

Chemical Analysis Report

SO-DIST-2022-03-30-02

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-2022-03-28-25**
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
Attn: William Mullen

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: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 20-APR-2022 14:53



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 Denton

Collection Date/Time: 03/29/2022 10:10

Field ID: G4SD0180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315405	DEP SOP: NU-094-1	Color (true)**	2.5	U	PCU	P411756	
	EPA 180.1 Rev. 2.0	Turbidity	0.30	I	NTU	P411772	
	EPA 300.0 Rev. 2.1	Chloride	21	A	mg Cl/L	P411907	
		Sulfate	45	A	mg SO4/L	P411910	
	SM 2320 B-2011	Total Alkalinity	39		mg CaCO3/L	P411967	
	SM 2540 C-2011	TDS	162		mg/L	P412029	
	SM 2540 D-2011	TSS	2	U	mg/L	P411901	
	SM 4500-F- C-2011	Fluoride	0.23		mg F/L	P411971	
2315408	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P411976	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21		mg N/L	P412168	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.9		mg N/L	P411799	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P411939	
	SM 5310 B-2011	Organic Carbon	1.7		mg C/L	P411832	

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 Glenada

Collection Date/Time: 03/29/2022 10:45

Field ID: G4SD0179

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315406	DEP SOP: NU-094-1	Color (true)**	37		PCU	P411756	
	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P411772	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P411907	
		Sulfate	16		mg SO4/L	P411910	
	SM 2320 B-2011	Total Alkalinity	38		mg CaCO3/L	P411967	
	SM 2540 C-2011	TDS	132		mg/L	P412029	
	SM 2540 D-2011	TSS	12		mg/L	P411901	
	SM 4500-F- C-2011	Fluoride	0.089	I	mg F/L	P411971	
2315409	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P411976	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P412167	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P411799	
	EPA 365.1 Rev. 2.0	Total-P	0.051		mg P/L	P411939	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P411832	

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: 03/29/2022 11:50

Field ID: G4SD0183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315407	DEP SOP: NU-094-1	Color (true)**	23		PCU	P411756	
	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P411772	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P411907	
		Sulfate	15		mg SO4/L	P411910	
	SM 2320 B-2011	Total Alkalinity	3.1		mg CaCO3/L	P411967	
	SM 2540 C-2011	TDS	73		mg/L	P412029	
	SM 2540 D-2011	TSS	2	I	mg/L	P411901	
	SM 4500-F- C-2011	Fluoride	0.080	I	mg F/L	P411971	
2315410	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P411976	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P412169	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P411799	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P411939	
	SM 5310 B-2011	Organic Carbon	7.5		mg C/L	P412045	

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: P411756

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411772

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411907

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411910

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P411976

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412167

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412168

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412169

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411799

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: P411939

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

Reference Method: SM 2320 B-2011
Batch ID: P411967

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

Reference Method: SM 2540 C-2011
Batch ID: P412029

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P411901

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P411971

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P411832

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

Reference Method: SM 5310 B-2011
Batch ID: P412045

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: P411756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411772

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411907

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411910

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P411976

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412167

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: P412168

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412169

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411799

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411939

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

Reference Method: SM 2320 B-2011
Batch ID: P411967

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.5		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P411971

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P411832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P412045

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411907

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315405	Chloride	97.3		P	90 - 110
2315497	Chloride	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315405	Sulfate	99.4		P	90 - 110
2315497	Sulfate	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P411976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315408	Ammonia-N	96.8	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315498	Kjeldahl Nitrogen	97.6	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412168

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315097	Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412169

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315163	Kjeldahl Nitrogen	106	116	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411799

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315351	NO2NO3-N	97.5	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315408	Total-P	103	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P411971

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315236	Fluoride	100	99.9	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P411832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315351	Organic Carbon	92.9	90.0	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P412045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315447	Organic Carbon	97.7	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P411756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315350	Color (true)	3.34	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315333	Turbidity	1.41	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411907

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315405	Chloride	0.933	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315405	Sulfate	0.390	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P411976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315408	Ammonia-N	1.85	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315498	Kjeldahl Nitrogen	5.26	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315097	Kjeldahl Nitrogen	0.0495	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412169

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315163	Kjeldahl Nitrogen	7.04	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315351	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315408	Total-P	0.146	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P411967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315236	Total Alkalinity	0.837	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P412029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315350	TDS	0.523	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P411971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315236	Fluoride	0.483	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P411832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315351	Organic Carbon	1.53	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P412045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315447	Organic Carbon	0.593	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A111208

Included Lab Sample IDs: 2315405, 2315406, 2315407

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

Reference Method: DEP SOP: NU-094-1

Run ID: A111233

Included Lab Sample IDs: 2315405, 2315406, 2315407

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111239

Included Lab Sample IDs: 2315405, 2315406, 2315407

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111245

Included Lab Sample IDs: 2315408, 2315409, 2315410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	96.5	P/P	90 - 110
NO2NO3-N	97.5	97.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111262

Included Lab Sample IDs: 2315408, 2315409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	95.9	P/P	90 - 110
Organic Carbon	96.8	98.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A111305

Included Lab Sample IDs: 2315405, 2315406, 2315407

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.3	97.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A111305

Included Lab Sample IDs: 2315405, 2315406, 2315407

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111307

Included Lab Sample IDs: 2315408, 2315409, 2315410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	97.3	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111353

Included Lab Sample IDs: 2315410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111379

Included Lab Sample IDs: 2315409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.6	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111389

Included Lab Sample IDs: 2315408, 2315410

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111453

Included Lab Sample IDs: 2315409, 2315410

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	105	P/P	90 - 110
Kjeldahl Nitrogen	106	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111463

Included Lab Sample IDs: 2315408

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	106	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)	100			3.34	
EPA 180.1 Rev. 2.0	Turbidity	97.0			1.41	
EPA 300.0 Rev. 2.1	Chloride	102	97.3	99.2	0.933	
	Sulfate	100	99.4	99.8	0.390	
EPA 350.1 Rev. 2.0	Ammonia-N	96.0	96.8	98.8		1.85
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.2	97.6	107		5.26
	Kjeldahl Nitrogen	102	101	101		0.0495
	Kjeldahl Nitrogen	106	106	116		7.04
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	97.5	97.5		0.0
EPA 365.1 Rev. 2.0	Total-P	103	103	102		0.146
SM 2320 B-2011	Total Alkalinity	97.5			0.837	
SM 2540 C-2011	TDS				0.523	
SM 4500-F- C-2011	Fluoride	101	100	99.9		0.483
SM 5310 B-2011	Organic Carbon	94.2	92.9	90.0		1.53
	Organic Carbon	94.8	97.7	97.0		0.593

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2315405, 2315406, 2315407
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2315405, 2315406, 2315407
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2315405, 2315406, 2315407
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2315405, 2315406, 2315407
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2315408, 2315409, 2315410
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2315408, 2315409, 2315410
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2315408, 2315409, 2315410
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2315408, 2315409, 2315410
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2315405, 2315406, 2315407
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2315405, 2315406, 2315407
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2315405, 2315406, 2315407
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2315405, 2315406, 2315407
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2315408, 2315409, 2315410

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	03/30/2022			03/30/2022 15:33	Samantha L Bates	2315405
	03/30/2022			03/30/2022 15:34	Samantha L Bates	2315406
	03/30/2022			03/30/2022 15:35	Samantha L Bates	2315407
EPA 180.1 Rev. 2.0	03/30/2022			03/30/2022 14:53	Anna M. Plaviak	2315405
	03/30/2022			03/30/2022 14:54	Anna M. Plaviak	2315406
	03/30/2022			03/30/2022 14:55	Anna M. Plaviak	2315407
EPA 300.0 Rev. 2.1	03/30/2022			04/02/2022 00:27	Anna M. Plaviak	2315405
	03/30/2022			04/02/2022 01:16	Anna M. Plaviak	2315406
	03/30/2022			04/02/2022 01:28	Anna M. Plaviak	2315407
EPA 350.1 Rev. 2.0	03/30/2022			04/05/2022 12:40	Ping Hua	2315408
	03/30/2022			04/05/2022 12:48	Ping Hua	2315409
	03/30/2022			04/05/2022 12:49	Ping Hua	2315410
EPA 351.2 Rev. 2.0	03/30/2022	04/13/2022 07:54	Samantha L Bates	04/13/2022 12:31	Alexandra J Mattheus	2315409
	03/30/2022	04/13/2022 07:54	Samantha L Bates	04/13/2022 13:28	Alexandra J Mattheus	2315410
	03/30/2022	04/13/2022 07:54	Samantha L Bates	04/13/2022 15:50	Alexandra J Mattheus	2315408
EPA 353.2 Rev. 2.0	03/30/2022			03/31/2022 10:21	Beverly Y. Sanders	2315410
	03/30/2022			03/31/2022 10:56	Beverly Y. Sanders	2315408
	03/30/2022			03/31/2022 10:57	Beverly Y. Sanders	2315409
EPA 365.1 Rev. 2.0	03/30/2022	04/07/2022 10:00	Simonne.V. Calhoun	04/07/2022 16:34	Sarah A Nixon	2315409
	03/30/2022	04/07/2022 10:00	Simonne.V. Calhoun	04/08/2022 11:27	James L Waggeberby	2315408
	03/30/2022	04/07/2022 10:00	Simonne.V. Calhoun	04/08/2022 11:28	James L Waggeberby	2315410
SM 2320 B-2011	03/30/2022			04/02/2022 10:25	Dale L. Simmons	2315405
	03/30/2022			04/02/2022 10:38	Dale L. Simmons	2315406
	03/30/2022			04/02/2022 10:47	Dale L. Simmons	2315407
SM 2540 C-2011	03/30/2022			03/31/2022 16:15	Simonne.V. Calhoun	2315405, 2315406, 2315407
SM 2540 D-2011	03/30/2022			03/31/2022 16:15	Simonne.V. Calhoun	2315405, 2315406, 2315407
SM 4500-F- C-2011	03/30/2022			04/02/2022 10:25	Dale L. Simmons	2315405
	03/30/2022			04/02/2022 10:38	Dale L. Simmons	2315406
	03/30/2022			04/02/2022 10:47	Dale L. Simmons	2315407
SM 5310 B-2011	03/30/2022			03/31/2022 14:57	Khloe J Berg	2315409
	03/30/2022			03/31/2022 21:10	Khloe J Berg	2315408
	03/30/2022			04/06/2022 17:48	Khloe J Berg	2315410