Chemical Analysis Report

NW-DIST-2022-10-19-01

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

Event Description: **Pensacola Estuary Run**
Request ID: **RQ-2022-10-17-29**
Customer: **NW-DIST**
Project ID: **SMP**

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Date Certified: 09-NOV-2022 14:57

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: Bayou Grande **Collection Date/Time: 10/17/2022 11:15**

Field ID: G4NW0500 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2363292	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P421115	
	SM 2320 B-2011	Total Alkalinity	92		mg CaCO3/L	P421458	
	SM 2540 D-2015	TSS	5	I	mg/L	P421405	
	SM 4500-F- C-2011	Fluoride	0.87		mg F/L	P421463	
2363295	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P421227	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	mg N/L	P421287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P421449	
	EPA 365.1 Rev. 2.0	Total-P	0.008	I	mg P/L	P421084	
	SM 5310 B-2011	Organic Carbon	3.7	I	mg C/L	P421636	

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: Bayou Grande at CR-297 **Collection Date/Time: 10/17/2022 10:30**

Field ID: G4NW0521 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2363293	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P421115	
	SM 2320 B-2011	Total Alkalinity	67		mg CaCO3/L	P421458	
	SM 2540 D-2015	TSS	3	I	mg/L	P421402	
	SM 4500-F- C-2011	Fluoride	0.52		mg F/L	P421463	
2363296	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P421682	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32	I	mg N/L	P421287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P421178	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P421769	
	SM 5310 B-2011	Organic Carbon	4.5		mg C/L	P421999	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The result was confirmed on 10/28/2022 using the protocol for saline matrices.

Sample Location: Tea Lake (Center) **Collection Date/Time: 10/17/2022 12:50**

Field ID: G5NW0035 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2363290	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P421115	
	SM 2320 B-2011	Total Alkalinity	55		mg CaCO3/L	P421458	
	SM 2540 D-2015	TSS	3	UA	mg/L	P421405	
	SM 4500-F- C-2011	Fluoride	0.45	I	mg F/L	P421463	
2363291	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P421682	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P421287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P421449	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P421084	
	SM 5310 B-2011	Organic Carbon	4.9		mg C/L	P421636	

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: Bayou Grande near Navy Point Boat Ramp **Collection Date/Time: 10/17/2022 11:30**

Field ID: G4NW0501 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2363294	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P421115	
	SM 2320 B-2011	Total Alkalinity	93		mg CaCO3/L	P421458	
	SM 2540 D-2015	TSS	3	U	mg/L	P421405	
	SM 4500-F- C-2011	Fluoride	0.88		mg F/L	P421463	
2363297	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P421227	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29	I	mg N/L	P421287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P421449	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P421084	
	SM 5310 B-2011	Organic Carbon	3.5	I	mg C/L	P421636	

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: P421115

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421227

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421287

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421178

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421449

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421084

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421769

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

Reference Method: SM 2320 B-2011
Batch ID: P421458

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P421402

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P421405

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P421463

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P421636

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

Reference Method: SM 5310 B-2011
Batch ID: P421999

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: P421115

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421227

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421287

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421178

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	93.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421084

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: P421769

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

Reference Method: SM 2320 B-2011
Batch ID: P421458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P421402

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.4		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P421405

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

Reference Method: SM 4500-F- C-2011
Batch ID: P421463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P421636

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P421999

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.4		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362332	Ammonia-N	105	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363291	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363291	Kjeldahl Nitrogen	108	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421178

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363261	NO2NO3-N	95.5	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362609	NO2NO3-N	109	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363295	Total-P	98.7	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365212	Total-P	98.8	97.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P421463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2364001	Fluoride	99.6	99.6	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P421636

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363291	Organic Carbon	92.1	93.5	P/P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P421999

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2365009	Organic Carbon	96.6	96.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363071	Turbidity	1.73	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362332	Ammonia-N	0.545	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363291	Ammonia-N	0.351	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363291	Kjeldahl Nitrogen	4.70	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421178

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363261	NO2NO3-N	0.522	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362609	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363295	Total-P	0.732	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365212	Total-P	0.899	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P421458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364001	Total Alkalinity	0.988	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P421463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364001	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P421636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363291	Organic Carbon	1.33	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P421999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2365009	Organic Carbon	0.0624	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: A115399
Included Lab Sample IDs: 2363290, 2363292, 2363293, 2363294

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A115424
Included Lab Sample IDs: 2363296

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	93.0	93.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A115448
Included Lab Sample IDs: 2363295, 2363297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A115477
Included Lab Sample IDs: 2363291, 2363295, 2363297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	95.8	P/P	90 - 110
Total-P	99.5	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A115503
Included Lab Sample IDs: 2363291, 2363295, 2363296, 2363297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	102	P/P	90 - 110
Kjeldahl Nitrogen	106	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A115537
Included Lab Sample IDs: 2363291, 2363295, 2363297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A115538
Included Lab Sample IDs: 2363290, 2363292, 2363293, 2363294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	95.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A115538
Included Lab Sample IDs: 2363290, 2363292, 2363293, 2363294

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500-F- C-2011
Run ID: A115538
Included Lab Sample IDs: 2363290, 2363292, 2363293, 2363294

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

Reference Method: SM 5310 B-2011
Run ID: A115617
Included Lab Sample IDs: 2363291, 2363295, 2363297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A115637
Included Lab Sample IDs: 2363291, 2363296

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A115721
Included Lab Sample IDs: 2363296

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

Reference Method: SM 5310 B-2011
Run ID: A115775
Included Lab Sample IDs: 2363296

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	97.0	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		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity	101				1.73	
EPA 350.1 Rev. 2.0	Ammonia-N	93.4	105	104			0.545
	Ammonia-N	98.4	101	101			0.351
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	108	102			4.70
EPA 353.2 Rev. 2.0	NO2NO3-N	93.0	95.5	96.0			0.522
	NO2NO3-N	105	109	109			0.0
EPA 365.1 Rev. 2.0	Total-P	105	98.7	99.4			0.732
	Total-P	105	98.8	97.8			0.899
SM 2320 B-2011	Total Alkalinity	101				0.988	
SM 2540 D-2015	TSS	94.4					
	TSS	93.1					
SM 4500-F- C-2011	Fluoride	98.3	99.6	99.6			0.0
SM 5310 B-2011	Organic Carbon	98.1	92.1	93.5			1.33
	Organic Carbon	98.4	96.6	96.6			0.0624

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2363290, 2363292, 2363293, 2363294
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2363291, 2363295, 2363296, 2363297
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2363291, 2363295, 2363296, 2363297
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2363291, 2363295, 2363296, 2363297
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2363291, 2363295, 2363296, 2363297
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2363290, 2363292, 2363293, 2363294
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2363290, 2363292, 2363293, 2363294
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2363290, 2363292, 2363293, 2363294
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2363291, 2363295, 2363296, 2363297

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	10/19/2022			10/19/2022 10:21	Khloe J Berg	2363290, 2363294
	10/19/2022			10/19/2022 10:22	Khloe J Berg	2363293
	10/19/2022			10/19/2022 10:24	Khloe J Berg	2363292
EPA 350.1 Rev. 2.0	10/19/2022			10/21/2022 08:41	Judith K. Clark	2363295
	10/19/2022			10/21/2022 08:43	Judith K. Clark	2363297
	10/19/2022			10/31/2022 12:33	Ping Hua	2363291
	10/19/2022			10/31/2022 12:37	Ping Hua	2363296
EPA 351.2 Rev. 2.0	10/19/2022	10/24/2022 14:48	Samantha L Bates	10/25/2022 11:30	Samantha L Bates	2363291
	10/19/2022	10/24/2022 14:48	Samantha L Bates	10/25/2022 11:39	Samantha L Bates	2363295
	10/19/2022	10/24/2022 14:48	Samantha L Bates	10/25/2022 11:40	Samantha L Bates	2363296
	10/19/2022	10/24/2022 14:48	Samantha L Bates	10/25/2022 11:42	Samantha L Bates	2363297
EPA 353.2 Rev. 2.0	10/19/2022			10/20/2022 10:25	Beverly Y. Sanders	2363296
	10/19/2022			10/26/2022 09:56	Beverly Y. Sanders	2363291
	10/19/2022			10/26/2022 09:57	Beverly Y. Sanders	2363295
	10/19/2022			10/26/2022 10:00	Beverly Y. Sanders	2363297
EPA 365.1 Rev. 2.0	10/19/2022	10/20/2022 15:06	Adam P Silver	10/24/2022 10:04	James L Waggerby	2363295
	10/19/2022	10/20/2022 15:06	Adam P Silver	10/24/2022 10:12	James L Waggerby	2363297
	10/19/2022	10/20/2022 15:06	Adam P Silver	10/24/2022 10:58	James L Waggerby	2363291
	10/19/2022	11/02/2022 17:10	Adam P Silver	11/03/2022 12:09	Simonne.V. Calhoun	2363296
SM 2320 B-2011	10/19/2022			10/26/2022 06:50	Adam P Silver	2363290
	10/19/2022			10/26/2022 07:02	Adam P Silver	2363292
	10/19/2022			10/26/2022 07:13	Adam P Silver	2363293
	10/19/2022			10/26/2022 07:25	Adam P Silver	2363294
SM 2540 D-2015	10/19/2022			10/21/2022 17:06	Yijie Li	2363290, 2363292, 2363293, 2363294
SM 4500-F- C-2011	10/19/2022			10/26/2022 04:24	Adam P Silver	2363290
	10/19/2022			10/26/2022 04:30	Adam P Silver	2363292
	10/19/2022			10/26/2022 04:35	Adam P Silver	2363293
	10/19/2022			10/26/2022 04:40	Adam P Silver	2363294
SM 5310 B-2011	10/19/2022			10/27/2022 23:37	Khloe J Berg	2363291
	10/19/2022			10/28/2022 00:29	Khloe J Berg	2363295
	10/19/2022			10/28/2022 00:47	Khloe J Berg	2363297
	10/19/2022			11/05/2022 06:42	Khloe J Berg	2363296