

Chemical Analysis Report

NE-DIST-2022-11-08-02

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **GTM NERR-Guana River SMP-7 site**
Request ID: **RQ-2022-11-07-19**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
GTM NERR
505 Guana River Rd.
Ponte Vedra Beach, FL 32082
Attn: Nikki Dix

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: Liang Lin, Environmental Administrator

Date Certified: 02-DEC-2022 17:09

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

Case Narrative

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

Results for the following analytical 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: 11/07/2022 08:35

Field ID: GTMGR3NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368304	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P422091	
	SM 2320 B-2011	Total Alkalinity	111		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	9	I	mg/L	P422342	
	SM 4500-F- C-2011	Fluoride	1.2		mg F/L	P422965	
2368311	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.080		mg N/L	P422503	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.49		mg N/L	P422540	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.017		mg N/L	P422577	
2368318	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.023		mg P/L	P422116	
2368325	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P422540	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P422308	
	SM 5310 B-2011	Organic Carbon	5.3		mg C/L	P422604	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEPGR2

Collection Date/Time: 11/07/2022 09:03

Field ID: GTMGRNUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368305	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P422091	
	SM 2320 B-2011	Total Alkalinity	107		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	7	I	mg/L	P422342	
	SM 4500-F- C-2011	Fluoride	1.1		mg F/L	P422965	
2368312	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.036		mg N/L	P422503	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.54		mg N/L	P422185	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.016		mg N/L	P422577	
2368319	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P422116	
2368326	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P422185	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P422308	
	SM 5310 B-2011	Organic Carbon	5.4		mg C/L	P422604	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEPGR1

Collection Date/Time: 11/07/2022 09:22

Field ID: GTMGR1NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368306	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P422091	
	SM 2320 B-2011	Total Alkalinity	107		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	9	I	mg/L	P422342	
	SM 4500-F- C-2011	Fluoride	0.98		mg F/L	P422965	
2368313	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.047		mg N/L	P422276	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.53		mg N/L	P422363	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.017		mg N/L	P422577	
2368320	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P422116	
2368327	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P422363	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P422308	
	SM 5310 B-2011	Organic Carbon	7.9		mg C/L	P422604	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEPGL4

Collection Date/Time: 11/07/2022 10:30

Field ID: GTMGL4NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368307	EPA 180.1 Rev. 2.0	Turbidity	8.0		NTU	P422091	
	SM 2320 B-2011	Total Alkalinity	119		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	20		mg/L	P422342	
	SM 4500-F- C-2011	Fluoride	0.81		mg F/L	P422965	
2368314	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.014		mg N/L	P422276	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.73		mg N/L	P422686	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.004	U	mg N/L	P422577	
2368321	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P422116	
2368328	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P422686	
	EPA 365.1 Rev. 2.0	Total-P	0.069		mg P/L	P422308	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P422604	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEPGL3

Collection Date/Time: 11/07/2022 10:50

Field ID: GTMLMNUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368308	EPA 180.1 Rev. 2.0	Turbidity	9.8		NTU	P422091	
	SM 2320 B-2011	Total Alkalinity	126		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	38		mg/L	P422342	
	SM 4500-F- C-2011	Fluoride	0.67		mg F/L	P422965	
2368315	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.056		mg N/L	P422276	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.1		mg N/L	P422686	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.005	I	mg N/L	P422577	
2368322	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P422116	
2368329	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P422686	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P422308	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P422617	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEPGL2

Collection Date/Time: 11/07/2022 11:15

Field ID: GTMGL2NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368309	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P422091	
	SM 2320 B-2011	Total Alkalinity	154		mg CaCO3/L	P422622	
	SM 2540 D-2015	TSS	34		mg/L	P422342	
	SM 4500-F- C-2011	Fluoride	0.56		mg F/L	P422965	
2368316	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.014		mg N/L	P422276	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.2		mg N/L	P422686	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.004	U	mg N/L	P422577	
2368323	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P422116	
2368330	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.2		mg N/L	P422686	
	EPA 365.1 Rev. 2.0	Total-P	0.093		mg P/L	P422308	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P422617	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DEPGL1

Collection Date/Time: 11/07/2022 11:40

Field ID: GTMGL1NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2368310	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P422091	
	SM 2320 B-2011	Total Alkalinity	157		mg CaCO3/L	P422621	
	SM 2540 D-2015	TSS	13		mg/L	P422341	
	SM 4500-F- C-2011	Fluoride	0.25		mg F/L	P422623	
2368317	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.15		mg N/L	P422277	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.7		mg N/L	P422687	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.013		mg N/L	P422480	
2368324	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.27		mg P/L	P422116	
2368331	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.5		mg N/L	P422685	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P422440	
	SM 5310 B-2011	Organic Carbon	28		mg C/L	P422616	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422091

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422276

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422277

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422503

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422185

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422363

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422685

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422686

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: P422185

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422363

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422540

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422686

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422687

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P422480

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P422577

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422308

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422440

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 dissolved
Batch ID: P422116

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

Reference Method: SM 2320 B-2011
Batch ID: P422621

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

Reference Method: SM 2320 B-2011
Batch ID: P422622

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

Reference Method: SM 2540 D-2015
Batch ID: P422341

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P422342

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422623

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P422604

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

Reference Method: SM 5310 B-2011
Batch ID: P422616

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P422617

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422091

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422277

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422503

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422185

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422363

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422685

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422185

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422363

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422687

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P422480

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P422577

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422308

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422440

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P422116

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

Reference Method: SM 2320 B-2011
Batch ID: P422621

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.5		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P422622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.2		P	94 - 106

Reference Method: SM 2540 D-2015
Batch ID: P422341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.1		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P422342

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P422623

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422604

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.5		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P422616

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P422617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368678	Ammonia-N	97.2	97.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367290	Ammonia-N	93.4	92.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P422503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368312	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368265	Kjeldahl Nitrogen	99.7	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422363

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368267	Kjeldahl Nitrogen	99.8	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	94.4	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370885	Kjeldahl Nitrogen	99.3	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368328	Kjeldahl Nitrogen	95.7	93.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368265	Kjeldahl Nitrogen	99.7	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422363

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368267	Kjeldahl Nitrogen	99.8	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	94.4	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368328	Kjeldahl Nitrogen	95.7	93.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P422687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370848	Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P422480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367178	NO2NO3-N	100	99.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P422577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368312	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368328	Total-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422440

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367631	Total-P	101	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P422116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368320	O-Phosphate-P	102	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P422623

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368106	Fluoride	97.7	97.0	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369410	Fluoride	100	102	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422604

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367749	Organic Carbon	89.0	90.9	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P422616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368512	Organic Carbon	97.0	97.7	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P422617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2368330	Organic Carbon	88.1	88.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P422091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368030	Turbidity	3.53	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Batch ID: P422276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368678	Ammonia-N	0.167	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Batch ID: P422277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367290	Ammonia-N	0.985	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Batch ID: P422503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368312	Ammonia-N	0.233	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P422185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368265	Kjeldahl Nitrogen	1.37	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P422363

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368267	Kjeldahl Nitrogen	0.784	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P422540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	1.68	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P422685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370885	Kjeldahl Nitrogen	1.30	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P422686

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368328	Kjeldahl Nitrogen	1.55	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P422185

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368265	Kjeldahl Nitrogen	1.37	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P422363

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368267	Kjeldahl Nitrogen	0.784	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P422540

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	1.68	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P422686

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368328	Kjeldahl Nitrogen	1.55	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Batch ID: P422687

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370848	Kjeldahl Nitrogen	1.37	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0 dissolved

Batch ID: P422480

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367178	NO2NO3-N	0.157	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0 dissolved

Batch ID: P422577

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368312	NO2NO3-N	0.897	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P422308

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368328	Total-P	1.07	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P422440

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367631	Total-P	3.99	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P422116

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368320	O-Phosphate-P	0.607	Spike	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P422621

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368106	Total Alkalinity	0.694	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011

Batch ID: P422622

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369410	Total Alkalinity	0.356	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011

Batch ID: P422623

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368106	Fluoride	0.524	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011

Batch ID: P422965

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369410	Fluoride	0.986	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P422604

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367749	Organic Carbon	1.35	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P422616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368512	Organic Carbon	0.637	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P422617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2368330	Organic Carbon	0.278	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: A115811

Included Lab Sample IDs: 2368304, 2368305, 2368306, 2368307, 2368308, 2368309, 2368310

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A115820

Included Lab Sample IDs: 2368318, 2368319, 2368320, 2368321, 2368322, 2368323, 2368324

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Run ID: A115898

Included Lab Sample IDs: 2368313, 2368314, 2368315, 2368316, 2368317

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	98.4	P/P	90 - 110
Ammonia-N	98.3	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved

Run ID: A115956

Included Lab Sample IDs: 2368317

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115958

Included Lab Sample IDs: 2368326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	109	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A115958

Included Lab Sample IDs: 2368312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	109	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Run ID: A115996

Included Lab Sample IDs: 2368311, 2368312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	98.9	P/P	90 - 110
Ammonia-N	99.2	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116000

Included Lab Sample IDs: 2368325, 2368326, 2368327, 2368328, 2368330

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	104	P/P	90 - 110
Total-P	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116022

Included Lab Sample IDs: 2368331

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.6	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116026

Included Lab Sample IDs: 2368327

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A116026

Included Lab Sample IDs: 2368313

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved

Run ID: A116028

Included Lab Sample IDs: 2368311, 2368312, 2368313, 2368314, 2368315, 2368316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116030

Included Lab Sample IDs: 2368329

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

Reference Method: SM 5310 B-2011

Run ID: A116039

Included Lab Sample IDs: 2368325, 2368326, 2368327, 2368328

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	101	P/P	90 - 110
Organic Carbon	97.8	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116048

Included Lab Sample IDs: 2368329, 2368330, 2368331

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A116048

Included Lab Sample IDs: 2368329, 2368330, 2368331

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	97.2	P/P	90 - 110
Organic Carbon	97.2	97.0	P/P	90 - 110
Organic Carbon	97.8	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116055

Included Lab Sample IDs: 2368304, 2368305, 2368306, 2368307, 2368308, 2368309, 2368310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.3	96.4	P/P	90 - 110
Total Alkalinity	95.0	96.4	P/P	90 - 110
Total Alkalinity	96.4	93.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116055

Included Lab Sample IDs: 2368310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	95.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116085

Included Lab Sample IDs: 2368325

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.4	91.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A116085

Included Lab Sample IDs: 2368311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.4	91.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116143

Included Lab Sample IDs: 2368328, 2368329, 2368330, 2368331

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.2	93.2	P/P	90 - 110
Kjeldahl Nitrogen	92.8	94.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A116143

Included Lab Sample IDs: 2368314, 2368315, 2368316, 2368317

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.2	93.2	P/P	90 - 110
Kjeldahl Nitrogen	93.2	93.8	P/P	90 - 110
Kjeldahl Nitrogen	94.3	92.2	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A116202

Included Lab Sample IDs: 2368304, 2368305, 2368306, 2368307, 2368308, 2368309

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	102	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	101			3.53	
EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	94.4	97.2	97.4		0.167
	Ammonia-N	93.6	93.4	92.2		0.985
	Ammonia-N	94.4	100	101		0.233
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	99.7	101		1.37
	Kjeldahl Nitrogen	98.3	99.8	98.9		0.784
	Kjeldahl Nitrogen	94.5	94.4	96.2		1.68
	Kjeldahl Nitrogen	103	99.3	97.4		1.30
	Kjeldahl Nitrogen	93.9	95.7	93.7		1.55
EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	102	99.7	101		1.37
	Kjeldahl Nitrogen	98.3	99.8	98.9		0.784
	Kjeldahl Nitrogen	94.5	94.4	96.2		1.68
	Kjeldahl Nitrogen	93.9	95.7	93.7		1.55
	Kjeldahl Nitrogen	97.3	103	104		1.37
EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	104	100	99.8		0.157
	NO2NO3-N	102	104	103		0.897
EPA 365.1 Rev. 2.0	Total-P	105	101	102		1.07
	Total-P	103	101	105		3.99
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	102	103		0.607
SM 2320 B-2011	Total Alkalinity	96.5			0.694	
	Total Alkalinity	97.2			0.356	
SM 2540 D-2015	TSS	93.1				
	TSS	93.1				
SM 4500-F- C-2011	Fluoride	96.1	97.7	97.0		0.524
	Fluoride	102	100	102		0.986
SM 5310 B-2011	Organic Carbon	98.5	89.0	90.9		1.35
	Organic Carbon	101	97.0	97.7		0.637
	Organic Carbon	99.2	88.1	88.5		0.278

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2368304, 2368305, 2368306, 2368307, 2368308, 2368309, 2368310
EPA 350.1 Rev. 2.0 dissolved	Ammonia, dissolved, in filtered, aqueous matrices as mg N/L	2368311, 2368312, 2368313, 2368314, 2368315, 2368316, 2368317
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2368325, 2368326, 2368327, 2368328, 2368329, 2368330, 2368331
EPA 351.2 Rev. 2.0 dissolved	Total Kjeldahl Nitrogen, dissolved, in filtered, aqueous matrices	2368311, 2368312, 2368313, 2368314, 2368315, 2368316, 2368317
EPA 353.2 Rev. 2.0 dissolved	Nitrite/Nitrate, dissolved, in filtered, aqueous matrices as mg N/L	2368311, 2368312, 2368313, 2368314, 2368315, 2368316, 2368317
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2368325, 2368326, 2368327, 2368328, 2368329, 2368330, 2368331
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2368318, 2368319, 2368320, 2368321, 2368322, 2368323, 2368324
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2368304, 2368305, 2368306, 2368307, 2368308, 2368309, 2368310
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2368304, 2368305, 2368306, 2368307, 2368308, 2368309, 2368310
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2368304, 2368305, 2368306, 2368307, 2368308, 2368309, 2368310
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2368325, 2368326, 2368327, 2368328, 2368329, 2368330, 2368331

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	11/08/2022			11/08/2022 16:12	Khloe J Berg	2368304
	11/08/2022			11/08/2022 16:13	Khloe J Berg	2368305
	11/08/2022			11/08/2022 16:14	Khloe J Berg	2368306
	11/08/2022			11/08/2022 16:15	Khloe J Berg	2368307
	11/08/2022			11/08/2022 16:18	Khloe J Berg	2368308
	11/08/2022			11/08/2022 16:19	Khloe J Berg	2368309
	11/08/2022			11/08/2022 16:20	Khloe J Berg	2368310
	11/08/2022			11/14/2022 13:45	Ping Hua	2368313
EPA 350.1 Rev. 2.0 dissolved	11/08/2022			11/14/2022 13:46	Ping Hua	2368314
	11/08/2022			11/14/2022 13:48	Ping Hua	2368315
	11/08/2022			11/14/2022 13:49	Ping Hua	2368316
	11/08/2022			11/14/2022 14:16	Ping Hua	2368317
	11/08/2022			11/17/2022 12:28	Ping Hua	2368312
	11/08/2022			11/17/2022 13:59	Ping Hua	2368311
	11/08/2022	11/10/2022 13:05	Samantha L Bates	11/16/2022 14:10	Samantha L Bates	2368326
	11/08/2022	11/16/2022 13:04	Alexandra J Mattheus	11/18/2022 10:26	Samantha L Bates	2368327
EPA 351.2 Rev. 2.0	11/08/2022	11/18/2022 10:00	Alexandra J Mattheus	11/21/2022 17:33	Judith K. Clark	2368325
	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 10:18	Judith K. Clark	2368331
	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 10:50	Judith K. Clark	2368328
	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 10:55	Judith K. Clark	2368329
	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 10:57	Judith K. Clark	2368330
	11/08/2022	11/10/2022 13:05	Samantha L Bates	11/16/2022 14:06	Samantha L Bates	2368312
	11/08/2022	11/16/2022 13:04	Alexandra J Mattheus	11/18/2022 10:24	Samantha L Bates	2368313
	11/08/2022	11/18/2022 10:00	Alexandra J Mattheus	11/21/2022 17:29	Judith K. Clark	2368311
EPA 351.2 Rev. 2.0 dissolved	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 10:42	Judith K. Clark	2368314
	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 10:47	Judith K. Clark	2368315
	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 10:49	Judith K. Clark	2368316
	11/08/2022	11/22/2022 09:10	Simonne.V. Calhoun	11/28/2022 11:10	Judith K. Clark	2368317
	11/08/2022			11/16/2022 10:26	Beverly Y. Sanders	2368317
	11/08/2022			11/18/2022 10:15	Beverly Y. Sanders	2368312
	11/08/2022			11/18/2022 10:23	Beverly Y. Sanders	2368311
	11/08/2022			11/18/2022 10:24	Beverly Y. Sanders	2368313
EPA 353.2 Rev. 2.0 dissolved	11/08/2022			11/18/2022 10:25	Beverly Y. Sanders	2368314
	11/08/2022			11/18/2022 10:26	Beverly Y. Sanders	2368315
	11/08/2022			11/18/2022 10:28	Beverly Y. Sanders	2368316
	11/08/2022	11/15/2022 10:56	Simonne.V. Calhoun	11/17/2022 13:20	Simonne.V. Calhoun	2368328
	11/08/2022	11/15/2022 10:56	Simonne.V. Calhoun	11/17/2022 13:24	Simonne.V. Calhoun	2368325
	11/08/2022	11/15/2022 10:56	Simonne.V. Calhoun	11/17/2022 13:25	Simonne.V. Calhoun	2368326
	11/08/2022	11/15/2022 10:56	Simonne.V. Calhoun	11/17/2022 13:26	Simonne.V. Calhoun	2368327
	11/08/2022	11/15/2022 10:56	Simonne.V. Calhoun	11/17/2022 13:34	Simonne.V. Calhoun	2368330

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	11/08/2022	11/15/2022 10:56	Simonne.V. Calhoun	11/18/2022 12:30	Simonne.V. Calhoun	2368329
	11/08/2022	11/17/2022 13:57	Adam P Silver	11/18/2022 09:36	James L Waggeberby	2368331
EPA 365.1 Rev. 2.0 dissolved	11/08/2022			11/08/2022 17:24	Elise M. Gillis	2368320
	11/08/2022			11/08/2022 17:27	Elise M. Gillis	2368318
	11/08/2022			11/08/2022 17:28	Elise M. Gillis	2368319, 2368321
	11/08/2022			11/08/2022 17:29	Elise M. Gillis	2368322
	11/08/2022			11/08/2022 17:30	Elise M. Gillis	2368323
	11/08/2022			11/08/2022 17:36	Elise M. Gillis	2368324
SM 2320 B-2011	11/08/2022			11/17/2022 21:49	Dale L. Simmons	2368310
	11/08/2022			11/18/2022 00:59	Dale L. Simmons	2368309
	11/08/2022			11/18/2022 01:12	Dale L. Simmons	2368304
	11/08/2022			11/18/2022 01:26	Dale L. Simmons	2368306
	11/08/2022			11/18/2022 01:40	Dale L. Simmons	2368307
	11/08/2022			11/18/2022 01:54	Dale L. Simmons	2368308
SM 2540 D-2015	11/08/2022			11/18/2022 04:28	Dale L. Simmons	2368305
	11/08/2022			11/09/2022 16:35	Yijie Li	2368304, 2368305, 2368306, 2368307, 2368308, 2368309, 2368310
SM 4500-F- C-2011	11/08/2022			11/17/2022 21:49	Dale L. Simmons	2368310
	11/08/2022			12/01/2022 08:36	Dale L. Simmons	2368309
	11/08/2022			12/01/2022 08:46	Dale L. Simmons	2368304
	11/08/2022			12/01/2022 08:52	Dale L. Simmons	2368305
	11/08/2022			12/01/2022 08:57	Dale L. Simmons	2368306
	11/08/2022			12/01/2022 09:02	Dale L. Simmons	2368307
SM 5310 B-2011	11/08/2022			12/01/2022 09:07	Dale L. Simmons	2368308
	11/08/2022			11/18/2022 06:25	Khloe J Berg	2368325
	11/08/2022			11/18/2022 07:30	Khloe J Berg	2368326
	11/08/2022			11/18/2022 07:48	Khloe J Berg	2368327
	11/08/2022			11/18/2022 08:02	Khloe J Berg	2368328
	11/08/2022			11/18/2022 22:19	Khloe J Berg	2368331
	11/08/2022			11/19/2022 01:54	Khloe J Berg	2368330
	11/08/2022			11/19/2022 05:41	Khloe J Berg	2368329