

Chemical Analysis Report

NE-DIST-2021-12-02-01

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

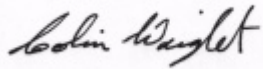
Event Description: **GTM NERR-Guana River SMP = 7 Sites + 1 Field Blank**
Request ID: **RQ-2021-11-29-12**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd.
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Certified by: Colin Wright, Program Administrator

Date Certified: 04-JAN-2022 13:52



Case Narrative

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

Results for the following analytical 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: 12/01/2021 07:07

Field ID: GTMGR3NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292446	EPA 180.1 Rev. 2.0	Turbidity	3.1	A	NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	115		mg CaCO3/L	P407162	
	SM 2540 D-2011	TSS	3	U	mg/L	P407132	
	SM 4500 F-C-2011	Fluoride	1.1		mg F/L	P407166	
2292453	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.019		mg N/L	P407081	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.46		mg N/L	P407276	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.016		mg N/L	P407093	
2292460	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P406962	
2292467	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P407276	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P407044	
	SM 5310 B-2011	Organic Carbon	5.5		mg C/L	P407177	

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: 12/01/2021 07:27

Field ID: GTMGRNUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292447	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	114		mg CaCO3/L	P407162	
	SM 2540 D-2011	TSS	10	I	mg/L	P407132	
	SM 4500 F-C-2011	Fluoride	0.98		mg F/L	P407166	
2292454	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.067		mg N/L	P407081	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.43		mg N/L	P407276	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.014		mg N/L	P407093	
2292461	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.027		mg P/L	P406962	
2292468	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P407276	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P407044	
	SM 5310 B-2011	Organic Carbon	6.7		mg C/L	P407177	

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: 12/01/2021 07:46

Field ID: GTMGR1NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292448	EPA 180.1 Rev. 2.0	Turbidity	6.6		NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	121		mg CaCO3/L	P407162	
	SM 2540 D-2011	TSS	10		mg/L	P407132	
	SM 4500 F-C-2011	Fluoride	0.89		mg F/L	P407166	
2292455	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.066		mg N/L	P407635	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.58		mg N/L	P407276	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.012		mg N/L	P407093	
2292462	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P406962	
2292469	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P407276	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P407044	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P407177	

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: 12/01/2021 09:13

Field ID: GTMGL4NUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292449	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	122		mg CaCO3/L	P407162	
	SM 2540 D-2011	TSS	16		mg/L	P407132	
	SM 4500 F-C-2011	Fluoride	0.71		mg F/L	P407166	
2292456	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.014		mg N/L	P407635	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.71		mg N/L	P407276	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.004	U	mg N/L	P407093	
2292463	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P406962	
2292470	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P407276	
	EPA 365.1 Rev. 2.0	Total-P	0.058		mg P/L	P407044	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P407177	

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: DEPGL3

Collection Date/Time: 12/01/2021 09:35

Field ID: GTMLMNUT

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292450	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	128		mg CaCO3/L	P407162	
	SM 2540 D-2011	TSS	13		mg/L	P407132	
	SM 4500 F-C-2011	Fluoride	0.61		mg F/L	P407166	
2292457	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.015		mg N/L	P407635	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.79		mg N/L	P407798	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.004	U	mg N/L	P407093	
2292464	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P406962	
2292471	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P407392	
	EPA 365.1 Rev. 2.0	Total-P	0.074		mg P/L	P407045	
	SM 5310 B-2011	Organic Carbon	20		mg C/L	P407177	

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: 12/01/2021 09:59

Field ID: GTMGL2NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292451	EPA 180.1 Rev. 2.0	Turbidity	4.9		NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	131		mg CaCO3/L	P407162	
	SM 2540 D-2011	TSS	8	IA	mg/L	P407132	
	SM 4500 F-C-2011	Fluoride	0.45		mg F/L	P407166	
2292458	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.014		mg N/L	P407635	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.1		mg N/L	P407791	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.004	U	mg N/L	P407093	
2292465	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P406963	
2292472	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P407368	MS
	EPA 365.1 Rev. 2.0	Total-P	0.072		mg P/L	P407423	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P407177	

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: DEPGL1

Collection Date/Time: 12/01/2021 10:20

Field ID: GTMGL1NUT

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292452	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	149		mg CaCO3/L	P407160	
	SM 2540 D-2011	TSS	2	U	mg/L	P407130	
	SM 4500 F-C-2011	Fluoride	0.19		mg F/L	P407165	
2292459	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.033		mg N/L	P407632	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	1.1		mg N/L	P407791	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.042		mg N/L	P407057	
2292466	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.076		mg P/L	P406961	
2292473	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P407368	MS
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P407040	
	SM 5310 B-2011	Organic Carbon	20		mg C/L	P407413	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: FB

Collection Date/Time: 12/01/2021 07:07

Field ID: Field Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2292474	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P406968	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P407160	
	SM 2540 D-2011	TSS	2	U	mg/L	P407130	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P407165	
2292475	EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	0.002	U	mg N/L	P407632	
	EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	0.13	I	mg N/L	P407791	
	EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	0.004	U	mg N/L	P407057	
2292476	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P406961	
2292477	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P407729	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P407040	
	SM 5310 B-2011	Organic Carbon	0.50	I	mg C/L	P407413	

Ref. Method and Comment:

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

SM 4500 F-C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0 dissolved: The result was confirmed on 01/03/2022.

SM 5310 B-2011: The result was confirmed on 12/16/2021.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P406968

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407081

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407632

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407635

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407276

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407368

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407392

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407729

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407276

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: P407791

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407798

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407057

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407093

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407040

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407044

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407045

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407423

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406961

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406962

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406963

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

Reference Method: SM 2320 B-2011
Batch ID: P407160

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

Reference Method: SM 2320 B-2011
Batch ID: P407162

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

Reference Method: SM 2540 D-2011
Batch ID: P407130

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P407132

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P407165

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P407166

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P407177

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: P407413

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407081

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407635

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407276

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407368

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: P407392

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: P407729

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407276

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

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407791

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407798

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407057

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407040

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407044

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: P407045

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: P407423

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406961

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406963

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.7		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P407160

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.8		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P407162

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.1		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P407165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P407166

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

Reference Method: SM 5310 B-2011
Batch ID: P407177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	105		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P407413

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407081

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2290447	Ammonia-N	94.4	96.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292905	Ammonia-N	98.0	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved
Batch ID: P407635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292456	Ammonia-N	100	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292453	Kjeldahl Nitrogen	96.9	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407368

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292442	Kjeldahl Nitrogen	101	114	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407392

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292255	Kjeldahl Nitrogen	96.8	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P407729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2293935	Kjeldahl Nitrogen	90.2	93.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292453	Kjeldahl Nitrogen	96.9	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407791

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292244	Kjeldahl Nitrogen	97.7	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292602	Kjeldahl Nitrogen	93.1	90.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292442	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292429	NO2NO3-N	99.4	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292380	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292467	Total-P	97.9	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292587	Total-P	99.8	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407423

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2294962	Total-P	100	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406961

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292551	O-Phosphate-P	92.1	93.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292460	O-Phosphate-P	98.3	99.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P406963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292519	O-Phosphate-P	99.2	97.7	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P407166

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2293021	Fluoride	98.2	99.6	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P407177

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2292469	Organic Carbon	104	105	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P407413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2293022	Organic Carbon	92.8	93.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P406968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292446	Turbidity	2.86	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Batch ID: P407081

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2290447	Ammonia-N	1.43	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Batch ID: P407632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292905	Ammonia-N	0.988	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Batch ID: P407635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292456	Ammonia-N	0.938	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P407276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292453	Kjeldahl Nitrogen	2.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P407368

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292442	Kjeldahl Nitrogen	6.82	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P407392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292255	Kjeldahl Nitrogen	0.210	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P407729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2293935	Kjeldahl Nitrogen	3.10	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292453	Kjeldahl Nitrogen	2.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292244	Kjeldahl Nitrogen	3.93	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0 dissolved
Batch ID: P407798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292602	Kjeldahl Nitrogen	2.66	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292442	NO2NO3-N	0.905	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0 dissolved
Batch ID: P407093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292429	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292380	Total-P	1.25	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292467	Total-P	1.43	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P407045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292587	Total-P	1.38	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P407423

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2294962	Total-P	1.81	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P406961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292551	O-Phosphate-P	1.51	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P406962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292460	O-Phosphate-P	0.896	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P406963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292519	O-Phosphate-P	1.07	Spike	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P407160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292610	Total Alkalinity	0.950	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011

Batch ID: P407162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2293021	Total Alkalinity	0.867	Sample	P	0 - 5.2

Reference Method: SM 4500 F-C-2011

Batch ID: P407165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292610	Fluoride	0.472	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011

Batch ID: P407166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2293021	Fluoride	1.01	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P407177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2292469	Organic Carbon	0.808	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P407413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2293022	Organic Carbon	0.123	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A109178

Included Lab Sample IDs: 2292460, 2292461, 2292462, 2292463, 2292464, 2292465, 2292466, 2292476

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	101	P/P	90 - 110
O-Phosphate-P	101	99.9	P/P	90 - 110
O-Phosphate-P	99.6	99.9	P/P	90 - 110
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109180

Included Lab Sample IDs: 2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474

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

Reference Method: EPA 353.2 Rev. 2.0 dissolved

Run ID: A109216

Included Lab Sample IDs: 2292459, 2292475

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

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Run ID: A109228

Included Lab Sample IDs: 2292453, 2292454

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0 dissolved

Run ID: A109233

Included Lab Sample IDs: 2292453, 2292454, 2292455, 2292456, 2292457, 2292458

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

Reference Method: SM 2320 B-2011

Run ID: A109252

Included Lab Sample IDs: 2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	97.8	P/P	90 - 110
Total Alkalinity	100	101	P/P	90 - 110
Total Alkalinity	97.8	99.0	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109252

Included Lab Sample IDs: 2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110
Fluoride	102	103	P/P	90 - 110
Fluoride	103	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A109260

Included Lab Sample IDs: 2292467, 2292468, 2292469, 2292470, 2292471, 2292472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	106	P/P	90 - 110
Organic Carbon	105	106	P/P	90 - 110
Organic Carbon	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A109271

Included Lab Sample IDs: 2292473

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A109274

Included Lab Sample IDs: 2292467, 2292468, 2292469, 2292470, 2292471, 2292477

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109354

Included Lab Sample IDs: 2292467, 2292468, 2292469, 2292470

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	104	P/P	90 - 110
Kjeldahl Nitrogen	104	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A109354

Included Lab Sample IDs: 2292453, 2292454, 2292455, 2292456

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

Reference Method: SM 5310 B-2011

Run ID: A109369

Included Lab Sample IDs: 2292473, 2292477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109421

Included Lab Sample IDs: 2292472, 2292473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.3	90.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109423

Included Lab Sample IDs: 2292471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A109461

Included Lab Sample IDs: 2292472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0 dissolved

Run ID: A109464

Included Lab Sample IDs: 2292455, 2292456, 2292457, 2292458, 2292459, 2292475

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	97.9	P/P	90 - 110
Ammonia-N	98.6	98.6	P/P	90 - 110
Ammonia-N	98.6	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109554

Included Lab Sample IDs: 2292477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.0	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A109562

Included Lab Sample IDs: 2292457

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0 dissolved

Run ID: A109570

Included Lab Sample IDs: 2292458, 2292459, 2292475

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.3	98.9	P/P	90 - 110
Kjeldahl Nitrogen	98.9	98.5	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				2.86	
EPA 350.1 Rev. 2.0 dissolved	Ammonia-N	97.0	94.4	96.0		1.43
	Ammonia-N	99.8	98.0	99.2		0.988
	Ammonia-N	101	100	102		0.938
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	110	96.9	99.4		2.12
	Kjeldahl Nitrogen	102	101	114		6.82
	Kjeldahl Nitrogen	102	96.8	97.0		0.210
	Kjeldahl Nitrogen	103	90.2	93.4		3.10
EPA 351.2 Rev. 2.0 dissolved	Kjeldahl Nitrogen	110	96.9	99.4		2.12
	Kjeldahl Nitrogen	104	97.7	103		3.93
	Kjeldahl Nitrogen	98.1	93.1	90.4		2.66
EPA 353.2 Rev. 2.0 dissolved	NO2NO3-N	102	101	102		0.905
	NO2NO3-N	98.0	99.4	99.4		0.0
EPA 365.1 Rev. 2.0	Total-P	108	106	105		1.25
	Total-P	107	97.9	99.4		1.43
	Total-P	105	99.8	98.4		1.38
	Total-P	106	100	98.3		1.81
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1	92.1	93.5		1.51
	O-Phosphate-P	99.5	98.3	99.4		0.896
	O-Phosphate-P	99.7	99.2	97.7		1.07
SM 2320 B-2011	Total Alkalinity	97.8			0.950	
	Total Alkalinity	97.1			0.867	
SM 4500 F-C-2011	Fluoride	99.9				0.472
	Fluoride	100	98.2	99.6		1.01
SM 5310 B-2011	Organic Carbon	105	104	105		0.808
	Organic Carbon	94.4	92.8	93.0		0.123

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474
EPA 350.1 Rev. 2.0 dissolved	Ammonia, dissolved, in filtered, aqueous matrices as mg N/L	2292453, 2292454, 2292455, 2292456, 2292457, 2292458, 2292459, 2292475
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2292467, 2292468, 2292469, 2292470, 2292471, 2292472, 2292473, 2292477
EPA 351.2 Rev. 2.0 dissolved	Total Kjeldahl Nitrogen, dissolved, in filtered, aqueous matrices	2292453, 2292454, 2292455, 2292456, 2292457, 2292458, 2292459, 2292475
EPA 353.2 Rev. 2.0 dissolved	Nitrite/Nitrate, dissolved, in filtered, aqueous matrices as mg N/L	2292453, 2292454, 2292455, 2292456, 2292457, 2292458, 2292459, 2292475
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2292467, 2292468, 2292469, 2292470, 2292471, 2292472, 2292473, 2292477
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2292460, 2292461, 2292462, 2292463, 2292464, 2292465, 2292466, 2292476
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2292467, 2292468, 2292469, 2292470, 2292471, 2292472, 2292473, 2292477

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	12/02/2021			12/02/2021 16:14	Khloe J Berg	2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474
EPA 350.1 Rev. 2.0 dissolved	12/02/2021			12/06/2021 15:04	Ping Hua	2292453
	12/02/2021			12/06/2021 15:05	Ping Hua	2292454
	12/02/2021			12/17/2021 13:36	Ping Hua	2292459
	12/02/2021			12/17/2021 14:24	Ping Hua	2292456
	12/02/2021			12/17/2021 14:36	Ping Hua	2292455
	12/02/2021			12/17/2021 14:37	Ping Hua	2292457
	12/02/2021			12/17/2021 14:38	Ping Hua	2292458
	12/02/2021			12/17/2021 15:20	Ping Hua	2292475
EPA 351.2 Rev. 2.0	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 12:57	Alexandra J Mattheus	2292467
	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 13:01	Alexandra J Mattheus	2292468
	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 13:03	Alexandra J Mattheus	2292469
	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 13:04	Alexandra J Mattheus	2292470
	12/02/2021	12/13/2021 13:19	Alexandra J Mattheus	12/14/2021 12:20	Alexandra J Mattheus	2292472
	12/02/2021	12/13/2021 13:19	Alexandra J Mattheus	12/14/2021 12:21	Alexandra J Mattheus	2292473
	12/02/2021	12/14/2021 10:00	Alexandra J Mattheus	12/15/2021 14:30	Alexandra J Mattheus	2292471
	12/02/2021	12/21/2021 11:52	Samantha L Bates	12/22/2021 15:50	Alexandra J Mattheus	2292477
EPA 351.2 Rev. 2.0 dissolved	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 12:50	Alexandra J Mattheus	2292453
	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 12:54	Alexandra J Mattheus	2292454
	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 12:55	Alexandra J Mattheus	2292455
	12/02/2021	12/10/2021 16:34	Alexandra J Mattheus	12/13/2021 12:56	Alexandra J Mattheus	2292456
	12/02/2021	12/22/2021 12:07	Samantha L Bates	12/27/2021 11:16	Alexandra J Mattheus	2292457
	12/02/2021	12/22/2021 12:57	Samantha L Bates	12/27/2021 14:48	Alexandra J Mattheus	2292458
	12/02/2021	12/22/2021 12:57	Samantha L Bates	12/27/2021 14:49	Alexandra J Mattheus	2292459
	12/02/2021	12/22/2021 12:57	Samantha L Bates	12/27/2021 14:54	Alexandra J Mattheus	2292475
EPA 353.2 Rev. 2.0 dissolved	12/02/2021			12/06/2021 09:54	Beverly Y. Sanders	2292459
	12/02/2021			12/06/2021 09:56	Beverly Y. Sanders	2292475
	12/02/2021			12/07/2021 09:14	Beverly Y. Sanders	2292453
	12/02/2021			12/07/2021 09:15	Beverly Y. Sanders	2292454
	12/02/2021			12/07/2021 09:16	Beverly Y. Sanders	2292455
	12/02/2021			12/07/2021 09:17	Beverly Y. Sanders	2292456
	12/02/2021			12/07/2021 09:18	Beverly Y. Sanders	2292457
	12/02/2021			12/07/2021 09:20	Beverly Y. Sanders	2292458
EPA 365.1 Rev. 2.0	12/02/2021	12/07/2021 16:30	Simonne.V. Calhoun	12/08/2021 12:11	Shengyu Ding	2292473
	12/02/2021	12/07/2021 16:30	Simonne.V. Calhoun	12/08/2021 13:32	Shengyu Ding	2292477
	12/02/2021	12/07/2021 16:30	Simonne.V. Calhoun	12/08/2021 13:37	Shengyu Ding	2292467
	12/02/2021	12/07/2021 16:30	Simonne.V. Calhoun	12/08/2021 13:51	Shengyu Ding	2292468
	12/02/2021	12/07/2021 16:30	Simonne.V. Calhoun	12/08/2021 13:52	Shengyu Ding	2292469
	12/02/2021	12/07/2021 16:30	Simonne.V. Calhoun	12/08/2021 13:53	Shengyu Ding	2292470

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	12/02/2021	12/07/2021 16:30	Simonne.V. Calhoun	12/08/2021 13:56	Shengyu Ding	2292471
	12/02/2021	12/15/2021 17:30	Simonne.V. Calhoun	12/17/2021 13:10	Shengyu Ding	2292472
EPA 365.1 Rev. 2.0 dissolved	12/02/2021			12/02/2021 14:50	James L Waggeberby	2292466, 2292476
	12/02/2021			12/02/2021 15:01	James L Waggeberby	2292460
	12/02/2021			12/02/2021 15:08	James L Waggeberby	2292461
	12/02/2021			12/02/2021 15:09	James L Waggeberby	2292462
	12/02/2021			12/02/2021 15:10	James L Waggeberby	2292463
	12/02/2021			12/02/2021 15:11	James L Waggeberby	2292464
	12/02/2021			12/02/2021 15:23	James L Waggeberby	2292465
	12/02/2021			12/07/2021 20:08	Dale L. Simmons	2292452
SM 2320 B-2011	12/02/2021			12/07/2021 20:17	Dale L. Simmons	2292474
	12/02/2021			12/08/2021 01:46	Dale L. Simmons	2292451
	12/02/2021			12/08/2021 03:57	Dale L. Simmons	2292446
	12/02/2021			12/08/2021 04:11	Dale L. Simmons	2292447
	12/02/2021			12/08/2021 04:24	Dale L. Simmons	2292448
	12/02/2021			12/08/2021 04:38	Dale L. Simmons	2292449
	12/02/2021			12/08/2021 04:52	Dale L. Simmons	2292450
	12/02/2021			12/03/2021 13:15	Simonne.V. Calhoun	2292446, 2292447, 2292448, 2292449, 2292450, 2292451, 2292452, 2292474
SM 2540 D-2011	12/02/2021					
SM 4500 F-C-2011	12/02/2021			12/07/2021 20:08	Dale L. Simmons	2292452
	12/02/2021			12/07/2021 20:17	Dale L. Simmons	2292474
	12/02/2021			12/07/2021 23:06	Dale L. Simmons	2292451
	12/02/2021			12/08/2021 00:22	Dale L. Simmons	2292446
	12/02/2021			12/08/2021 00:27	Dale L. Simmons	2292447
	12/02/2021			12/08/2021 00:32	Dale L. Simmons	2292448
	12/02/2021			12/08/2021 00:38	Dale L. Simmons	2292449
	12/02/2021			12/08/2021 00:43	Dale L. Simmons	2292450
SM 5310 B-2011	12/02/2021			12/07/2021 23:44	Khloe J Berg	2292469
	12/02/2021			12/08/2021 02:12	Khloe J Berg	2292467
	12/02/2021			12/08/2021 02:27	Khloe J Berg	2292468
	12/02/2021			12/08/2021 02:55	Khloe J Berg	2292470
	12/02/2021			12/08/2021 03:08	Khloe J Berg	2292471
	12/02/2021			12/08/2021 03:48	Khloe J Berg	2292472
	12/02/2021			12/13/2021 23:29	Khloe J Berg	2292473
	12/02/2021			12/13/2021 23:41	Khloe J Berg	2292477