

Chemical Analysis Report

SW-DIST-2022-06-02-01

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

Event Description: **Run 4**
Request ID: **RQ-2022-05-30-02**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 29-JUN-2022 09:56

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: Dowling Lake 2

Collection Date/Time: 06/01/2022 10:40

Field ID: G4SW0084

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2331252	DEP SOP: NU-094-1	Color (true)**	39		PCU	P415021	
	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P414666	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P414983	
		Sulfate	4.9		mg SO4/L	P414987	
	SM 2320 B-2011	Total Alkalinity	13		mg CaCO3/L	P415108	
	SM 2540 C-2011	TDS	82		mg/L	P414803	
	SM 2540 D-2011	TSS	2	I	mg/L	P414769	
	SM 4500-F- C-2011	Fluoride	0.12		mg F/L	P415112	
2331255	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P415173	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P414740	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P415305	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P414751	MS
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P414756	

Sample Location: FB

Collection Date/Time: 06/01/2022 09:30

Field ID: FB_06012022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2331253	DEP SOP: NU-094-1	Color (true)**	2.5	U	PCU	P415022	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P414666	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P414983	
		Sulfate	0.20	U	mg SO4/L	P414987	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P415108	
	SM 2540 C-2011	TDS	15	U	mg/L	P414803	
	SM 2540 D-2011	TSS	2	U	mg/L	P414769	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P415112	
2331256	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P415173	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P414739	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P415305	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P414751	MS
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P414756	

Sample Location: Mountain Lake @ Center

Collection Date/Time: 06/01/2022 11:30

Field ID: G4SW0103

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2331254	DEP SOP: NU-094-1	Color (true)**	73		PCU	P415022	
	EPA 180.1 Rev. 2.0	Turbidity	8.2		NTU	P414666	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P414983	
		Sulfate	0.38	I	mg SO4/L	P414987	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P415108	
	SM 2540 C-2011	TDS	87	A	mg/L	P414803	
	SM 2540 D-2011	TSS	11	A	mg/L	P414769	
	SM 4500-F- C-2011	Fluoride	0.099	I	mg F/L	P415112	
	2331257	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P415173
EPA 351.2 Rev. 2.0		Kjeldahl Nitrogen	1.7		mg N/L	P414740	
EPA 353.2 Rev. 2.0		NO2NO3-N	0.004	U	mg N/L	P415660	
EPA 365.1 Rev. 2.0		Total-P	0.12		mg P/L	P414751	MS
SM 5310 B-2011		Organic Carbon	16		mg C/L	P414756	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P415021

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P415022

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414666

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414983

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414987

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415173

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414739

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414740

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415305

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415660

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414751

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

Reference Method: SM 2320 B-2011
Batch ID: P415108

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

Reference Method: SM 2540 C-2011
Batch ID: P414803

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P414769

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P415112

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P414756

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P415021

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	109		P	85 - 115

Reference Method: DEP SOP: NU-094-1
Batch ID: P415022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414666

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414987

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415173

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	91.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	92.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415305

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.0		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415660

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414751

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

Reference Method: SM 2320 B-2011
Batch ID: P415108

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P415112

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P414756

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2330879	Chloride	100		P	90 - 110
2330889	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2330879	Sulfate	96.4		P	90 - 110
2330889	Sulfate	98.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415173

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331221	Ammonia-N	93.8	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331292	Kjeldahl Nitrogen	93.3	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331255	Kjeldahl Nitrogen	109	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415305

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331222	NO2NO3-N	92.0	93.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332815	NO2NO3-N	96.3	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331220	Total-P	110	114	F/F	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P415112

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2330820	Fluoride	100	100	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P414756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331158	Organic Carbon	95.3	95.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P415021

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331112	Color (true)	2.68	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P415022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331284	Color (true)	7.66	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331154	Turbidity	5.09	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2330879	Chloride	0.362	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P414987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2330879	Sulfate	0.540	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415173

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331221	Ammonia-N	0.915	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331292	Kjeldahl Nitrogen	4.92	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331255	Kjeldahl Nitrogen	3.46	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415305

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331222	NO2NO3-N	1.56	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332815	NO2NO3-N	0.456	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331220	Total-P	3.30	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P415108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2330820	Total Alkalinity	0.250	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P414803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331254	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P414769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331254	TSS	3.64	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P415112

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2330820	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P414756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331158	Organic Carbon	0.259	Spike	P	0 - 20

Quality Assurance Report Precision

* 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: A112575

Included Lab Sample IDs: 2331252, 2331253, 2331254

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

Reference Method: SM 5310 B-2011

Run ID: A112617

Included Lab Sample IDs: 2331255, 2331256, 2331257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112647

Included Lab Sample IDs: 2331257

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112648

Included Lab Sample IDs: 2331255, 2331256

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112707

Included Lab Sample IDs: 2331252, 2331253, 2331254

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

Reference Method: DEP SOP: NU-094-1

Run ID: A112727

Included Lab Sample IDs: 2331252, 2331253, 2331254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	85 - 115
Color (true)	103	103	P/P	85 - 115

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112749

Included Lab Sample IDs: 2331255, 2331256, 2331257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.0	99.7	P/P	90 - 110
Kjeldahl Nitrogen	97.1	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A112774

Included Lab Sample IDs: 2331252, 2331253, 2331254

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.1	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112774

Included Lab Sample IDs: 2331252, 2331253, 2331254

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112817

Included Lab Sample IDs: 2331255, 2331256, 2331257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	94.6	97.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112870

Included Lab Sample IDs: 2331255, 2331256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	94.0	94.5	P/P	90 - 110
NO2NO3-N	96.0	94.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A113014

Included Lab Sample IDs: 2331257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	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
DEP SOP: NU-094-1	Color (true)	109			2.68	
	Color (true)	101			7.66	
EPA 180.1 Rev. 2.0	Turbidity	97.0			5.09	
EPA 300.0 Rev. 2.1	Chloride	99.9	100	100	0.362	
	Sulfate	99.6	96.4	98.5	0.540	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	93.8	94.8		0.915
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	91.4	93.3	99.5		4.92
	Kjeldahl Nitrogen	92.1	109	103		3.46
EPA 353.2 Rev. 2.0	NO2NO3-N	97.0	92.0	93.4		1.56
	NO2NO3-N	100	96.3	96.8		0.456
EPA 365.1 Rev. 2.0	Total-P	105	110	114		3.30
SM 2320 B-2011	Total Alkalinity	102			0.250	
SM 2540 C-2011	TDS				0.0	
SM 2540 D-2011	TSS				3.64	
SM 4500-F- C-2011	Fluoride	100	100	100		0.0
SM 5310 B-2011	Organic Carbon	93.5	95.3	95.0		0.259

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2331252, 2331253, 2331254
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2331252, 2331253, 2331254
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2331252, 2331253, 2331254
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2331252, 2331253, 2331254
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2331255, 2331256, 2331257
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2331255, 2331256, 2331257
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2331255, 2331256, 2331257
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2331255, 2331256, 2331257
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2331252, 2331253, 2331254
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2331252, 2331253, 2331254
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2331252, 2331253, 2331254
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2331252, 2331253, 2331254
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2331255, 2331256, 2331257

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	06/02/2022			06/02/2022 14:13	Blanca Fach	2331252
	06/02/2022			06/02/2022 14:16	Blanca Fach	2331253
	06/02/2022			06/02/2022 14:21	Blanca Fach	2331254
EPA 180.1 Rev. 2.0	06/02/2022			06/02/2022 13:56	Anna M. Plaviak	2331252
	06/02/2022			06/02/2022 13:57	Anna M. Plaviak	2331253
	06/02/2022			06/02/2022 13:58	Anna M. Plaviak	2331254
EPA 300.0 Rev. 2.1	06/02/2022			06/08/2022 20:55	Anna M. Plaviak	2331252
	06/02/2022			06/08/2022 21:07	Anna M. Plaviak	2331253
	06/02/2022			06/08/2022 21:19	Anna M. Plaviak	2331254
EPA 350.1 Rev. 2.0	06/02/2022			06/14/2022 12:19	Judith K. Clark	2331255
	06/02/2022			06/14/2022 12:20	Judith K. Clark	2331256
	06/02/2022			06/14/2022 12:22	Judith K. Clark	2331257
EPA 351.2 Rev. 2.0	06/02/2022	06/08/2022 09:10	Samantha L Bates	06/10/2022 14:04	Alexandra J Mattheus	2331256
	06/02/2022	06/08/2022 09:10	Samantha L Bates	06/10/2022 14:34	Alexandra J Mattheus	2331255
	06/02/2022	06/08/2022 09:10	Samantha L Bates	06/10/2022 14:39	Alexandra J Mattheus	2331257
EPA 353.2 Rev. 2.0	06/02/2022			06/14/2022 17:52	Touraj Touran	2331256
	06/02/2022			06/14/2022 18:33	Touraj Touran	2331255
	06/02/2022			06/22/2022 17:07	Touraj Touran	2331257
EPA 365.1 Rev. 2.0	06/02/2022	06/06/2022 15:34	Adam P Silver	06/07/2022 11:23	James L Waggeberby	2331257
	06/02/2022	06/06/2022 15:34	Adam P Silver	06/07/2022 14:18	James L Waggeberby	2331256
	06/02/2022	06/06/2022 15:34	Adam P Silver	06/07/2022 14:20	James L Waggeberby	2331255
SM 2320 B-2011	06/02/2022			06/12/2022 23:30	Dale L. Simmons	2331252
	06/02/2022			06/12/2022 23:39	Dale L. Simmons	2331253
	06/02/2022			06/12/2022 23:52	Dale L. Simmons	2331254
SM 2540 C-2011	06/02/2022			06/03/2022 14:44	Ping Hua	2331252, 2331253, 2331254
SM 2540 D-2011	06/02/2022			06/03/2022 14:44	Ping Hua	2331252, 2331253, 2331254
SM 4500-F- C-2011	06/02/2022			06/12/2022 23:30	Dale L. Simmons	2331252
	06/02/2022			06/12/2022 23:39	Dale L. Simmons	2331253
	06/02/2022			06/12/2022 23:52	Dale L. Simmons	2331254
SM 5310 B-2011	06/02/2022			06/03/2022 20:16	Khloe J Berg	2331255
	06/02/2022			06/03/2022 20:30	Khloe J Berg	2331256
	06/02/2022			06/03/2022 20:44	Khloe J Berg	2331257