

Chemical Analysis Report

CEN-DIST-2021-08-26-03

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

Event Description: **Bird Lake and Faulk - WBIDs 3029 and 3060**

Request ID: **RQ-2021-08-23-24**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

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: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 21-SEP-2021 11:39



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: Bird Lake Ditches 1.2mi W of 95

Collection Date/Time: 08/25/2021 10:30

Field ID: G3CE0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2272129	EPA 180.1 Rev. 2.0	Turbidity	7.9		NTU	P403042	
	EPA 300.0 Rev. 2.1	Chloride	600		mg Cl/L	P403238	
		Sulfate	74		mg SO ₄ /L	P403242	
		Color (true)	260		PCU	P403044	
	SM 2320 B-2011	Total Alkalinity	174		mg CaCO ₃ /L	P403123	
	SM 2540 C-2011	TDS	1.32E+03		mg/L	P403401	
	SM 2540 D-2011	TSS	10	I	mg/L	P403394	
	SM 4500 F-C-2011	Fluoride	0.19		mg F/L	P403125	
	2272131	Ammonia-N	0.18		mg N/L	P403209	
		Kjeldahl Nitrogen	1.9		mg N/L	P403312	
		NO ₂ NO ₃ -N	0.054		mg N/L	P403184	
		Total-P	0.23		mg P/L	P403140	
		Organic Carbon	28		mg C/L	P403344	
2272133	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.084		mg P/L	P403037	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Falk Canal @ 50m Upstream of Fiske Blvd.

Collection Date/Time: 08/25/2021 11:15

Field ID: G3CE0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2272130	EPA 180.1 Rev. 2.0	Turbidity	9.9		NTU	P403042	
	EPA 300.0 Rev. 2.1	Chloride	210		mg Cl/L	P403238	
		Sulfate	34		mg SO4/L	P403242	
		Color (true)	120	A	PCU	P403044	
	SM 2320 B-2011	Total Alkalinity	88		mg CaCO3/L	P403123	
	SM 2540 C-2011	TDS	527		mg/L	P403401	
	SM 2540 D-2011	TSS	6	I	mg/L	P403394	
	SM 4500 F-C-2011	Fluoride	0.078	I	mg F/L	P403125	
	2272132	Ammonia-N	0.065		mg N/L	P403321	
		Kjeldahl Nitrogen	1.5		mg N/L	P403314	
		NO2NO3-N	0.004	U	mg N/L	P403184	
		Total-P	0.081		mg P/L	P403140	
		Organic Carbon	23		mg C/L	P403344	
2272134	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P403037	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2011: 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: P403042

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403238

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403242

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403209

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403321

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403312

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403314

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403184

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403140

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403037

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

Reference Method: SM 2120 B-2011
Batch ID: P403044

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P403123

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

Reference Method: SM 2540 C-2011
Batch ID: P403401

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P403394

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P403125

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P403344

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403238

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403242

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403209

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403321

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403314

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403140

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403037

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P403044

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

Reference Method: SM 2320 B-2011
Batch ID: P403123

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P403125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P403344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403238

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271671	Chloride	101		P	90 - 110
2271970	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271970	Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403209

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272078	Ammonia-N	97.0	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272182	Ammonia-N	96.2	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272078	Kjeldahl Nitrogen	98.9	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272147	Kjeldahl Nitrogen	105	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403184

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272132	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272132	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272098	O-Phosphate-P	97.5	97.6	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P403125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272101	Fluoride	98.4	98.4	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P403344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272049	Organic Carbon	101		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P403042

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272088	Turbidity	1.37	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271671	Chloride	0.720	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271671	Sulfate	0.781	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272078	Ammonia-N	1.26	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272182	Ammonia-N	1.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272078	Kjeldahl Nitrogen	4.24	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272147	Kjeldahl Nitrogen	5.73	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272132	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P403140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272132	Total-P	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P403037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272098	O-Phosphate-P	0.103	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
 Batch ID: P403044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272130	Color (true)	1.99	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P403123

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272101	Total Alkalinity	2.24	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
 Batch ID: P403401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272144	TDS	2.70	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P403125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272101	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
 Batch ID: P403344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272049	Organic Carbon	2.33	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107484

Included Lab Sample IDs: 2272133, 2272134

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107487

Included Lab Sample IDs: 2272129, 2272130

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

Reference Method: SM 2120 B-2011

Run ID: A107489

Included Lab Sample IDs: 2272129, 2272130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	102	103	P/P	90 - 115

Reference Method: SM 2320 B-2011

Run ID: A107535

Included Lab Sample IDs: 2272129, 2272130

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

Reference Method: SM 4500 F-C-2011

Run ID: A107535

Included Lab Sample IDs: 2272129, 2272130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110
Fluoride	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107555

Included Lab Sample IDs: 2272131, 2272132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.5	P/P	90 - 110
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107562

Included Lab Sample IDs: 2272131, 2272132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.4	101	P/P	90 - 110
Total-P	99.6	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107569

Included Lab Sample IDs: 2272131

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107592

Included Lab Sample IDs: 2272129, 2272130

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107618

Included Lab Sample IDs: 2272132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	98.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107635

Included Lab Sample IDs: 2272131, 2272132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.7	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107640

Included Lab Sample IDs: 2272131, 2272132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.6	97.6	P/P	90 - 110
Kjeldahl Nitrogen	97.2	97.9	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		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					1.37	
EPA 300.0 Rev. 2.1	Chloride	101	101	99.7		0.720	
	Sulfate	101		99.6		0.781	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	97.0	98.4			1.26
	Ammonia-N	98.6	96.2	98.0			1.46
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.2	98.9	107			4.24
	Kjeldahl Nitrogen	101	105	97.2			5.73
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.0	97.0	97.0			0.0
EPA 365.1 Rev. 2.0	Total-P	106	105	104			1.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	97.5	97.6			0.103
SM 2120 B-2011	Color (true)	101				1.99	
SM 2320 B-2011	Total Alkalinity	103				2.24	
SM 2540 C-2011	TDS					2.70	
SM 4500 F-C-2011	Fluoride	99.8	98.4	98.4			0.0
SM 5310 B-2011	Organic Carbon	98.2	101				2.33

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2272129, 2272130
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2272129, 2272130
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2272129, 2272130
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2272131, 2272132
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2272131, 2272132
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2272131, 2272132
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2272131, 2272132
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2272133, 2272134
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2272129, 2272130
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2272129, 2272130
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2272129, 2272130
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2272129, 2272130
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2272129, 2272130
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2272131, 2272132

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	08/26/2021			08/26/2021 15:25	Sarah A Nixon	2272129, 2272130
EPA 300.0 Rev. 2.1	08/26/2021			08/31/2021 19:47	Lipi Saha	2272129
	08/26/2021			08/31/2021 19:59	Lipi Saha	2272130
EPA 350.1 Rev. 2.0	08/26/2021			08/31/2021 12:00	Ping Hua	2272131
	08/26/2021			09/02/2021 12:29	Ping Hua	2272132
EPA 351.2 Rev. 2.0	08/26/2021	09/02/2021 13:17	Benjamin T. Nordmann	09/03/2021 11:43	Alexandra J Mattheus	2272132
	08/26/2021	09/02/2021 16:07	Benjamin T. Nordmann	09/03/2021 11:05	Alexandra J Mattheus	2272131
EPA 353.2 Rev. 2.0	08/26/2021			08/30/2021 10:30	Beverly Y. Sanders	2272132
	08/26/2021			08/30/2021 11:56	Beverly Y. Sanders	2272131
EPA 365.1 Rev. 2.0	08/26/2021	08/30/2021 14:00	Simonne.V. Calhoun	08/31/2021 11:04	Shengyu Ding	2272132
	08/26/2021	08/30/2021 14:00	Simonne.V. Calhoun	08/31/2021 11:16	Shengyu Ding	2272131
EPA 365.1 Rev. 2.0 dissolved	08/26/2021			08/26/2021 14:40	James L Waggeberby	2272133
	08/26/2021			08/26/2021 14:41	James L Waggeberby	2272134
SM 2120 B-2011	08/26/2021			08/26/2021 16:20	Sarah A Nixon	2272130
	08/26/2021			08/26/2021 16:45	Sarah A Nixon	2272129
SM 2320 B-2011	08/26/2021			08/27/2021 19:10	Dale L. Simmons	2272130
	08/26/2021			08/27/2021 21:59	Dale L. Simmons	2272129
SM 2540 C-2011	08/26/2021			08/30/2021 15:46	Yijie Li	2272129, 2272130
SM 2540 D-2011	08/26/2021			08/30/2021 14:36	Yijie Li	2272129, 2272130
SM 4500 F-C-2011	08/26/2021			08/27/2021 19:10	Dale L. Simmons	2272130
	08/26/2021			08/27/2021 21:59	Dale L. Simmons	2272129
SM 5310 B-2011	08/26/2021			09/01/2021 23:55	Touraj Touran	2272131
	08/26/2021			09/02/2021 00:09	Touraj Touran	2272132