab Sample IDs: 2151192, 2151195, 2151198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	101	100	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A97134

Included Lab Sample IDs: 2151192, 2151195, 2151198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110
Total Alkalinity	101	104	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A97134

Included Lab Sample IDs: 2151192, 2151195, 2151198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110
Fluoride	99.1	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97138

Included Lab Sample IDs: 2151199

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

Reference Method: SM 5310 B-2011

Run ID: A97157

Included Lab Sample IDs: 2151196

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A97159

Included Lab Sample IDs: 2151193, 2151199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.7	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A97170

Included Lab Sample IDs: 2151198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	99.9	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97171

Included Lab Sample IDs: 2151196

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97177

Included Lab Sample IDs: 2151207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	105	103	P/P	90 - 110
Calcium	101	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	101	102	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	107	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97186

Included Lab Sample IDs: 2151193

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: A97221

Included Lab Sample IDs: 2151196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97234

Included Lab Sample IDs: 2151193, 2151199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	107	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97243

Included Lab Sample IDs: 2151196

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

Run ID: A97248

Included Lab Sample IDs: 2151199

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97256

Included Lab Sample IDs: 2151193

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97264

Included Lab Sample IDs: 2151207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.8	97.7	P/P	90 - 110
Antimony	100	100	P/P	90 - 110
Arsenic	99.7	100	P/P	90 - 110
Boron	105	104	P/P	90 - 110
Cadmium	97.9	97.9	P/P	90 - 110
Chromium	96.4	96.0	P/P	90 - 110
Copper	97.8	97.2	P/P	90 - 110
Lead	102	103	P/P	90 - 110
Nickel	98.8	97.9	P/P	90 - 110
Selenium	99.3	98.0	P/P	90 - 110
Silver	99.0	98.3	P/P	90 - 110
Thallium	101	99.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97280

Included Lab Sample IDs: 2151193, 2151199

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97298

Included Lab Sample IDs: 2151196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A97501

Included Lab Sample IDs: 2151195

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

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.50	
	Turbidity						13.2	
EPA 200.7 Rev. 4.4	Barium	102	102	102	105			0.0028
	Calcium	100	101	105				0.113
	Iron	103	103	103	106			0.403
	Magnesium	104	97.8	96.5	108			0.690
	Potassium	101	95.2	96.1	111			0.554
	Sodium	99.8	98.4	103				0.783
	Zinc	102	103	103	103			0.550
EPA 200.8 Rev. 5.4	Aluminum	102	104	102	100			1.70
	Antimony	106	108	107	102			1.40
	Arsenic	104	106	106	104			0.173
	Boron	98.5	101	100	100			0.593
	Cadmium	104	106	106	102			0.0883
	Chromium	103	107	106	103			0.716
	Copper	105	105	105	106			0.225
	Lead	107	110	109	108			1.07
	Nickel	103	104	103	104			0.490
	Selenium	103	99.8	102	101			0.830
	Silver	104	103	101	102			1.40
	Thallium	102	105	105	103			0.451
EPA 300.0 Rev. 2.1	Bromide	102	98.7	98.1	97.4			0.320
	Chloride	101	100	101			0.722	
	Sulfate	102	99.5	99.1			0.936	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	96.6	97.9				0.912
	Ammonia-N	96.7	99.3	102				2.36
	Ammonia-N	97.7	97.1	95.5				0.947
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	102	103				0.641
	Kjeldahl Nitrogen	99.4	101	104				2.45
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	97.5	99.0				1.42
	NO ₂ NO ₃ -N	101	97.9	98.4				0.402
	NO ₂ NO ₃ -N	101	99.4	99.9				0.475
EPA 365.1 Rev. 2.0	Total-P	104	99.9	101				0.628
	Total-P	103	104	104				0.735
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	98.0	97.9				0.102
	O-Phosphate-P	99.2	93.0	95.1				1.61
SM 2120 B-2011	Color (true)	101					0.989	
	Color (true)	103					1.76	
SM 2320 B-2011	Total Alkalinity	102					0.451	
	Total Alkalinity	104					0.0269	
SM 2540 C-2011	TDS						0.317	
SM 4500 F-C-2011	Fluoride	97.0	98.6	98.6				0.0
	Fluoride	97.0	97.0	98.3				0.972
SM 5310 B-2011	Organic Carbon	101	89.7	89.1				0.534
	Organic Carbon	96.4	97.8	98.6				0.642

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2151192, 2151195, 2151198
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2151207

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2151207
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2151195
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2151198
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2151192, 2151198
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2151193, 2151196, 2151199
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2151193, 2151196, 2151199
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2151193, 2151196, 2151199
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2151193, 2151196, 2151199
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2151194, 2151197, 2151200
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2151192, 2151198
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2151192, 2151195, 2151198
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2151207
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2151192, 2151198
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2151192, 2151195, 2151198
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2151192, 2151195, 2151198
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2151193, 2151196, 2151199

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	01/23/2020			01/23/2020 16:14	Samantha Davila	2151192, 2151195, 2151198
EPA 200.7 Rev. 4.4	01/23/2020	01/27/2020 14:00	Elliott D. Healy	01/29/2020 15:44	Betina Topolski	2151207
EPA 200.8 Rev. 5.4	01/23/2020	01/27/2020 14:00	Elliott D. Healy	02/01/2020 03:15	Alexander Thompson	2151207
EPA 300.0 Rev. 2.1	01/23/2020			01/30/2020 05:32	Lipi Saha	2151198
	01/23/2020			01/30/2020 08:22	Lipi Saha	2151192
	01/23/2020			02/11/2020 22:10	Elliott Rodriguez	2151195
EPA 350.1 Rev. 2.0	01/23/2020			01/30/2020 13:05	Ping Hua	2151196
	01/23/2020			02/03/2020 13:16	Ping Hua	2151193
	01/23/2020			02/03/2020 13:32	Ping Hua	2151199
EPA 351.2 Rev. 2.0	01/23/2020	01/30/2020 17:30	Jhamieka S. Greenwood	01/31/2020 10:28	Jhamieka S. Greenwood	2151193
	01/23/2020	01/30/2020 17:30	Jhamieka S. Greenwood	01/31/2020 10:33	Jhamieka S. Greenwood	2151199
	01/23/2020	02/03/2020 11:45	Jhamieka S. Greenwood	02/04/2020 10:13	Jhamieka S. Greenwood	2151196
EPA 353.2 Rev. 2.0	01/23/2020			01/28/2020 11:49	Beverly Y. Sanders	2151199
	01/23/2020			01/29/2020 09:34	Beverly Y. Sanders	2151193
	01/23/2020			01/31/2020 09:20	Beverly Y. Sanders	2151196
EPA 365.1 Rev. 2.0	01/23/2020	01/24/2020 13:35	Yen Ta	01/29/2020 13:51	Benjamin T. Nordmann	2151196
	01/23/2020	01/29/2020 15:35	Yen Ta	01/30/2020 14:15	Benjamin T. Nordmann	2151199
	01/23/2020	01/29/2020 15:35	Yen Ta	01/31/2020 13:39	Benjamin T. Nordmann	2151193
EPA 365.1 Rev. 2.0 dissolved	01/23/2020			01/23/2020 15:57	Carlos Miranda	2151197
	01/23/2020			01/23/2020 16:13	Carlos Miranda	2151194
	01/23/2020			01/23/2020 16:14	Carlos Miranda	2151200
SM 2120 B-2011	01/23/2020			01/23/2020 16:41	Madeline Funaro	2151192
	01/23/2020			01/23/2020 16:42	Madeline Funaro	2151198
SM 2320 B-2011	01/23/2020			01/28/2020 01:57	Dale L. Simmons	2151192
	01/23/2020			01/28/2020 02:12	Dale L. Simmons	2151198
	01/23/2020			01/28/2020 09:37	Dale L. Simmons	2151195
SM 2340B	01/23/2020			01/29/2020 15:44	Betina Topolski	2151207
SM 2540 C-2011	01/23/2020			01/27/2020 16:10	Sima Feizi	2151192, 2151198
SM 2540 D-2011	01/23/2020			01/27/2020 16:10	Sima Feizi	2151192, 2151195, 2151198
SM 4500 F-C-2011	01/23/2020			01/28/2020 01:57	Dale L. Simmons	2151192
	01/23/2020			01/28/2020 02:12	Dale L. Simmons	2151198
	01/23/2020			01/28/2020 06:50	Dale L. Simmons	2151195
SM 5310 B-2011	01/23/2020			01/28/2020 10:29	Madeline Funaro	2151193
	01/23/2020			01/28/2020 10:46	Madeline Funaro	2151199
	01/23/2020			01/28/2020 10:51	Madeline Funaro	2151196