

Chemical Analysis Report

SW-DIST-2022-09-21-04

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

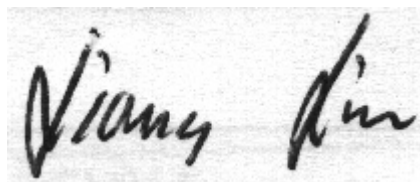
Event Description: **Run 15**
Request ID: **RQ-2022-09-12-19**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Sarah Meyer

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 13-OCT-2022 14:08

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: Wahneta Farm Drain @ 19th St

Collection Date/Time: 09/20/2022 12:30

Field ID: G3SW0083

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2358380	DEP SOP: NU-094-1	Color (true)	110		PCU	P419923	
	EPA 180.1 Rev. 2.0	Turbidity	5.5	A	NTU	P419960	
	EPA 300.0 Rev. 2.1	Chloride	20	A	mg Cl/L	P420258	
		Sulfate	12	A	mg SO4/L	P420262	
	SM 2320 B-2011	Total Alkalinity	49		mg CaCO3/L	P420379	
	SM 2540 C-2011	TDS	124	A	mg/L	P420437	
	SM 2540 D-2011	TSS	8	IA	mg/L	P420391	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P420383	
2358382	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P420419	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P420125	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P420315	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P420227	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P420174	
2358384	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P419929	

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: Reclaimed Mine Cut Lake SE

Collection Date/Time: 09/20/2022 10:40

Field ID: G3SW0074

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2358381	DEP SOP: NU-094-1	Color (true)	11	A	PCU	P419924	
	EPA 180.1 Rev. 2.0	Turbidity	8.9		NTU	P419960	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P420258	
		Sulfate	0.20	U	mg SO4/L	P420262	
	SM 2320 B-2011	Total Alkalinity	55		mg CaCO3/L	P420379	
	SM 2540 C-2011	TDS	89		mg/L	P420437	
	SM 2540 D-2011	TSS	11		mg/L	P420391	
	SM 4500-F- C-2011	Fluoride	1.0		mg F/L	P420383	
2358383	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P420419	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P420078	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P420315	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P420134	
	SM 5310 B-2011	Organic Carbon	8.9		mg C/L	P420174	
2358385	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.099		mg P/L	P419929	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P419923

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P419924

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419960

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420258

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420262

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420419

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420078

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420125

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420315

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420134

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420227

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419929

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

Reference Method: SM 2320 B-2011
Batch ID: P420379

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

Reference Method: SM 2540 C-2011
Batch ID: P420437

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P420391

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P420383

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P420174

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: P419923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P419924

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419960

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420258

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420262

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420419

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420078

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420315

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420134

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420227

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419929

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

Reference Method: SM 2320 B-2011
Batch ID: P420379

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.6		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P420383

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

Reference Method: SM 5310 B-2011
Batch ID: P420174

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358380	Chloride	102		P	90 - 110
2358665	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358380	Sulfate	100		P	90 - 110
2358665	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358324	Ammonia-N	97.0	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357817	Kjeldahl Nitrogen	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358107	NO2NO3-N	92.4	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420134

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358232	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358382	Total-P	107	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419929

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358242	O-Phosphate-P	95.5	98.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P420383

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358674	Fluoride	100	100	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P420174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2358433	Organic Carbon	97.5	98.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P419923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358292	Color (true)	2.61	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P419924

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358381	Color (true)	1.19	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419960

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358380	Turbidity	0.182	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358380	Chloride	0.815	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358380	Sulfate	1.02	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358324	Ammonia-N	0.527	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358383	Kjeldahl Nitrogen	0.232	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357817	Kjeldahl Nitrogen	1.73	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358107	NO2NO3-N	10.3	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420134

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358232	Total-P	1.06	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P420227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358382	Total-P	1.09	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358242	O-Phosphate-P	3.09	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P420379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358674	Total Alkalinity	1.87	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P420437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358380	TDS	4.02	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P420383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358674	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P420174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2358433	Organic Carbon	0.693	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: DEP SOP: NU-094-1

Run ID: A114859

Included Lab Sample IDs: 2358380, 2358381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	90 - 110
Color (true)	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A114862

Included Lab Sample IDs: 2358384, 2358385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114874

Included Lab Sample IDs: 2358380, 2358381

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

Reference Method: SM 5310 B-2011

Run ID: A114964

Included Lab Sample IDs: 2358382, 2358383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.7	96.0	P/P	90 - 110
Organic Carbon	96.0	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114984

Included Lab Sample IDs: 2358383

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114999

Included Lab Sample IDs: 2358380, 2358381

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A115018

Included Lab Sample IDs: 2358382

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A115032

Included Lab Sample IDs: 2358382, 2358383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A115070

Included Lab Sample IDs: 2358380, 2358381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.5	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A115070

Included Lab Sample IDs: 2358380, 2358381

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115082

Included Lab Sample IDs: 2358383

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115092

Included Lab Sample IDs: 2358382

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115096

Included Lab Sample IDs: 2358382, 2358383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	98.7	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)	102			2.61	
	Color (true)	101			1.19	
EPA 180.1 Rev. 2.0	Turbidity	101			0.182	
EPA 300.0 Rev. 2.1	Chloride	104	102	102	0.815	
	Sulfate	103	100	102	1.02	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	97.0	96.4		0.527
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100				0.232
	Kjeldahl Nitrogen	98.8	104	102		1.73
EPA 353.2 Rev. 2.0	NO2NO3-N	102	92.4	107		10.3
EPA 365.1 Rev. 2.0	Total-P	103	106	105		1.06
	Total-P	103	107	105		1.09
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5	95.5	98.5		3.09
SM 2320 B-2011	Total Alkalinity	98.6			1.87	
SM 2540 C-2011	TDS				4.02	
SM 4500-F- C-2011	Fluoride	102	100	100		0.0
SM 5310 B-2011	Organic Carbon	95.9	97.5	98.3		0.693

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2358380, 2358381
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2358380, 2358381
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2358380, 2358381
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2358380, 2358381
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2358382, 2358383
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2358382, 2358383
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2358382, 2358383
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2358382, 2358383
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2358384, 2358385
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2358380, 2358381
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2358380, 2358381
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2358380, 2358381
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2358380, 2358381
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2358382, 2358383

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	09/21/2022			09/21/2022 14:59	Samantha L Bates	2358380
	09/21/2022			09/21/2022 15:02	Samantha L Bates	2358381
EPA 180.1 Rev. 2.0	09/21/2022			09/21/2022 14:58	Chandler E Cox	2358380
	09/21/2022			09/21/2022 15:00	Chandler E Cox	2358381
EPA 300.0 Rev. 2.1	09/21/2022			09/28/2022 09:48	Anna M. Plaviak	2358380
	09/21/2022			09/28/2022 12:04	Anna M. Plaviak	2358381
EPA 350.1 Rev. 2.0	09/21/2022			10/03/2022 14:14	Ping Hua	2358382
	09/21/2022			10/03/2022 14:15	Ping Hua	2358383
EPA 351.2 Rev. 2.0	09/21/2022	09/26/2022 13:48	Alexandra J Mattheus	10/03/2022 10:47	Samantha L Bates	2358383
	09/21/2022	09/27/2022 14:11	Samantha L Bates	10/03/2022 14:02	Samantha L Bates	2358382
EPA 353.2 Rev. 2.0	09/21/2022			09/29/2022 12:49	Judith K. Clark	2358382
	09/21/2022			09/29/2022 12:50	Judith K. Clark	2358383
EPA 365.1 Rev. 2.0	09/21/2022	09/27/2022 14:20	Simonne.V. Calhoun	09/28/2022 10:30	James L Waggeberby	2358383
	09/21/2022	09/28/2022 14:15	Simonne.V. Calhoun	09/29/2022 09:27	James L Waggeberby	2358382
EPA 365.1 Rev. 2.0 dissolved	09/21/2022			09/21/2022 15:59	Elise M. Gillis	2358384
	09/21/2022			09/21/2022 16:00	Elise M. Gillis	2358385
SM 2320 B-2011	09/21/2022			10/01/2022 14:38	Dale L. Simmons	2358380
	09/21/2022			10/01/2022 14:50	Dale L. Simmons	2358381
SM 2540 C-2011	09/21/2022			09/26/2022 15:56	Yijie Li	2358380, 2358381
SM 2540 D-2011	09/21/2022			09/26/2022 15:56	Yijie Li	2358380, 2358381
SM 4500-F- C-2011	09/21/2022			10/01/2022 14:38	Dale L. Simmons	2358380
	09/21/2022			10/01/2022 14:50	Dale L. Simmons	2358381
SM 5310 B-2011	09/21/2022			09/26/2022 23:32	Touraj Touran	2358383
	09/21/2022			09/27/2022 01:41	Touraj Touran	2358382