

Chemical Analysis Report

SE-DIST-2020-06-30-01

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

Event Description: **SMP- 3136, 3209, 3107B, 3203A pickups**

Request ID: **RQ-2020-06-22-47**

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
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Date Certified: 16-JUL-2020 13:52



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: Goat Creek @ Gradick

Collection Date/Time: 06/29/2020 10:20

Field ID: G5SE0080

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179549	EPA 180.1 Rev. 2.0	Turbidity	6.5		NTU	P383887	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P384003	
		Sulfate	19		mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	230		PCU	P383916	
	SM 2320 B-2011	Total Alkalinity	105		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	493		mg/L	P384364	
	SM 2540 D-2011	TSS	7	I	mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.16		mg F/L	P384048	
2179553	EPA 350.1 Rev. 2.0	Ammonia-N	0.075		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P383977	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	25		mg C/L	P383961	
2179557	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P383896	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Goat Creek @ Leghorn

Collection Date/Time: 06/29/2020 10:40

Field ID: G5SE0090

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179550	EPA 180.1 Rev. 2.0	Turbidity	5.3	A	NTU	P383887	
	EPA 300.0 Rev. 2.1	Chloride	140		mg Cl/L	P384003	
		Sulfate	18		mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	240		PCU	P383916	
	SM 2320 B-2011	Total Alkalinity	102		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	508	A	mg/L	P384364	
	SM 2540 D-2011	TSS	5	IA	mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.16		mg F/L	P384048	
2179554	EPA 350.1 Rev. 2.0	Ammonia-N	0.083		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.089		mg N/L	P383977	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	26		mg C/L	P383961	
2179558	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P383896	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Fort Pierce Farm Canal @ Taylor Diary

Collection Date/Time: 06/29/2020 11:40

Field ID: G2SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179551	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P383887	
	EPA 300.0 Rev. 2.1	Chloride	320		mg Cl/L	P384003	
		Sulfate	71		mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	73	A	PCU	P383916	
	SM 2320 B-2011	Total Alkalinity	182		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	890		mg/L	P384364	
	SM 2540 D-2011	TSS	5	I	mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.44		mg F/L	P384048	
2179555	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P383911	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P383977	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P383961	
2179559	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.23		mg P/L	P383896	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Kissimmee upstream of 78

Collection Date/Time: 06/29/2020 13:45

Field ID: G4SE0131

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179552	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P383887	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P384003	
		Sulfate	15		mg SO4/L	P384005	
		Color (true)	310		PCU	P383916	
	SM 2320 B-2011	Total Alkalinity	36		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	176	A	mg/L	P384365	
	SM 2540 D-2011	TSS	3	IA	mg/L	P384356	
	SM 4500 F-C-2011	Fluoride	0.093	I	mg F/L	P384048	
2179556	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P384024	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P383911	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P383977	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P383928	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P383961	
2179560	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P383898	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Nubbin Slough upstream of STA

Collection Date/Time: 06/29/2020 14:20

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179561	EPA 180.1 Rev. 2.0	Turbidity	8.3		NTU	P383887	
	EPA 300.0 Rev. 2.1	Chloride	42		mg Cl/L	P384003	
		Sulfate	15		mg SO4/L	P384005	
		Color (true)	360		PCU	P383916	
	SM 2320 B-2011	Total Alkalinity	43		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	229		mg/L	P384365	
	SM 2540 D-2011	TSS	14		mg/L	P384356	
2179562	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P384048	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P384024	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P383911	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P383977	
	EPA 365.1 Rev. 2.0	Total-P	0.50		mg P/L	P383928	
2179563	SM 5310 B-2011	Organic Carbon	41		mg C/L	P383961	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.21		mg P/L	P383898	
2179574	EPA 200.7 Rev. 4.4	Barium	17.4		ug/L	P383939	
		Calcium	18.6		mg/L	P383939	
		Iron	2.07E+03		ug/L	P383939	
		Magnesium	5.76		mg/L	P383939	
		Potassium	12.0		mg/L	P383939	
		Sodium	25.0		mg/L	P383939	
		Zinc	5.5	I	ug/L	P383939	
	EPA 200.8 Rev. 5.4	Aluminum	536		ug/L	P383939	
		Antimony	0.069	I	ug/L	P383939	
		Arsenic	1.35		ug/L	P383939	
		Boron**	43.0		ug/L	P383939	
		Cadmium	0.020	U	ug/L	P383939	
		Chromium	1.8		ug/L	P383939	
		Copper	0.99		ug/L	P383939	
		Lead	0.39	I	ug/L	P383939	
		Nickel	0.57	I	ug/L	P383939	
		Selenium	0.33	I	ug/L	P383939	
		Silver	0.010	U	ug/L	P383939	
		Thallium	0.10	U	ug/L	P383939	
		Hardness	70.3		mg/L	P383939	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P383887

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P383939

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: P383939

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: P384003

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384005

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384023

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: P384024

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383910

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383911

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383977

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383927

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383928

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383896

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383898

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

Reference Method: SM 2120 B-2011
Batch ID: P383916

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P384044

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

Reference Method: SM 2540 C-2011
Batch ID: P384364

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P384365

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384355

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384356

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P384048

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P383961

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: P383939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	104		P	85 - 115
Iron	106		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	98.8		P	85 - 115
Sodium	101		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	103		P	85 - 115
Boron	106		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	104		P	85 - 115
Copper	100		P	85 - 115
Lead	104		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	100		P	85 - 115
Silver	103		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384003

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384005

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384023

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384024

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383910

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383911

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383977

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: P383927

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: P383928

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383898

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: P383916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.6		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P384044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	93 - 104

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P384048

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P383961

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P383939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179737	Barium	104		P	80 - 120
2179737	Calcium	105		P	80 - 120
2179737	Iron	107		P	80 - 120
2179737	Magnesium	105		P	80 - 120
2179737	Potassium	101		P	80 - 120
2179737	Sodium	102		P	80 - 120
2179737	Zinc	107		P	80 - 120
2179830	Barium	103	106	P/P	80 - 120
2179830	Calcium	104		P	80 - 120
2179830	Iron	104	108	P/P	80 - 120
2179830	Magnesium	104	108	P/P	80 - 120
2179830	Potassium	99.2	100	P/P	80 - 120
2179830	Sodium	100		P	80 - 120
2179830	Zinc	106	109	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179737	Aluminum	96.6		P	80 - 120
2179737	Antimony	100		P	80 - 120
2179737	Arsenic	102		P	80 - 120
2179737	Boron	103		P	80 - 120
2179737	Cadmium	104		P	80 - 120
2179737	Chromium	104		P	80 - 120
2179737	Copper	99.0		P	80 - 120
2179737	Lead	102		P	80 - 120
2179737	Nickel	98.7		P	80 - 120
2179737	Selenium	98.1		P	80 - 120
2179737	Silver	100		P	80 - 120
2179737	Thallium	107		P	80 - 120
2179830	Aluminum	99.7	99.4	P/P	80 - 120
2179830	Antimony	102	100	P/P	80 - 120
2179830	Arsenic	103	103	P/P	80 - 120
2179830	Boron	105	103	P/P	80 - 120
2179830	Cadmium	103	104	P/P	80 - 120
2179830	Chromium	103	103	P/P	80 - 120
2179830	Copper	99.6	101	P/P	80 - 120
2179830	Lead	105	104	P/P	80 - 120
2179830	Nickel	99.6	99.9	P/P	80 - 120
2179830	Selenium	99.3	99.3	P/P	80 - 120
2179830	Silver	101	101	P/P	80 - 120
2179830	Thallium	107	108	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179031	Chloride	97.0		P	90 - 110
2179313	Chloride	98.4		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179031	Sulfate	98.7		P	90 - 110
2179313	Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179177	Ammonia-N	99.7	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179590	Ammonia-N	98.4	99.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383977

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179555	NO2NO3-N	97.5	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179177	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179556	Total-P	106	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179312	O-Phosphate-P	96.2	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383898

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179784	O-Phosphate-P	93.3	94.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P384048

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179702	Fluoride	101	101	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P383961

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179320	Organic Carbon	99.8	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P383887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179550	Turbidity	2.45	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P383939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179830	Barium	2.89	Spike	P	0 - 20
2179830	Calcium	0.380	Spike	P	0 - 20
2179830	Iron	3.09	Spike	P	0 - 20
2179830	Magnesium	2.86	Spike	P	0 - 20
2179830	Potassium	0.770	Spike	P	0 - 20
2179830	Sodium	0.569	Spike	P	0 - 20
2179830	Zinc	2.73	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179830	Aluminum	0.274	Spike	P	0 - 20
2179830	Antimony	1.42	Spike	P	0 - 20
2179830	Arsenic	0.506	Spike	P	0 - 20
2179830	Boron	0.751	Spike	P	0 - 20
2179830	Cadmium	0.786	Spike	P	0 - 20
2179830	Chromium	0.175	Spike	P	0 - 20
2179830	Copper	1.33	Spike	P	0 - 20
2179830	Lead	0.930	Spike	P	0 - 20
2179830	Nickel	0.274	Spike	P	0 - 20
2179830	Selenium	0.0171	Spike	P	0 - 20
2179830	Silver	0.226	Spike	P	0 - 20
2179830	Thallium	0.888	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179031	Chloride	0.386	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179031	Sulfate	0.735	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179177	Ammonia-N	0.443	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179590	Ammonia-N	1.04	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179320	Kjeldahl Nitrogen	4.13	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179556	Kjeldahl Nitrogen	0.968	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383977

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179555	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179177	Total-P	0.701	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179556	Total-P	2.52	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179312	O-Phosphate-P	1.81	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179784	O-Phosphate-P	0.960	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P383916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179551	Color (true)	1.33	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P384044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179702	Total Alkalinity	1.21	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P384364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179550	TDS	7.09	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P384365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179552	TDS	5.10	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P384048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179702	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P383961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179320	Organic Carbon	0.620	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99608

Included Lab Sample IDs: 2179549, 2179550, 2179551, 2179552, 2179561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99611

Included Lab Sample IDs: 2179557, 2179558, 2179559, 2179560, 2179563

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.0	96.5	P/P	90 - 110
O-Phosphate-P	98.8	99.5	P/P	90 - 110
O-Phosphate-P	99.1	97.7	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A99622

Included Lab Sample IDs: 2179549, 2179550, 2179551, 2179552, 2179561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.5	98.3	P/P	90 - 115
Color (true)	99.8	99.9	P/P	90 - 115

Reference Method: SM 5310 B-2011

Run ID: A99638

Included Lab Sample IDs: 2179553, 2179554, 2179555, 2179556, 2179562

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.1	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99647

Included Lab Sample IDs: 2179553, 2179554, 2179555, 2179556, 2179562

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99648

Included Lab Sample IDs: 2179553, 2179554

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99651

Included Lab Sample IDs: 2179555, 2179556, 2179562

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99659

Included Lab Sample IDs: 2179549, 2179550, 2179551, 2179552, 2179561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.8	P/P	90 - 110
Chloride	99.8	101	P/P	90 - 110
Sulfate	99.2	100	P/P	90 - 110
Sulfate	99.9	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99664

Included Lab Sample IDs: 2179553, 2179554, 2179555, 2179556, 2179562

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

Reference Method: SM 2320 B-2011

Run ID: A99669

Included Lab Sample IDs: 2179549, 2179550, 2179551, 2179552, 2179561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.9	96.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A99669

Included Lab Sample IDs: 2179549, 2179550, 2179551, 2179552, 2179561

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A99673

Included Lab Sample IDs: 2179574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	103	P/P	90 - 110
Calcium	106	106	P/P	90 - 110
Iron	107	107	P/P	90 - 110
Magnesium	106	105	P/P	90 - 110
Potassium	98.2	99.5	P/P	90 - 110
Sodium	102	103	P/P	90 - 110
Zinc	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99697

Included Lab Sample IDs: 2179555, 2179556, 2179562

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99699

Included Lab Sample IDs: 2179553, 2179554

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99728

Included Lab Sample IDs: 2179574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	101	102	P/P	90 - 110
Arsenic	103	104	P/P	90 - 110
Cadmium	104	105	P/P	90 - 110
Chromium	101	102	P/P	90 - 110
Copper	99.0	99.8	P/P	90 - 110
Lead	104	104	P/P	90 - 110
Nickel	99.8	99.6	P/P	90 - 110
Selenium	103	104	P/P	90 - 110
Silver	103	104	P/P	90 - 110
Thallium	103	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99751

Included Lab Sample IDs: 2179574

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99778

Included Lab Sample IDs: 2179574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.0	97.6	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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					2.45	
EPA 200.7 Rev. 4.4	Barium	102	104	103	106		2.89
	Calcium	104	105	104			0.380
	Iron	106	107	104	108		3.09
	Magnesium	106	105	104	108		2.86
	Potassium	98.8	101	99.2	100		0.770
	Sodium	101	102	100			0.569
	Zinc	102	107	106	109		2.73
EPA 200.8 Rev. 5.4	Aluminum	100	99.7	99.4	96.6		0.274
	Antimony	101	102	100	100		1.42
	Arsenic	103	103	103	102		0.506
	Boron	106	105	103	103		0.751
	Cadmium	104	103	104	104		0.786
	Chromium	104	103	103	104		0.175
	Copper	100	99.6	101	99.0		1.33
	Lead	104	105	104	102		0.930
	Nickel	99.9	99.6	99.9	98.7		0.274
	Selenium	100	99.3	99.3	98.1		0.0171
	Silver	103	101	101	100		0.226
	Thallium	105	107	108	107		0.888
EPA 300.0 Rev. 2.1	Chloride	97.4	97.0	98.4		0.386	
	Sulfate	95.8	98.7	97.3		0.735	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	99.7	99.2			0.443
	Ammonia-N	100	98.4	99.9			1.04
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108					4.13
	Kjeldahl Nitrogen	108					0.968
EPA 353.2 Rev. 2.0	NO2NO3-N	100	97.5	98.5			1.02
EPA 365.1 Rev. 2.0	Total-P	104	105	106			0.701
	Total-P	105	106	103			2.52
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1	96.2	98.2			1.81
	O-Phosphate-P	99.2	93.3	94.2			0.960
SM 2120 B-2011	Color (true)	96.6				1.33	
SM 2320 B-2011	Total Alkalinity	99.4				1.21	
SM 2540 C-2011	TDS					7.09	
	TDS					5.10	
SM 4500 F-C-2011	Fluoride	99.3	101	101			0.0
SM 5310 B-2011	Organic Carbon	101	99.8	101			0.620

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2179549, 2179550, 2179551, 2179552, 2179561
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2179574
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2179574
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2179549, 2179550, 2179551, 2179552, 2179561
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2179549, 2179550, 2179551, 2179552, 2179561
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2179553, 2179554, 2179555, 2179556, 2179562

Reference Method Descriptions

Method	Description	Associated Samples
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2179553, 2179554, 2179555, 2179556, 2179562
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2179553, 2179554, 2179555, 2179556, 2179562
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2179553, 2179554, 2179555, 2179556, 2179562
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2179557, 2179558, 2179559, 2179560, 2179563
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2179549, 2179550, 2179551, 2179552, 2179561
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2179549, 2179550, 2179551, 2179552, 2179561
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2179574
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2179549, 2179550, 2179551, 2179552, 2179561
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2179549, 2179550, 2179551, 2179552, 2179561
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2179549, 2179550, 2179551, 2179552, 2179561
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2179553, 2179554, 2179555, 2179556, 2179562

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	06/30/2020			06/30/2020 15:18	Yen Ta	2179549, 2179550, 2179551, 2179552, 2179561
EPA 200.7 Rev. 4.4	06/30/2020	07/01/2020 16:10	Elliott D. Healy	07/02/2020 14:08	Betina Topolski	2179574
EPA 200.8 Rev. 5.4	06/30/2020	07/01/2020 16:10	Elliott D. Healy	07/07/2020 19:58	Alexander Thompson	2179574
	06/30/2020	07/01/2020 16:10	Elliott D. Healy	07/08/2020 18:04	Alexander Thompson	2179574
	06/30/2020	07/01/2020 16:10	Elliott D. Healy	07/09/2020 12:21	Alexander Thompson	2179574
EPA 300.0 Rev. 2.1	06/30/2020			07/02/2020 10:15	Elliott Rodriguez	2179549
	06/30/2020			07/02/2020 10:27	Elliott Rodriguez	2179550
	06/30/2020			07/02/2020 10:39	Elliott Rodriguez	2179551
	06/30/2020			07/02/2020 10:52	Elliott Rodriguez	2179552
	06/30/2020			07/02/2020 11:28	Elliott Rodriguez	2179561
EPA 350.1 Rev. 2.0	06/30/2020			07/04/2020 11:08	Ping Hua	2179553
	06/30/2020			07/04/2020 11:09	Ping Hua	2179554
	06/30/2020			07/04/2020 11:11	Ping Hua	2179555
	06/30/2020			07/04/2020 11:26	Ping Hua	2179556
	06/30/2020			07/04/2020 11:27	Ping Hua	2179562
EPA 351.2 Rev. 2.0	06/30/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:34	Jhamieka S. Greenwood	2179553
	06/30/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:35	Jhamieka S. Greenwood	2179554
	06/30/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 11:07	Jhamieka S. Greenwood	2179556
	06/30/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 11:12	Jhamieka S. Greenwood	2179555
	06/30/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 11:13	Jhamieka S. Greenwood	2179562
EPA 353.2 Rev. 2.0	06/30/2020			07/02/2020 08:07	Beverly Y. Sanders	2179555
	06/30/2020			07/02/2020 08:13	Beverly Y. Sanders	2179553
	06/30/2020			07/02/2020 08:15	Beverly Y. Sanders	2179554
	06/30/2020			07/02/2020 08:16	Beverly Y. Sanders	2179556
	06/30/2020			07/02/2020 08:17	Beverly Y. Sanders	2179562
EPA 365.1 Rev. 2.0	06/30/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:43	Lipi Saha	2179555
	06/30/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:46	Lipi Saha	2179556
	06/30/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:52	Lipi Saha	2179562
	06/30/2020	07/01/2020 12:11	Yen Ta	07/07/2020 07:53	Lipi Saha	2179553
	06/30/2020	07/01/2020 12:11	Yen Ta	07/07/2020 07:54	Lipi Saha	2179554
EPA 365.1 Rev. 2.0 dissolved	06/30/2020			06/30/2020 15:57	Jhamieka S. Greenwood	2179559
	06/30/2020			06/30/2020 15:59	Jhamieka S. Greenwood	2179557
	06/30/2020			06/30/2020 16:23	Jhamieka S. Greenwood	2179563
	06/30/2020			06/30/2020 16:25	Jhamieka S. Greenwood	2179560
	06/30/2020			06/30/2020 16:44	Jhamieka S. Greenwood	2179558
SM 2120 B-2011	06/30/2020			06/30/2020 14:29	Benjamin T. Nordmann	2179551
	06/30/2020			06/30/2020 15:05	Benjamin T. Nordmann	2179549
	06/30/2020			06/30/2020 15:06	Benjamin T. Nordmann	2179550, 2179552
	06/30/2020			06/30/2020 15:07	Benjamin T. Nordmann	2179561

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	06/30/2020			07/03/2020 04:27	Lauren Lees	2179549
	06/30/2020			07/03/2020 04:40	Lauren Lees	2179550
	06/30/2020			07/03/2020 04:53	Lauren Lees	2179552
	06/30/2020			07/03/2020 05:05	Lauren Lees	2179561
	06/30/2020			07/03/2020 05:47	Lauren Lees	2179551
SM 2340B	06/30/2020			07/02/2020 14:08	Betina Topolski	2179574
SM 2540 C-2011	06/30/2020			07/01/2020 13:59	Yijie Li	2179549, 2179550, 2179551, 2179552, 2179561
SM 2540 D-2011	06/30/2020			07/01/2020 13:59	Yijie Li	2179549, 2179550, 2179551, 2179552, 2179561
SM 4500 F-C-2011	06/30/2020			07/03/2020 04:27	Lauren Lees	2179549
	06/30/2020			07/03/2020 04:40	Lauren Lees	2179550
	06/30/2020			07/03/2020 04:53	Lauren Lees	2179552
	06/30/2020			07/03/2020 05:05	Lauren Lees	2179561
	06/30/2020			07/03/2020 05:47	Lauren Lees	2179551
SM 5310 B-2011	06/30/2020			07/01/2020 16:53	David Boose	2179553
	06/30/2020			07/01/2020 17:05	David Boose	2179554
	06/30/2020			07/01/2020 17:17	David Boose	2179555
	06/30/2020			07/01/2020 17:30	David Boose	2179556
	06/30/2020			07/01/2020 17:42	David Boose	2179562