

Chemical Analysis Report

CEN-DIST-2023-11-30-02

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

Event Description: **Run 16**
Request ID: **RQ-2023-11-27-08**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Marek Topolski, Environmental Specialist III

Date Certified: 20-DEC-2023 10:26

A handwritten signature in black ink, appearing to read "Marek Topolski", with a stylized flourish at the end.

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: QUEENS MIRROR LAKE AT CENTER

Collection Date/Time: 11/29/2023 09:18

Field ID: G2CE0214

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2453718	DEP SOP: NU-094-1	Color (true)	100		PCU	P438367	
	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P438375	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P438737	
		Sulfate	5.5		mg SO4/L	P438740	
	SM 2320 B-2011	Total Alkalinity	39		mg CaCO3/L	P438460	
	SM 2540 C-2015	TDS	94		mg/L	P438847	
	SM 2540 D-2015	TSS	5	I	mg/L	P438774	
	SM 4500-F- C-2011	Fluoride	0.052	I	mg F/L	P438463	
2453720	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P438568	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P438465	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P438474	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P438576	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P438532	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE ANN AT CENTER

Collection Date/Time: 11/29/2023 10:11

Field ID: G2CE0097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2453715	DEP SOP: NU-094-1	Color (true)	25		PCU	P438367	
	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P438375	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P438737	
		Sulfate	11		mg SO4/L	P438740	
	SM 2320 B-2011	Total Alkalinity	28		mg CaCO3/L	P438460	
	SM 2540 C-2015	TDS	78		mg/L	P438847	
	SM 2540 D-2015	TSS	4	I	mg/L	P438774	
	SM 4500-F- C-2011	Fluoride	0.037	I	mg F/L	P438463	
2453716	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P438568	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P438465	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P438474	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P438487	
	SM 5310 B-2011	Organic Carbon	7.7		mg C/L	P438441	
2453717	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P438370	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LAKE FLORENCE S OF CENTER

Collection Date/Time: 11/29/2023 11:04

Field ID: G2CE0283

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2453719	DEP SOP: NU-094-1	Color (true)	11		PCU	P438367	
	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P438375	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P438737	
		Sulfate	14		mg SO4/L	P438740	
	SM 2320 B-2011	Total Alkalinity	11		mg CaCO3/L	P438460	
	SM 2540 C-2015	TDS	110		mg/L	P438847	
	SM 2540 D-2015	TSS	3	I	mg/L	P438774	
	SM 4500-F- C-2011	Fluoride	0.036	I	mg F/L	P438463	
2453721	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P438568	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P438465	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P438474	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P438576	
	SM 5310 B-2011	Organic Carbon	5.3		mg C/L	P438532	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: 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: P438367

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438375

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438737

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438740

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438568

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438465

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438474

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438487

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438576

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: P438370

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

Reference Method: SM 2320 B-2011
Batch ID: P438460

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

Reference Method: SM 2540 C-2015
Batch ID: P438847

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P438774

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438463

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P438441

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

Reference Method: SM 5310 B-2011
Batch ID: P438532

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: P438367

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438375

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438737

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438740

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438568

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438465

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438474

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438487

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438576

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.1		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P438460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.1		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P438847

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.6		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	97.6		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P438463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P438441

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P438532

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438737

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453434	Chloride	102		P	90 - 110
2453693	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453434	Sulfate	102		P	90 - 110
2453693	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453695	Ammonia-N	97.0	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453716	Kjeldahl Nitrogen	105	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438474

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453696	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453695	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453681	O-Phosphate-P	101	100	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P438463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453794	Fluoride	102	101	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P438441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453621	Organic Carbon	96.7	96.3	P/P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P438532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453721	Organic Carbon	96.6	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P438367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453693	Color (true)	0.264	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453619	Turbidity	9.94	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453434	Chloride	3.69	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453434	Sulfate	6.92	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453695	Ammonia-N	1.11	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453716	Kjeldahl Nitrogen	2.34	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438474

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453696	NO2NO3-N	0.468	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453695	Total-P	2.09	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453792	Total-P	1.86	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P438370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453681	O-Phosphate-P	0.698	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P438460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453794	Total Alkalinity	0.161	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P438847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453694	TDS	4.48	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P438463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453794	Fluoride	0.476	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P438441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453621	Organic Carbon	0.348	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P438532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453721	Organic Carbon	0.817	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A122963

Included Lab Sample IDs: 2453715, 2453718, 2453719

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A122964

Included Lab Sample IDs: 2453717

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122967

Included Lab Sample IDs: 2453715, 2453718, 2453719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A122996

Included Lab Sample IDs: 2453716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	97.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A123013

Included Lab Sample IDs: 2453715, 2453718, 2453719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.5	98.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A123013

Included Lab Sample IDs: 2453715, 2453718, 2453719

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123014

Included Lab Sample IDs: 2453716, 2453720, 2453721

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

Reference Method: SM 5310 B-2011

Run ID: A123034

Included Lab Sample IDs: 2453720, 2453721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123049

Included Lab Sample IDs: 2453716, 2453720, 2453721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123055

Included Lab Sample IDs: 2453716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123057

Included Lab Sample IDs: 2453716, 2453720, 2453721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123085

Included Lab Sample IDs: 2453720, 2453721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	100	P/P	90 - 110
Total-P	98.0	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A123118

Included Lab Sample IDs: 2453715, 2453718, 2453719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Sulfate	102	102	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	
DEP SOP: NU-094-1	Color (true)	101				0.264	
EPA 180.1 Rev. 2.0	Turbidity	104				9.94	
EPA 300.0 Rev. 2.1	Chloride	101	102	103		3.69	
	Sulfate	101	102	103		6.92	
EPA 350.1 Rev. 2.0	Ammonia-N	102	97.0	95.8			1.11
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	105	102			2.34
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	99.5	100			0.468
EPA 365.1 Rev. 2.0	Total-P	101	102	104			2.09
	Total-P	104					1.86
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1	101	100			0.698
SM 2320 B-2011	Total Alkalinity	97.1				0.161	
SM 2540 C-2015	TDS	93.6				4.48	
SM 2540 D-2015	TSS	97.6					
SM 4500-F- C-2011	Fluoride	102	102	101			0.476
SM 5310 B-2011	Organic Carbon	97.2	96.7	96.3			0.348
	Organic Carbon	95.6	96.6	95.6			0.817

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2453715, 2453718, 2453719
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2453715, 2453718, 2453719
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2453715, 2453718, 2453719
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2453715, 2453718, 2453719
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2453716, 2453720, 2453721
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2453716, 2453720, 2453721
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2453716, 2453720, 2453721
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2453716, 2453720, 2453721
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2453717
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2453715, 2453718, 2453719
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2453715, 2453718, 2453719
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2453715, 2453718, 2453719
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2453715, 2453718, 2453719
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2453716, 2453720, 2453721

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	11/30/2023			11/30/2023 14:08	Blanca Fach	2453715, 2453718
	11/30/2023			11/30/2023 14:09	Blanca Fach	2453719
	11/30/2023			11/30/2023 13:27	Khloe J Berg	2453715
EPA 180.1 Rev. 2.0	11/30/2023			11/30/2023 13:29	Khloe J Berg	2453718
	11/30/2023			11/30/2023 13:30	Khloe J Berg	2453719
	11/30/2023			12/07/2023 20:37	James L Waggeberby	2453715
EPA 300.0 Rev. 2.1	11/30/2023			12/07/2023 20:52	James L Waggeberby	2453718
	11/30/2023			12/07/2023 21:07	James L Waggeberby	2453719
	11/30/2023			12/06/2023 11:51	Ping Hua	2453716
EPA 350.1 Rev. 2.0	11/30/2023			12/06/2023 11:52	Ping Hua	2453720
	11/30/2023			12/06/2023 11:53	Ping Hua	2453721
	11/30/2023	12/05/2023 11:47	Simonne.V. Calhoun	12/06/2023 10:50	Samantha L Bates	2453716
EPA 351.2 Rev. 2.0	11/30/2023	12/05/2023 11:47	Simonne.V. Calhoun	12/06/2023 10:55	Samantha L Bates	2453720
	11/30/2023	12/05/2023 11:47	Simonne.V. Calhoun	12/06/2023 10:57	Samantha L Bates	2453721
	11/30/2023			12/04/2023 13:57	Fadila Guebre	2453716
EPA 353.2 Rev. 2.0	11/30/2023			12/04/2023 13:58	Fadila Guebre	2453720
	11/30/2023			12/04/2023 13:59	Fadila Guebre	2453721
	11/30/2023	12/05/2023 12:17	Adam P Silver	12/06/2023 13:56	James L Waggeberby	2453716
EPA 365.1 Rev. 2.0	11/30/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 11:55	Chandler E Cox	2453720
	11/30/2023	12/06/2023 13:01	Adam P Silver	12/07/2023 12:03	Chandler E Cox	2453721
	11/30/2023			11/30/2023 15:26	Elise M. Gillis	2453717
EPA 365.1 Rev. 2.0 dissolved SM 2320 B-2011	11/30/2023			12/02/2023 07:41	Dale L. Simmons	2453715
	11/30/2023			12/02/2023 07:53	Dale L. Simmons	2453718
	11/30/2023			12/02/2023 08:05	Dale L. Simmons	2453719
SM 2540 C-2015	11/30/2023			12/05/2023 16:11	Yijie Li	2453715, 2453718, 2453719
SM 2540 D-2015	11/30/2023			12/05/2023 16:11	Yijie Li	2453715, 2453718, 2453719
SM 4500-F- C-2011	11/30/2023			12/02/2023 07:41	Dale L. Simmons	2453715
	11/30/2023			12/02/2023 07:53	Dale L. Simmons	2453718
	11/30/2023			12/02/2023 08:05	Dale L. Simmons	2453719
SM 5310 B-2011	11/30/2023			12/01/2023 23:58	Kenneth H Lee	2453716
	11/30/2023			12/05/2023 15:24	Kenneth H Lee	2453721
	11/30/2023			12/05/2023 16:51	Kenneth H Lee	2453720