

Chemical Analysis Report

SO-DIST-2022-02-10-01

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

Event Description: **2022 SMP : Sebring Lakes**
Request ID: **RQ-2022-02-07-40**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 07-MAR-2022 09:47

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first few letters of the last 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 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: Lake Glenada

Collection Date/Time: 02/09/2022 10:35

Field ID: G4SD0179

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304762	DEP SOP: NU-094-1	Color (true)**	33		PCU	P409712	
	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P409700	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P409886	
		Sulfate	15		mg SO4/L	P409889	
	SM 2320 B-2011	Total Alkalinity	38		mg CaCO3/L	P409857	
	SM 2540 C-2011	TDS	122		mg/L	P410072	
	SM 2540 D-2011	TSS	15		mg/L	P409826	
	SM 4500 F-C-2011	Fluoride	0.083	I	mg F/L	P409860	
2304765	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P409953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P409732	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P409842	
	EPA 365.1 Rev. 2.0	Total-P	0.077		mg P/L	P409776	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P410384	
2304768	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P409692	

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: Lake Denton

Collection Date/Time: 02/09/2022 11:30

Field ID: G4SD0180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304763	DEP SOP: NU-094-1	Color (true)**	2.5	U	PCU	P409712	
	EPA 180.1 Rev. 2.0	Turbidity	0.30	I	NTU	P409700	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P409886	
		Sulfate	44		mg SO4/L	P409889	
	SM 2320 B-2011	Total Alkalinity	39		mg CaCO3/L	P409857	
	SM 2540 C-2011	TDS	158		mg/L	P410072	
	SM 2540 D-2011	TSS	2	U	mg/L	P409826	
	SM 4500 F-C-2011	Fluoride	0.22		mg F/L	P409860	
2304766	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P409953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P409965	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.8		mg N/L	P409842	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P409776	
	SM 5310 B-2011	Organic Carbon	1.8		mg C/L	P410384	
2304769	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P409692	

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: Little Lake Jackson

Collection Date/Time: 02/09/2022 12:20

Field ID: G4SD0183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304764	DEP SOP: NU-094-1	Color (true)**	23		PCU	P409712	
	EPA 180.1 Rev. 2.0	Turbidity	1.6	A	NTU	P409700	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P409886	
		Sulfate	14		mg SO4/L	P409889	
	SM 2320 B-2011	Total Alkalinity	2.5	I	mg CaCO3/L	P409858	
	SM 2540 C-2011	TDS	62		mg/L	P410072	
	SM 2540 D-2011	TSS	2	I	mg/L	P409826	
	SM 4500 F-C-2011	Fluoride	0.077	I	mg F/L	P409861	
2304767	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P409953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P409965	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P409842	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P409776	
	SM 5310 B-2011	Organic Carbon	7.5		mg C/L	P410384	
2304770	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P409692	

Ref. Method and Comment:

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: DEP SOP: NU-094-1
Batch ID: P409712

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409700

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409886

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409889

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409953

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409732

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409965

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409842

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409776

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: P409692

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

Reference Method: SM 2320 B-2011
Batch ID: P409857

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

Reference Method: SM 2320 B-2011
Batch ID: P409858

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

Reference Method: SM 2540 C-2011
Batch ID: P410072

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P409826

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P409861

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P410384

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: P409712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409700

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409886

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409889

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: P409953

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409732

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409842

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409776

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409692

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.4		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P409857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P409858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.4		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P409861

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.7		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P410384

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409886

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304626	Chloride	98.6		P	90 - 110
2304656	Chloride	99.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304626	Sulfate	96.7		P	90 - 110
2304656	Sulfate	96.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409953

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304766	Ammonia-N	98.2	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304617	Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304766	Kjeldahl Nitrogen	96.8	94.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409842

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304765	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409776

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304778	Total-P	108	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304770	O-Phosphate-P	101	103	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304818	Fluoride	98.6	98.6	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P409861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304920	Fluoride	98.7	98.1	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P410384

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304631	Organic Carbon	97.7	95.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P409712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304655	Color (true)	0.771	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304764	Turbidity	16.0	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409886

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304626	Chloride	1.51	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304626	Sulfate	0.172	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304766	Ammonia-N	1.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304617	Kjeldahl Nitrogen	2.11	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304766	Kjeldahl Nitrogen	1.91	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304765	NO2NO3-N	0.489	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P409776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304778	Total-P	2.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P409692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304770	O-Phosphate-P	1.18	Spike	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P409857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304818	Total Alkalinity	0.689	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011

Batch ID: P409858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304920	Total Alkalinity	2.25	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P410072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2305049	TDS	0.771	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P409860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304818	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011

Batch ID: P409861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304920	Fluoride	0.495	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011

Batch ID: P410384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304631	Organic Carbon	1.33	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 365.1 Rev. 2.0 dissolved

Run ID: A110338

Included Lab Sample IDs: 2304768, 2304769, 2304770

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110339

Included Lab Sample IDs: 2304762, 2304763, 2304764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.5	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A110350

Included Lab Sample IDs: 2304762, 2304763, 2304764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.6	101	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110411

Included Lab Sample IDs: 2304765, 2304766, 2304767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	104	103	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A110414

Included Lab Sample IDs: 2304762, 2304763, 2304764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	100	P/P	90 - 110
Total Alkalinity	98.7	94.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A110414

Included Lab Sample IDs: 2304762, 2304763, 2304764

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 300.0 Rev. 2.1

Run ID: A110423

Included Lab Sample IDs: 2304762, 2304763, 2304764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	99.9	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110427

Included Lab Sample IDs: 2304765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	98.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110454

Included Lab Sample IDs: 2304765, 2304766, 2304767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110469

Included Lab Sample IDs: 2304765

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110489

Included Lab Sample IDs: 2304767

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110521

Included Lab Sample IDs: 2304766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110537

Included Lab Sample IDs: 2304766, 2304767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.4	97.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110636

Included Lab Sample IDs: 2304765, 2304766, 2304767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	96.1	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)	99.3			0.771	
EPA 180.1 Rev. 2.0	Turbidity	95.8			16.0	
EPA 300.0 Rev. 2.1	Chloride	98.5	98.6	99.5	1.51	
	Sulfate	99.6	96.7	96.9	0.172	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	98.2	99.6		1.06
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.9	101	104		2.11
	Kjeldahl Nitrogen	99.3	96.8	94.5		1.91
EPA 353.2 Rev. 2.0	NO2NO3-N	96.0	102	102		0.489
EPA 365.1 Rev. 2.0	Total-P	105	108	105		2.14
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4	101	103		1.18
SM 2320 B-2011	Total Alkalinity	99.5			0.689	
	Total Alkalinity	96.4			2.25	
SM 2540 C-2011	TDS				0.771	
SM 4500 F-C-2011	Fluoride	98.2	98.6	98.6		0.0
	Fluoride	99.7	98.7	98.1		0.495
SM 5310 B-2011	Organic Carbon	95.0	97.7	95.4		1.33

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2304762, 2304763, 2304764
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2304762, 2304763, 2304764
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2304762, 2304763, 2304764
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2304762, 2304763, 2304764
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2304765, 2304766, 2304767
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2304765, 2304766, 2304767
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2304765, 2304766, 2304767
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2304765, 2304766, 2304767
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2304768, 2304769, 2304770
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2304762, 2304763, 2304764
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2304762, 2304763, 2304764
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2304762, 2304763, 2304764
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2304762, 2304763, 2304764
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2304765, 2304766, 2304767

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	02/10/2022			02/10/2022 17:00	Anna M. Plaviak	2304762, 2304763
	02/10/2022			02/10/2022 17:01	Anna M. Plaviak	2304764
	02/10/2022			02/10/2022 14:29	Khloe J Berg	2304764
EPA 180.1 Rev. 2.0	02/10/2022			02/10/2022 14:39	Khloe J Berg	2304762
	02/10/2022			02/10/2022 14:41	Khloe J Berg	2304763
	02/10/2022			02/15/2022 16:34	James L Waggeberby	2304762
EPA 300.0 Rev. 2.1	02/10/2022			02/15/2022 16:46	James L Waggeberby	2304763
	02/10/2022			02/15/2022 16:58	James L Waggeberby	2304764
	02/10/2022			02/16/2022 13:56	Ping Hua	2304766
EPA 350.1 Rev. 2.0	02/10/2022			02/16/2022 14:02	Ping Hua	2304765
	02/10/2022			02/16/2022 14:10	Ping Hua	2304767
	02/10/2022			02/15/2022 16:35	Alexandra J Mattheus	2304765
EPA 351.2 Rev. 2.0	02/10/2022	02/15/2022 09:06	Samantha L Bates	02/22/2022 11:20	Alexandra J Mattheus	2304766
	02/10/2022	02/18/2022 10:12	Samantha L Bates	02/22/2022 11:25	Alexandra J Mattheus	2304767
	02/10/2022	02/18/2022 10:12	Samantha L Bates	02/15/2022 09:40	Beverly Y. Sanders	2304765
EPA 353.2 Rev. 2.0	02/10/2022			02/15/2022 11:24	Beverly Y. Sanders	2304766
	02/10/2022			02/15/2022 11:25	Beverly Y. Sanders	2304767
	02/10/2022			02/17/2022 13:03	Shengyu Ding	2304765
EPA 365.1 Rev. 2.0	02/10/2022	02/15/2022 14:20	Simonne.V. Calhoun	02/18/2022 13:20	Shengyu Ding	2304767
	02/10/2022	02/15/2022 14:20	Simonne.V. Calhoun	02/21/2022 15:35	Sarah A Nixon	2304766
	02/10/2022	02/15/2022 14:20	Simonne.V. Calhoun	02/10/2022 14:45	James L Waggeberby	2304770
EPA 365.1 Rev. 2.0 dissolved	02/10/2022			02/10/2022 14:48	James L Waggeberby	2304768, 2304769
	02/10/2022			02/15/2022 01:26	Dale L. Simmons	2304762
	02/10/2022			02/15/2022 01:37	Dale L. Simmons	2304763
SM 2320 B-2011	02/10/2022			02/15/2022 05:46	Dale L. Simmons	2304764
	02/10/2022			02/11/2022 15:30	Simonne.V. Calhoun	2304762, 2304763, 2304764
	02/10/2022			02/11/2022 15:30	Simonne.V. Calhoun	2304762, 2304763, 2304764
SM 2540 C-2011	02/10/2022			02/15/2022 01:26	Dale L. Simmons	2304762
	02/10/2022			02/15/2022 01:37	Dale L. Simmons	2304763
	02/10/2022			02/15/2022 05:46	Dale L. Simmons	2304764
SM 2540 D-2011	02/10/2022			02/25/2022 04:54	Touraj Touran	2304765
	02/10/2022			02/25/2022 05:07	Touraj Touran	2304766
	02/10/2022			02/25/2022 05:20	Touraj Touran	2304767
SM 4500 F-C-2011	02/10/2022					
	02/10/2022					
	02/10/2022					
SM 5310 B-2011	02/10/2022					
	02/10/2022					
	02/10/2022					