

Chemical Analysis Report

NE-DIST-2020-07-16-01

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

Event Description: **GTM NERR-Guana River SMP = 7 Sites + 1 Field Blank**
Request ID: **RQ-2020-04-27-08**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd.
MS 3560
Tallahassee, FL 32399-2400
Attn: Alicia Hogue

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 07-AUG-2020 12:35

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: DEPGR3

Collection Date/Time: 07/15/2020 07:05

Field ID: GTMGR3NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183400	EPA 180.1 Rev. 2.0	Turbidity	6.2	A	NTU	P385090	
	EPA 300.0 Rev. 2.1	Bromide	56		mg Br/L	P385582	
	SM 2320 B-2011	Total Alkalinity	120		mg CaCO3/L	P385003	
	SM 2540 D-2011	TSS	9	IA	mg/L	P384908	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P385006	
2183407	EPA 350.1 Rev. 2.0	Ammonia-N	0.038		mg N/L	P384825	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P384773	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384861	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P385034	
	SM 5310 B-2011	Organic Carbon	5.7		mg C/L	P384845	
2183414	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P384791	
2183421	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.51		mg N/L	P384984	

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: DEPGR2

Collection Date/Time: 07/15/2020 07:25

Field ID: GTMGRNUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183401	EPA 180.1 Rev. 2.0	Turbidity	9.7		NTU	P385090	
	EPA 300.0 Rev. 2.1	Bromide	55		mg Br/L	P385582	
	SM 2320 B-2011	Total Alkalinity	117		mg CaCO3/L	P385003	
	SM 2540 D-2011	TSS	26		mg/L	P384908	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P385006	
2183408	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P384825	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P384773	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384861	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P385034	
	SM 5310 B-2011	Organic Carbon	6.3		mg C/L	P384845	
2183415	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P384791	
2183422	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.57		mg N/L	P384984	

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: DEPGR1

Collection Date/Time: 07/15/2020 07:44

Field ID: GTMGR1NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183402	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P385090	
	EPA 300.0 Rev. 2.1	Bromide	56		mg Br/L	P385582	
	SM 2320 B-2011	Total Alkalinity	102		mg CaCO3/L	P385003	
	SM 2540 D-2011	TSS	29		mg/L	P384908	
	SM 4500 F-C-2011	Fluoride	1.2		mg F/L	P385006	
2183409	EPA 350.1 Rev. 2.0	Ammonia-N	0.055		mg N/L	P384825	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P384773	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384861	
	EPA 365.1 Rev. 2.0	Total-P	0.095		mg P/L	P385034	
	SM 5310 B-2011	Organic Carbon	9.1		mg C/L	P384845	
2183416	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.043		mg P/L	P384791	
2183423	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.70		mg N/L	P384984	

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: DEPGL4

Collection Date/Time: 07/15/2020 09:03

Field ID: GTMGL4NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183403	EPA 180.1 Rev. 2.0	Turbidity	7.5		NTU	P385090	
	EPA 300.0 Rev. 2.1	Bromide	52		mg Br/L	P385582	
	SM 2320 B-2011	Total Alkalinity	41		mg CaCO3/L	P385003	
	SM 2540 D-2011	TSS	10		mg/L	P384908	
	SM 4500 F-C-2011	Fluoride	1.1		mg F/L	P385006	
2183410	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P384825	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P384773	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384861	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P385034	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P384845	
2183417	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P384791	
2183424	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.1		mg N/L	P384984	

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: DEPL3

Collection Date/Time: 07/15/2020 09:30

Field ID: GTMLMUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183404	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P385090	
	EPA 300.0 Rev. 2.1	Bromide	38		mg Br/L	P385582	
	SM 2320 B-2011	Total Alkalinity	59		mg CaCO ₃ /L	P385003	
	SM 2540 D-2011	TSS	6	I	mg/L	P384908	
	SM 4500 F-C-2011	Fluoride	0.89		mg F/L	P385006	
2183411	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P384825	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P384773	
	EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	0.004	U	mg N/L	P384861	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P385034	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P384845	
2183418	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P384791	
2183425	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.6		mg N/L	P384984	

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: DEPGL2

Collection Date/Time: 07/15/2020 09:54

Field ID: GTMGL2NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183405	EPA 180.1 Rev. 2.0	Turbidity	7.5		NTU	P385090	
	EPA 300.0 Rev. 2.1	Bromide	14		mg Br/L	P385582	
	SM 2320 B-2011	Total Alkalinity	119	A	mg CaCO3/L	P385003	
	SM 2540 D-2011	TSS	10		mg/L	P384910	
	SM 4500 F-C-2011	Fluoride	0.49		mg F/L	P385006	
2183412	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P384825	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.6		mg N/L	P384984	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384861	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P385034	
	SM 5310 B-2011	Organic Carbon	32		mg C/L	P384843	
2183419	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.015		mg P/L	P384791	
2183426	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.6		mg N/L	P384984	

Sample Location: DEPGL1

Collection Date/Time: 07/15/2020 10:27

Field ID: GTMGL1NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183406	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P385090	
	EPA 300.0 Rev. 2.1	Bromide	0.38		mg Br/L	P385582	
	SM 2320 B-2011	Total Alkalinity	124		mg CaCO3/L	P385001	
	SM 2540 D-2011	TSS	2	U	mg/L	P384910	
	SM 4500 F-C-2011	Fluoride	0.24		mg F/L	P385004	
2183413	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P384823	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P384983	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384914	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P384879	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P384843	
2183420	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.048		mg P/L	P384789	
2183427	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.0		mg N/L	P384983	

Sample Location: Field Blank

Collection Date/Time: 07/15/2020 07:06

Field ID: Field Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2183428	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P385090	MS
	EPA 300.0 Rev. 2.1	Bromide	0.013	U	mg Br/L	P385583	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P385001	
	SM 2540 D-2011	TSS	2	U	mg/L	P384911	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385004	
2183429	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P384826	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P384983	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384914	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P384880	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P384843	
2183430	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P384789	
2183431	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.080	U	mg N/L	P384983	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385090

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385582

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384823

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384826

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384773

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384983

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384984

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384983

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384984

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384861

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384914

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384879

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384880

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385034

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384789

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384791

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P385001

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

Reference Method: SM 2320 B-2011
Batch ID: P385003

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

Reference Method: SM 2540 D-2011
Batch ID: P384908

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384910

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384911

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385004

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385006

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P384843

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

Reference Method: SM 5310 B-2011
Batch ID: P384845

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	96.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	95.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384823

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384826

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384773

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384984

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.6		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384984

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384861

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: P384914

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: P384879

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384880

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385034

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384791

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

Reference Method: SM 2320 B-2011
Batch ID: P385001

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P385003

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P385004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P385006

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P384843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.7		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P384845

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2182961	Bromide	92.9		P	90 - 110
2183177	Bromide	93.3	92.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183463	Bromide	90.8		P	90 - 110
2184296	Bromide	90.0	90.6	F/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384823

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183319	Ammonia-N	97.7	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183412	Ammonia-N	98.5	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384826

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183476	Ammonia-N	97.1	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183047	Kjeldahl Nitrogen	99.9	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183341	Kjeldahl Nitrogen	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183423	Kjeldahl Nitrogen	101	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183341	Kjeldahl Nitrogen	103	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183423	Kjeldahl Nitrogen	101	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183407	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183348	NO2NO3-N	96.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384879

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183186	Total-P	108	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183466	Total-P	110	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183171	Total-P	98.2	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183321	O-Phosphate-P	96.5	97.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384791

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183414	O-Phosphate-P	95.6	95.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P385004

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184058	Fluoride	99.6	99.6	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P385006

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183405	Fluoride	100	99.2	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P384843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183529	Organic Carbon	99.4	99.8	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P384845

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183409	Organic Carbon	101	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183400	Turbidity	0.971	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183177	Bromide	0.308	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184296	Bromide	0.600	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384823

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183319	Ammonia-N	1.90	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183412	Ammonia-N	0.548	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183476	Ammonia-N	1.34	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183047	Kjeldahl Nitrogen	2.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183341	Kjeldahl Nitrogen	0.714	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183423	Kjeldahl Nitrogen	4.18	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183341	Kjeldahl Nitrogen	0.714	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P384984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183423	Kjeldahl Nitrogen	4.18	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183407	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183348	NO2NO3-N	0.506	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183186	Total-P	0.337	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183466	Total-P	2.60	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183171	Total-P	0.218	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183321	O-Phosphate-P	0.515	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183414	O-Phosphate-P	0.164	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P385001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184058	Total Alkalinity	1.86	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P385003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183405	Total Alkalinity	1.99	Sample	P	0 - 8.1

Reference Method: SM 2540 D-2011
Batch ID: P384910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183563	TSS	0.0	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P384911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183464	TSS	3.51	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P385004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184058	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P385006

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183405	Fluoride	0.460	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P384843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183529	Organic Carbon	0.296	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P384845

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183409	Organic Carbon	0.0	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

Run ID: A100005

Included Lab Sample IDs: 2183429

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	95.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100019

Included Lab Sample IDs: 2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	105	P/P	90 - 110
Total Alkalinity	98.8	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100019

Included Lab Sample IDs: 2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100044

Included Lab Sample IDs: 2183412, 2183413, 2183429

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	103	P/P	90 - 110
Kjeldahl Nitrogen	108	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A100044

Included Lab Sample IDs: 2183421, 2183422, 2183423, 2183424, 2183425, 2183426, 2183427, 2183431

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	103	P/P	90 - 110
Kjeldahl Nitrogen	108	105	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100047

Included Lab Sample IDs: 2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100056

Included Lab Sample IDs: 2183412

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100083

Included Lab Sample IDs: 2183407, 2183408, 2183409, 2183410, 2183411

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	97.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100250

Included Lab Sample IDs: 2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	107	94.6	P/P	90 - 110
Bromide	108	97.6	P/P	90 - 110
Bromide	94.6	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99941

Included Lab Sample IDs: 2183414, 2183415, 2183416, 2183417, 2183418, 2183419, 2183420, 2183430

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.8	95.9	P/P	90 - 110
O-Phosphate-P	96.8	96.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99954

Included Lab Sample IDs: 2183413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	97.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99955

Included Lab Sample IDs: 2183407, 2183408, 2183409, 2183410, 2183411, 2183412, 2183429

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	98.7	P/P	90 - 110
Ammonia-N	98.8	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A99964

Included Lab Sample IDs: 2183407, 2183408, 2183409, 2183410, 2183411, 2183412, 2183413, 2183429

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	97.7	P/P	90 - 110
Organic Carbon	103	98.3	P/P	90 - 110
Organic Carbon	97.7	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99968

Included Lab Sample IDs: 2183407, 2183408, 2183409, 2183410, 2183411, 2183412

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99971

Included Lab Sample IDs: 2183408, 2183409, 2183410, 2183411

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99976

Included Lab Sample IDs: 2183407

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.8	96.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99985

Included Lab Sample IDs: 2183413, 2183429

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99998

Included Lab Sample IDs: 2183413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	99.2	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					0.971	
EPA 300.0 Rev. 2.1	Bromide	96.2	93.3	92.9	92.9		0.308
	Bromide	95.0	90.0	90.6	90.8		0.600
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	97.7	99.5			1.90
	Ammonia-N	101	98.5	99.2			0.548
	Ammonia-N	99.0	97.1	98.6			1.34
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	99.9	104			2.33
	Kjeldahl Nitrogen	99.6	103	102			0.714
	Kjeldahl Nitrogen	104	101	96.0			4.18
EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	99.6	103	102			0.714
	Kjeldahl Nitrogen	104	101	96.0			4.18
EPA 353.2 Rev. 2.0	NO2NO3-N	101	102	100			0.990
	NO2NO3-N	100	96.2				0.506
EPA 365.1 Rev. 2.0	Total-P	106	108	109			0.337
	Total-P	107	110	104			2.60
	Total-P	104	98.2	98.0			0.218
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5	96.5	97.1			0.515
	O-Phosphate-P	98.5	95.6	95.8			0.164
SM 2320 B-2011	Total Alkalinity	104				1.86	
	Total Alkalinity	100				1.99	
SM 2540 D-2011	TSS					0.0	
	TSS					3.51	
SM 4500 F-C-2011	Fluoride	102	99.6	99.6			0.0
	Fluoride	102	100	99.2			0.460
SM 5310 B-2011	Organic Carbon	98.7	99.4	99.8			0.296
	Organic Carbon	106	101	101			0.0

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2183407, 2183408, 2183409, 2183410, 2183411, 2183412, 2183413, 2183429
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2183407, 2183408, 2183409, 2183410, 2183411, 2183412, 2183413, 2183429
EPA 351.2 Rev. 2.0 dissolved	Total Kjeldahl Nitrogen, dissolved, in filtered, aqueous matrices	2183421, 2183422, 2183423, 2183424, 2183425, 2183426, 2183427, 2183431
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2183407, 2183408, 2183409, 2183410, 2183411, 2183412, 2183413, 2183429
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2183407, 2183408, 2183409, 2183410, 2183411, 2183412, 2183413, 2183429
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2183414, 2183415, 2183416, 2183417, 2183418, 2183419, 2183420, 2183430
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2183407, 2183408, 2183409, 2183410, 2183411, 2183412, 2183413, 2183429

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	07/16/2020			07/16/2020 16:02	Samantha Davila	2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428
EPA 300.0 Rev. 2.1	07/16/2020			07/28/2020 20:06	Julia Storbeck	2183400
	07/16/2020			07/28/2020 20:24	Julia Storbeck	2183401
	07/16/2020			07/28/2020 20:42	Julia Storbeck	2183402
	07/16/2020			07/28/2020 21:37	Julia Storbeck	2183403
	07/16/2020			07/28/2020 21:55	Julia Storbeck	2183404
	07/16/2020			07/28/2020 22:13	Julia Storbeck	2183405
	07/16/2020			07/28/2020 22:31	Julia Storbeck	2183406
	07/16/2020			07/29/2020 01:33	Julia Storbeck	2183428
EPA 350.1 Rev. 2.0	07/16/2020			07/18/2020 13:59	Ping Hua	2183413
	07/16/2020			07/19/2020 10:57	Ping Hua	2183407
	07/16/2020			07/19/2020 10:59	Ping Hua	2183408
	07/16/2020			07/19/2020 11:00	Ping Hua	2183409
	07/16/2020			07/19/2020 11:02	Ping Hua	2183410
	07/16/2020			07/19/2020 11:03	Ping Hua	2183412
	07/16/2020			07/19/2020 11:06	Ping Hua	2183411
	07/16/2020			07/19/2020 11:39	Ping Hua	2183429
EPA 351.2 Rev. 2.0	07/16/2020	07/17/2020 11:15	Jhamieka S. Greenwood	07/20/2020 13:01	Jhamieka S. Greenwood	2183408
	07/16/2020	07/17/2020 11:15	Jhamieka S. Greenwood	07/20/2020 13:03	Jhamieka S. Greenwood	2183409
	07/16/2020	07/17/2020 11:15	Jhamieka S. Greenwood	07/20/2020 13:04	Jhamieka S. Greenwood	2183410
	07/16/2020	07/17/2020 11:15	Jhamieka S. Greenwood	07/20/2020 13:06	Jhamieka S. Greenwood	2183411
	07/16/2020	07/17/2020 11:15	Jhamieka S. Greenwood	07/20/2020 16:01	Jhamieka S. Greenwood	2183407
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 13:39	Jhamieka S. Greenwood	2183413
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 13:42	Jhamieka S. Greenwood	2183429
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 14:00	Jhamieka S. Greenwood	2183412
EPA 351.2 Rev. 2.0 dissolved	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 13:41	Jhamieka S. Greenwood	2183427
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 13:44	Jhamieka S. Greenwood	2183431
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 13:55	Jhamieka S. Greenwood	2183423
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 14:02	Jhamieka S. Greenwood	2183421
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 14:03	Jhamieka S. Greenwood	2183422
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 14:05	Jhamieka S. Greenwood	2183424
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 14:06	Jhamieka S. Greenwood	2183425
	07/16/2020	07/22/2020 10:10	Jhamieka S. Greenwood	07/23/2020 14:08	Jhamieka S. Greenwood	2183426
EPA 353.2 Rev. 2.0	07/16/2020			07/20/2020 10:01	Beverly Y. Sanders	2183407
	07/16/2020			07/20/2020 10:09	Beverly Y. Sanders	2183408
	07/16/2020			07/20/2020 10:10	Beverly Y. Sanders	2183409
	07/16/2020			07/20/2020 10:11	Beverly Y. Sanders	2183410
	07/16/2020			07/20/2020 10:12	Beverly Y. Sanders	2183411
	07/16/2020			07/20/2020 10:14	Beverly Y. Sanders	2183412

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 353.2 Rev. 2.0	07/16/2020			07/21/2020 08:55	Beverly Y. Sanders	2183413
	07/16/2020			07/21/2020 08:56	Beverly Y. Sanders	2183429
EPA 365.1 Rev. 2.0	07/16/2020	07/20/2020 13:21	Yen Ta	07/21/2020 11:03	Lipi Saha	2183413
	07/16/2020	07/20/2020 13:21	Yen Ta	07/22/2020 08:39	Lipi Saha	2183429
	07/16/2020	07/23/2020 10:00	Lipi Saha	07/24/2020 08:22	Lipi Saha	2183412
	07/16/2020	07/23/2020 10:00	Lipi Saha	07/27/2020 08:20	Lipi Saha	2183407
	07/16/2020	07/23/2020 10:00	Lipi Saha	07/27/2020 08:21	Lipi Saha	2183408
	07/16/2020	07/23/2020 10:00	Lipi Saha	07/27/2020 08:22	Lipi Saha	2183409
	07/16/2020	07/23/2020 10:00	Lipi Saha	07/27/2020 08:23	Lipi Saha	2183410
	07/16/2020	07/23/2020 10:00	Lipi Saha	07/27/2020 08:24	Lipi Saha	2183411
EPA 365.1 Rev. 2.0 dissolved	07/16/2020			07/16/2020 16:31	Carlos Miranda	2183420
	07/16/2020			07/16/2020 16:32	Carlos Miranda	2183430
	07/16/2020			07/16/2020 16:44	Carlos Miranda	2183414
	07/16/2020			07/16/2020 16:51	Carlos Miranda	2183415
	07/16/2020			07/16/2020 16:52	Carlos Miranda	2183416
	07/16/2020			07/16/2020 16:53	Carlos Miranda	2183417
	07/16/2020			07/16/2020 16:54	Carlos Miranda	2183418, 2183419
	07/16/2020			07/21/2020 21:48	Dale L. Simmons	2183406
SM 2320 B-2011	07/16/2020			07/21/2020 21:57	Dale L. Simmons	2183428
	07/16/2020			07/22/2020 09:11	Dale L. Simmons	2183405
	07/16/2020			07/22/2020 09:36	Dale L. Simmons	2183400
	07/16/2020			07/22/2020 09:49	Dale L. Simmons	2183401
	07/16/2020			07/22/2020 10:01	Dale L. Simmons	2183402
	07/16/2020			07/22/2020 10:12	Dale L. Simmons	2183403
	07/16/2020			07/22/2020 10:25	Dale L. Simmons	2183404
	07/16/2020			07/17/2020 19:29	Madeline Gruver	2183400, 2183401, 2183402, 2183403, 2183404, 2183405, 2183406, 2183428
SM 2540 D-2011	07/16/2020					
	07/16/2020					
	07/16/2020					
	07/16/2020					
	07/16/2020					
	07/16/2020					
	07/16/2020					
	07/16/2020					
SM 4500 F-C-2011	07/16/2020			07/21/2020 21:48	Dale L. Simmons	2183406
	07/16/2020			07/21/2020 21:57	Dale L. Simmons	2183428
	07/16/2020			07/22/2020 07:24	Dale L. Simmons	2183405
	07/16/2020			07/22/2020 07:48	Dale L. Simmons	2183400
	07/16/2020			07/22/2020 07:53	Dale L. Simmons	2183401
	07/16/2020			07/22/2020 07:59	Dale L. Simmons	2183402
	07/16/2020			07/22/2020 08:36	Dale L. Simmons	2183403
	07/16/2020			07/22/2020 08:41	Dale L. Simmons	2183404
SM 5310 B-2011	07/16/2020			07/17/2020 21:33	David Boose	2183412
	07/16/2020			07/17/2020 21:47	David Boose	2183413
	07/16/2020			07/17/2020 21:59	David Boose	2183429
	07/16/2020			07/18/2020 03:21	David Boose	2183409
	07/16/2020			07/18/2020 04:03	David Boose	2183407

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	07/16/2020			07/18/2020 04:42	David Boose	2183408
	07/16/2020			07/18/2020 05:08	David Boose	2183410
	07/16/2020			07/18/2020 05:23	David Boose	2183411