

Chemical Analysis Report

SO-DIST-2022-09-13-01

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

Event Description: **Lake Trafford Lake Reference**
Request ID: **RQ-2022-09-12-16**
Customer: **SO-DIST**
Project ID: **LAKESREF**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Thomas Baker

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 28-SEP-2022 10:58

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the name.

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 groups are included in this report: Metals and 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: Lake Trafford

Collection Date/Time: 09/12/2022 10:40

Field ID: 28030024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2355705	DEP SOP: NU-094-1	Color (true)	61	A	PCU	P419507	
	EPA 180.1 Rev. 2.0	Turbidity	7.2		NTU	P419497	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P419775	
		Sulfate	4.2		mg SO4/L	P419779	
	SM 2320 B-2011	Total Alkalinity	117		mg CaCO3/L	P419768	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P419772	
2355706	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P419720	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P419587	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P419704	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P419596	
2355707	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P419501	
2355709	EPA 200.7 Rev. 4.4	Calcium	44.2		mg/L	P419590	
		Iron	75	I	ug/L	P419590	
		Magnesium	5.02		mg/L	P419590	
		Potassium	5.3		mg/L	P419590	
		Sodium	9.5		mg/L	P419590	
		Zinc	5.0	U	ug/L	P419590	
	EPA 200.8 Rev. 5.4	Arsenic	1.11		ug/L	P419590	
		Cadmium	0.020	U	ug/L	P419590	
		Chromium	0.40	U	ug/L	P419590	
		Copper	0.40	U	ug/L	P419590	
		Lead	0.20	U	ug/L	P419590	
		Nickel	0.50	U	ug/L	P419590	
		Silver	0.010	U	ug/L	P419590	

Ref. Method and Comment:

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: P419507

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419497

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419590

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419590

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419775

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419779

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419720

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419587

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419704

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419596

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419501

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

Reference Method: SM 2320 B-2011
Batch ID: P419768

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

Reference Method: SM 4500-F- C-2011
Batch ID: P419772

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P419507

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419497

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	105		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	104		P	85 - 115
Sodium	104		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	105		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	101		P	85 - 115
Copper	104		P	85 - 115
Lead	93.4		P	85 - 115
Nickel	104		P	85 - 115
Silver	88.1		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419775

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419779

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419720

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419587

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419704

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419596

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419501

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

Reference Method: SM 2320 B-2011
Batch ID: P419768

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

Reference Method: SM 4500-F- C-2011
Batch ID: P419772

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P419590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356076	Calcium	104	106	P/P	80 - 120
2356076	Iron	104	106	P/P	80 - 120
2356076	Magnesium	104	105	P/P	80 - 120
2356076	Potassium	104	106	P/P	80 - 120
2356076	Sodium	99.8	101	P/P	80 - 120
2356076	Zinc	103	104	P/P	80 - 120
2356077	Calcium	106		P	80 - 120
2356077	Iron	107		P	80 - 120
2356077	Magnesium	105		P	80 - 120
2356077	Potassium	106		P	80 - 120
2356077	Sodium	102		P	80 - 120
2356077	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P419590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356076	Arsenic	103	107	P/P	80 - 120
2356076	Cadmium	98.6	103	P/P	80 - 120
2356076	Chromium	99.7	103	P/P	80 - 120
2356076	Copper	104	107	P/P	80 - 120
2356076	Lead	93.4	96.9	P/P	80 - 120
2356076	Nickel	102	106	P/P	80 - 120
2356076	Silver	85.4	88.3	P/P	80 - 120
2356077	Arsenic	103		P	80 - 120
2356077	Cadmium	98.2		P	80 - 120
2356077	Chromium	101		P	80 - 120
2356077	Copper	103		P	80 - 120
2356077	Lead	94.1		P	80 - 120
2356077	Nickel	100		P	80 - 120
2356077	Silver	85.5		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P419775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355474	Chloride	98.5		P	90 - 110
2355588	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P419779

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355474	Sulfate	96.1		P	90 - 110
2355588	Sulfate	99.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P419720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355256	Ammonia-N	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355643	NO2NO3-N	92.7	90.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355701	Total-P	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419501

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355702	O-Phosphate-P	95.0	94.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P419772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355843	Fluoride	98.2	98.2	P/P	94 - 104

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P419507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355705	Color (true)	0.914	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355586	Turbidity	7.96	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356076	Calcium	1.11	Spike	P	0 - 20
2356076	Iron	1.06	Spike	P	0 - 20
2356076	Magnesium	0.862	Spike	P	0 - 20
2356076	Potassium	1.50	Spike	P	0 - 20
2356076	Sodium	0.949	Spike	P	0 - 20
2356076	Zinc	0.926	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356076	Arsenic	3.80	Spike	P	0 - 20
2356076	Cadmium	4.50	Spike	P	0 - 20
2356076	Chromium	3.58	Spike	P	0 - 20
2356076	Copper	3.21	Spike	P	0 - 20
2356076	Lead	3.61	Spike	P	0 - 20
2356076	Nickel	3.68	Spike	P	0 - 20
2356076	Silver	3.44	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355474	Chloride	0.187	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355474	Sulfate	0.114	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355256	Ammonia-N	0.786	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355706	Kjeldahl Nitrogen	0.873	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355643	NO2NO3-N	1.70	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355701	Total-P	0.799	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419501

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355702	O-Phosphate-P	0.0995	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P419768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355843	Total Alkalinity	0.566	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P419772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355843	Fluoride	0.0	Spike	P	0 - 1.6

* 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: A114694

Included Lab Sample IDs: 2355705

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A114695

Included Lab Sample IDs: 2355707

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

Reference Method: DEP SOP: NU-094-1

Run ID: A114696

Included Lab Sample IDs: 2355705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114761

Included Lab Sample IDs: 2355706

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114764

Included Lab Sample IDs: 2355709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	105	103	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Chromium	103	102	P/P	90 - 110
Copper	106	103	P/P	90 - 110
Lead	90.9	90.3	P/P	90 - 110
Nickel	104	102	P/P	90 - 110
Silver	98.1	97.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114771

Included Lab Sample IDs: 2355709

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	103	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	99.9	99.5	P/P	90 - 110
Sodium	99.9	100	P/P	90 - 110
Zinc	101	98.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114777

Included Lab Sample IDs: 2355706

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114783

Included Lab Sample IDs: 2355706

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114789

Included Lab Sample IDs: 2355705

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114800

Included Lab Sample IDs: 2355706

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

Reference Method: SM 2320 B-2011

Run ID: A114801

Included Lab Sample IDs: 2355705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.7	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A114801

Included Lab Sample IDs: 2355705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	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 SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	99.8				0.914	
EPA 180.1 Rev. 2.0	Turbidity	100				7.96	
EPA 200.7 Rev. 4.4	Calcium	105	104	106	106		1.11
	Iron	105	104	106	107		1.06
	Magnesium	104	104	105	105		0.862
	Potassium	104	104	106	106		1.50
	Sodium	104	99.8	101	102		0.949
	Zinc	100	103	104	102		0.926
EPA 200.8 Rev. 5.4	Arsenic	105	103	107	103		3.80
	Cadmium	98.9	98.6	103	98.2		4.50
	Chromium	101	99.7	103	101		3.58
	Copper	104	104	107	103		3.21
	Lead	93.4	93.4	96.9	94.1		3.61
	Nickel	104	102	106	100		3.68
	Silver	88.1	85.4	88.3	85.5		3.44
EPA 300.0 Rev. 2.1	Chloride	102	98.5	101		0.187	
	Sulfate	101	96.1	99.2		0.114	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	101	102			0.786
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107					0.873
EPA 353.2 Rev. 2.0	NO2NO3-N	103	92.7	90.7			1.70
EPA 365.1 Rev. 2.0	Total-P	102	102	100			0.799
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	95.0	94.9			0.0995
SM 2320 B-2011	Total Alkalinity	101				0.566	
SM 4500-F- C-2011	Fluoride	100	98.2	98.2			0.0

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2355705
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2355705
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2355709
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2355709
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2355705
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2355705
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2355706
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2355706
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2355706
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2355706
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2355707
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2355705
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2355705

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	09/13/2022			09/13/2022 16:15	Anna M. Plaviak	2355705
EPA 180.1 Rev. 2.0	09/13/2022			09/13/2022 13:34	Chandler E Cox	2355705
EPA 200.7 Rev. 4.4	09/13/2022	09/15/2022 10:20	Megan Whitefoot	09/16/2022 01:43	McKinley C Carter	2355709
EPA 200.8 Rev. 5.4	09/13/2022	09/15/2022 10:20	Megan Whitefoot	09/15/2022 18:02	Emily M Philpot	2355709
EPA 300.0 Rev. 2.1	09/13/2022			09/17/2022 05:27	Anna M. Plaviak	2355705
EPA 350.1 Rev. 2.0	09/13/2022			09/16/2022 10:16	Judith K. Clark	2355706
EPA 351.2 Rev. 2.0	09/13/2022	09/15/2022 13:58	Alexandra J Mattheus	09/16/2022 14:21	Alexandra J Mattheus	2355706
EPA 353.2 Rev. 2.0	09/13/2022			09/15/2022 13:27	Judith K. Clark	2355706
EPA 365.1 Rev. 2.0	09/13/2022	09/15/2022 15:47	Adam P Silver	09/15/2022 20:08	James L Waggerby	2355706
EPA 365.1 Rev. 2.0 dissolved	09/13/2022			09/13/2022 15:37	Elise M. Gillis	2355707
SM 2320 B-2011	09/13/2022			09/17/2022 09:05	Dale L. Simmons	2355705
SM 4500-F- C-2011	09/13/2022			09/17/2022 09:05	Dale L. Simmons	2355705