

Chemical Analysis Report

NE-DIST-2019-07-16-02

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-2019-07-15-05**
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.
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Phone (850) 245-8085

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

Date Certified: 02-AUG-2019 11:27

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.

NON-CONFORMANCE REPORT INCLUDED

Case Narrative

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

Results for the following analytical 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: 07/15/2019 09:45

Field ID: GTMGR3NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103434	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P367298	
	EPA 300.0	Bromide	73		mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	125		mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	12		mg/L	P367580	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P367942	
2103441	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P367770	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P367721	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367767	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P367387	
	SM 5310 B-00	Organic Carbon	3.2		mg C/L	P367590	
2103448	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.37	I	mg N/L	P367733	

Sample Location: DEPGR2

Collection Date/Time: 07/15/2019 10:10

Field ID: GTMGRNUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103435	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P367298	
	EPA 300.0	Bromide	72		mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	125		mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	12		mg/L	P367580	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P367942	
2103442	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P367770	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37	I	mg N/L	P367733	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367768	
	EPA 365.1 Rev. 2.0	Total-P	0.055		mg P/L	P367387	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P367590	
2103449	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.27	I	mg N/L	P367735	

Sample Location: DEPGR1

Collection Date/Time: 07/15/2019 10:30

Field ID: GTMGR1NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103436	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P367298	
	EPA 300.0	Bromide	73		mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	128		mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	11		mg/L	P367581	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P367942	
2103443	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P367770	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P367733	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367768	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P367388	MS
	SM 5310 B-00	Organic Carbon	5.1		mg C/L	P367590	
2103450	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.51	J	mg N/L	P367735	

Ref. Method and Comment:

EPA 351.2 Rev. 2.0 dissolved: Container cap was broken resulting in sample loss, sample integrity may be compromised.

Sample Location: DEPGL4

Collection Date/Time: 07/15/2019 11:55

Field ID: GTMGL4NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103437	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P367298	
	EPA 300.0	Bromide	70		mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	116		mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	16		mg/L	P367581	
	SM 4500 F-C-97	Fluoride	1.2		mg F/L	P367942	
2103444	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P367770	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P367733	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367768	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P367388	MS
	SM 5310 B-00	Organic Carbon	7.7		mg C/L	P367590	
2103451	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.69		mg N/L	P367735	

Sample Location: DEPGL3

Collection Date/Time: 07/15/2019 12:20

Field ID: GTMLMNUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103438	EPA 180.1 Rev. 2.0	Turbidity	15	A	NTU	P367298	
	EPA 300.0	Bromide	39		mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	21	A	mg/L	P367581	
	SM 4500 F-C-97	Fluoride	0.83		mg F/L	P367942	
2103445	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P368039	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P367733	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367768	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P367388	MS
	SM 5310 B-00	Organic Carbon	23		mg C/L	P367590	
2103452	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.6		mg N/L	P367736	

Sample Location: DEPL2

Collection Date/Time: 07/15/2019 12:50

Field ID: GTMGL2NUT

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103439	EPA 180.1 Rev. 2.0	Turbidity	16		NTU	P367298	
	EPA 300.0	Bromide	14		mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	171		mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	20		mg/L	P367576	
	SM 4500 F-C-97	Fluoride	0.49		mg F/L	P367942	
2103446	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P368039	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.9		mg N/L	P367733	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367768	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P367388	MS
	SM 5310 B-00	Organic Carbon	35		mg C/L	P367589	
2103453	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	2.4		mg N/L	P367736	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEPGL1

Collection Date/Time: 07/15/2019 13:15

Field ID: GTMGL1NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103440	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P367298	
	EPA 300.0	Bromide	0.44		mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	172		mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	4	I	mg/L	P367576	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P367783	
2103447	EPA 350.1 Rev. 2.0	Ammonia-N	0.066		mg N/L	P367773	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P367734	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367799	
	EPA 365.1 Rev. 2.0	Total-P	0.64		mg P/L	P367883	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P367589	
2103454	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.3		mg N/L	P367734	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: FIELD BLANK

Collection Date/Time: 07/15/2019 09:36

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2103455	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P367298	
	EPA 300.0	Bromide	0.013	U	mg Br/L	P367487	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P367778	
	SM 2540 D-97	TSS	2	U	mg/L	P367576	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P367783	
2103456	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P367773	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P367336	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367592	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P367379	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P367589	
2103457	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.080	U	mg N/L	P367734	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 7800

Event(s)

NE-DIST-2019-07-16-02

Job(s)

TLH-2019-07-16-90

Sample(s)

2103450

Test(s)

NCR Type: PREPARATION

NCR Category: Sample Homogeneity and

Observation: Sample bottle was dropped on the floor, cap shattered, resulting in sample loss. Bottle was closed with a new clean cap.

Resolution: Sample integrity may be compromised. The result associated with the preparation/analysis performed after 11:30 am 7/22/2019 are J qualified.

Authorized by/Date: Peter D. Kaus 8/1/2019

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

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P367298

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P367487

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367770

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367773

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368039

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367336

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367721

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367733

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367734

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: P367733

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367734

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367735

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367736

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367592

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367767

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367768

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367799

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367379

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367387

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367388

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367883

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: SM 2320 B-97
Batch ID: P367778

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

Reference Method: SM 2540 D-97
Batch ID: P367576

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P367580

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P367581

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P367783

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P367942

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P367589

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

Reference Method: SM 5310 B-00
Batch ID: P367590

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
Batch ID: P367487

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367770

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367773

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368039

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367336

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	90.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367721

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367733

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: P367734

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367733

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367734

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367735

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367736

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367592

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367767

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367768

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367799

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367379

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367387

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367388

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367883

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.3		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P367778

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P367783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P367942

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P367589

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

Reference Method: SM 5310 B-00
Batch ID: P367590

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P367487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103149	Bromide	98.2	98.1	P/P	90 - 110
2103440	Bromide	93.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367770

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103275	Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103374	Ammonia-N	107	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368039

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103445	Ammonia-N	106	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103293	Kjeldahl Nitrogen	98.2	96.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367721

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103344	Kjeldahl Nitrogen	93.5	94.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103448	Kjeldahl Nitrogen	95.4	90.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103508	Kjeldahl Nitrogen	98.2	94.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103448	Kjeldahl Nitrogen	95.4	90.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103508	Kjeldahl Nitrogen	98.2	94.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103451	Kjeldahl Nitrogen	94.7	95.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367736

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103452	Kjeldahl Nitrogen	99.6	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103374	NO2NO3-N	97.5	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103344	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103442	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367799

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103447	NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367379

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103293	Total-P	97.6	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103344	Total-P	94.4	96.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367388

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103496	Total-P	93.9	88.6	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367883

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2105028	Total-P	98.4	98.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P367783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103662	Fluoride	96.5	96.5	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P367942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103439	Fluoride	97.1	97.1	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P367589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103579	Organic Carbon	100	101	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P367590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2103443	Organic Carbon	98.3	98.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P367298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103438	Turbidity	1.35	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P367487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103149	Bromide	0.0837	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103275	Ammonia-N	0.858	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103374	Ammonia-N	1.55	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368039

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103445	Ammonia-N	1.11	Spike	P	0 - 15

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103293	Kjeldahl Nitrogen	1.61	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367721

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103344	Kjeldahl Nitrogen	0.697	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103448	Kjeldahl Nitrogen	4.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103508	Kjeldahl Nitrogen	2.43	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103448	Kjeldahl Nitrogen	4.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103508	Kjeldahl Nitrogen	2.43	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103451	Kjeldahl Nitrogen	0.787	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P367736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103452	Kjeldahl Nitrogen	2.98	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103374	NO2NO3-N	0.980	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103344	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103442	NO2NO3-N	0.494	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103447	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103293	Total-P	3.32	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103344	Total-P	1.94	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103496	Total-P	5.51	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367883

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2105028	Total-P	0.406	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P367778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103662	Total Alkalinity	0.0246	Sample	P	0 - 2.8

Reference Method: SM 2540 D-97
Batch ID: P367580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103160	TSS	2.25	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P367581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103438	TSS	7.55	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P367783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103662	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P367942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103439	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P367589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103579	Organic Carbon	0.157	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P367590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2103443	Organic Carbon	0.404	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A92795

Included Lab Sample IDs: 2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92847

Included Lab Sample IDs: 2103446

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92853

Included Lab Sample IDs: 2103441, 2103442, 2103443, 2103444, 2103445, 2103456

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	99.2	P/P	90 - 110
Total-P	99.2	99.5	P/P	90 - 110
Total-P	99.5	101	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A92857

Included Lab Sample IDs: 2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	103	104	P/P	90 - 110
Bromide	104	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92880

Included Lab Sample IDs: 2103456

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	105	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A92899

Included Lab Sample IDs: 2103441, 2103442, 2103443, 2103444, 2103445, 2103446, 2103447, 2103456

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	100	P/P	90 - 110
Organic Carbon	102	102	P/P	90 - 110
Organic Carbon	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92900

Included Lab Sample IDs: 2103456

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92960

Included Lab Sample IDs: 2103441, 2103442, 2103443, 2103444, 2103445, 2103446

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.5	P/P	90 - 110
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92961

Included Lab Sample IDs: 2103441, 2103442, 2103443, 2103444, 2103447, 2103456

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

Reference Method: SM 2320 B-97

Run ID: A92962

Included Lab Sample IDs: 2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455

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

Reference Method: SM 4500 F-C-97

Run ID: A92962

Included Lab Sample IDs: 2103440, 2103455

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92975

Included Lab Sample IDs: 2103447

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92987

Included Lab Sample IDs: 2103441

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.3	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A92987

Included Lab Sample IDs: 2103449, 2103450, 2103451

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A93001

Included Lab Sample IDs: 2103442, 2103443, 2103444, 2103445, 2103446, 2103447

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.9	97.1	P/P	90 - 110
Kjeldahl Nitrogen	98.2	95.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A93001

Included Lab Sample IDs: 2103448, 2103454, 2103457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.9	97.1	P/P	90 - 110
Kjeldahl Nitrogen	98.2	95.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A93010

Included Lab Sample IDs: 2103452, 2103453

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

Reference Method: SM 4500 F-C-97

Run ID: A93033

Included Lab Sample IDs: 2103434, 2103435, 2103436, 2103437, 2103438, 2103439

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A93048

Included Lab Sample IDs: 2103447

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.7	99.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A93067

Included Lab Sample IDs: 2103445, 2103446

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	105	98.0	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					1.35	
EPA 300.0	Bromide	100	98.2	98.1	93.7		0.0837
EPA 350.1 Rev. 2.0	Ammonia-N	105	104	103			0.858
	Ammonia-N	106	107	104			1.55
	Ammonia-N	105	106	104			1.11
	Ammonia-N	105	106	104			1.11
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	90.4	98.2	96.5			1.61
	Kjeldahl Nitrogen	97.3	93.5	94.3			0.697
	Kjeldahl Nitrogen	101	95.4	90.9			4.12
	Kjeldahl Nitrogen	97.7	98.2	94.4			2.43
EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	101	95.4	90.9			4.12
	Kjeldahl Nitrogen	97.7	98.2	94.4			2.43
	Kjeldahl Nitrogen	93.6	94.7	95.7			0.787
	Kjeldahl Nitrogen	100	99.6	105			2.98
EPA 353.2 Rev. 2.0	NO2NO3-N	100	97.5	98.5			0.980
	NO2NO3-N	100	100	100			0.499
	NO2NO3-N	100	101	102			0.494
	NO2NO3-N	98.5	99.0	99.0			0.0
EPA 365.1 Rev. 2.0	Total-P	103	97.6	102			3.32
	Total-P	104	94.4	96.2			1.94
	Total-P	100	93.9	88.6			5.51
	Total-P	98.3	98.4	98.9			0.406
SM 2320 B-97	Total Alkalinity	103				0.0246	
SM 2540 D-97	TSS					2.25	
	TSS					7.55	
SM 4500 F-C-97	Fluoride	94.9	96.5	96.5			0.0
	Fluoride	97.6	97.1	97.1			0.0
SM 5310 B-00	Organic Carbon	101	100	101			0.157
	Organic Carbon	101	98.3	98.7			0.404

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455
EPA 300.0 / E31780	Bromide in aqueous matrices	2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2103441, 2103442, 2103443, 2103444, 2103445, 2103446, 2103447, 2103456
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2103441, 2103442, 2103443, 2103444, 2103445, 2103446, 2103447, 2103456
EPA 351.2 Rev. 2.0 dissolved / E31780	Total Kjeldahl Nitrogen, dissolved, in filtered, aqueous matrices	2103448, 2103449, 2103450, 2103451, 2103452, 2103453, 2103454, 2103457
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2103441, 2103442, 2103443, 2103444, 2103445, 2103446, 2103447, 2103456
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2103441, 2103442, 2103443, 2103444, 2103445, 2103446, 2103447, 2103456
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2103441, 2103442, 2103443, 2103444, 2103445, 2103446, 2103447, 2103456

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	07/16/2019			07/16/2019 16:25	Samantha Davila	2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455
EPA 300.0	07/16/2019			07/18/2019 01:21	Jhamieka S. Greenwood	2103440
	07/16/2019			07/18/2019 04:29	Jhamieka S. Greenwood	2103434
	07/16/2019			07/18/2019 04:46	Jhamieka S. Greenwood	2103435
	07/16/2019			07/18/2019 05:03	Jhamieka S. Greenwood	2103436
	07/16/2019			07/18/2019 05:20	Jhamieka S. Greenwood	2103437
	07/16/2019			07/18/2019 05:37	Jhamieka S. Greenwood	2103438
	07/16/2019			07/18/2019 05:54	Jhamieka S. Greenwood	2103439
	07/16/2019			07/18/2019 06:11	Jhamieka S. Greenwood	2103455
EPA 350.1 Rev. 2.0	07/16/2019			07/23/2019 11:22	Virginia P. Brown	2103441
	07/16/2019			07/23/2019 11:24	Virginia P. Brown	2103442
	07/16/2019			07/23/2019 11:25	Virginia P. Brown	2103443
	07/16/2019			07/23/2019 11:27	Virginia P. Brown	2103444
	07/16/2019			07/23/2019 13:41	Virginia P. Brown	2103447
	07/16/2019			07/23/2019 14:14	Virginia P. Brown	2103456
	07/16/2019			07/26/2019 19:59	Virginia P. Brown	2103445
	07/16/2019			07/26/2019 20:03	Virginia P. Brown	2103446
EPA 351.2 Rev. 2.0	07/16/2019	07/17/2019 13:35	Sima Feizi	07/18/2019 11:50	Joseph Suarez	2103456
	07/16/2019	07/22/2019 12:00	Adrian Shelby	07/24/2019 10:46	Joseph Suarez	2103441
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:31	Joseph Suarez	2103442
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:33	Joseph Suarez	2103443
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:34	Joseph Suarez	2103444
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:36	Joseph Suarez	2103445
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:37	Joseph Suarez	2103446
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:54	Joseph Suarez	2103447
EPA 351.2 Rev. 2.0 dissolved	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 12:02	Joseph Suarez	2103449
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 12:04	Joseph Suarez	2103450
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 12:05	Joseph Suarez	2103451
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:39	Joseph Suarez	2103448
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:56	Joseph Suarez	2103454
	07/16/2019	07/23/2019 09:45	Adrian Shelby	07/24/2019 15:58	Joseph Suarez	2103457
	07/16/2019	07/23/2019 13:00	Adrian Shelby	07/25/2019 09:44	Joseph Suarez	2103452
	07/16/2019	07/23/2019 13:00	Adrian Shelby	07/25/2019 09:49	Joseph Suarez	2103453
EPA 353.2 Rev. 2.0	07/16/2019			07/19/2019 09:57	Beverly Y. Sanders	2103456
	07/16/2019			07/23/2019 13:50	Beverly Y. Sanders	2103441
	07/16/2019			07/23/2019 13:57	Beverly Y. Sanders	2103442
	07/16/2019			07/23/2019 14:02	Beverly Y. Sanders	2103443
	07/16/2019			07/23/2019 14:04	Beverly Y. Sanders	2103444
	07/16/2019			07/23/2019 14:05	Beverly Y. Sanders	2103445

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	07/16/2019			07/23/2019 14:06	Beverly Y. Sanders	2103446
	07/16/2019			07/24/2019 08:48	Beverly Y. Sanders	2103447
EPA 365.1 Rev. 2.0	07/16/2019	07/17/2019 12:55	Sima Feizi	07/18/2019 09:34	Lipi Saha	2103446
	07/16/2019	07/17/2019 12:55	Sima Feizi	07/18/2019 10:43	Lipi Saha	2103456
	07/16/2019	07/17/2019 12:55	Sima Feizi	07/18/2019 11:14	Lipi Saha	2103441
	07/16/2019	07/17/2019 12:55	Sima Feizi	07/18/2019 11:15	Lipi Saha	2103442
	07/16/2019	07/17/2019 12:55	Sima Feizi	07/18/2019 11:17	Lipi Saha	2103443
	07/16/2019	07/17/2019 12:55	Sima Feizi	07/18/2019 11:18	Lipi Saha	2103444
	07/16/2019	07/17/2019 12:55	Sima Feizi	07/18/2019 11:26	Lipi Saha	2103445
	07/16/2019	07/25/2019 12:40	Vijayalakshmi Reddy	07/26/2019 10:34	Lipi Saha	2103447
SM 2320 B-97	07/16/2019			07/23/2019 05:32	Dale L. Simmons	2103434
	07/16/2019			07/23/2019 05:44	Dale L. Simmons	2103435
	07/16/2019			07/23/2019 05:56	Dale L. Simmons	2103436
	07/16/2019			07/23/2019 06:08	Dale L. Simmons	2103437
	07/16/2019			07/23/2019 06:20	Dale L. Simmons	2103438
	07/16/2019			07/23/2019 06:33	Dale L. Simmons	2103439
	07/16/2019			07/23/2019 06:47	Dale L. Simmons	2103440
	07/16/2019			07/23/2019 07:01	Dale L. Simmons	2103455
SM 2540 D-97	07/16/2019			07/16/2019 21:03	Yijie Li	2103434, 2103435, 2103436, 2103437, 2103438, 2103439, 2103440, 2103455
SM 4500 F-C-97	07/16/2019			07/23/2019 06:47	Dale L. Simmons	2103440
	07/16/2019			07/23/2019 07:01	Dale L. Simmons	2103455
	07/16/2019			07/25/2019 06:13	Dale L. Simmons	2103439
	07/16/2019			07/25/2019 06:49	Dale L. Simmons	2103434
	07/16/2019			07/25/2019 06:53	Dale L. Simmons	2103435
	07/16/2019			07/25/2019 06:57	Dale L. Simmons	2103436
	07/16/2019			07/25/2019 07:02	Dale L. Simmons	2103437
	07/16/2019			07/25/2019 07:06	Dale L. Simmons	2103438
SM 5310 B-00	07/16/2019			07/19/2019 01:01	Madeline Funaro	2103446
	07/16/2019			07/19/2019 01:13	Madeline Funaro	2103447
	07/16/2019			07/19/2019 01:25	Madeline Funaro	2103456
	07/16/2019			07/19/2019 04:04	Madeline Funaro	2103443
	07/16/2019			07/19/2019 06:25	Madeline Funaro	2103441
	07/16/2019			07/19/2019 06:38	Madeline Funaro	2103442
	07/16/2019			07/19/2019 07:02	Madeline Funaro	2103444
	07/16/2019			07/19/2019 07:14	Madeline Funaro	2103445