

Chemical Analysis Report

CEN-DIST-2023-03-16-02

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

Event Description: **Run 14**
Request ID: **RQ-2023-03-13-11**
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.
Chris Bowen, B.S.
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: 13-APR-2023 09:29



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: HOLIDAY SPRING ABOVE PUMP HOUSE

Collection Date/Time: 03/15/2023 10:25

Field ID: G1CE0029

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2394353	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P427261	
	EPA 180.1 Rev. 2.0	Turbidity	0.15	I	NTU	P427257	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P427728	
		Sulfate	13		mg SO4/L	P427731	
	SM 2320 B-2011	Total Alkalinity	105		mg CaCO3/L	P427557	
	SM 2540 C-2015	TDS	162		mg/L	P427922	
	SM 2540 D-2015	TSS	2	U	mg/L	P427592	
	SM 4500-F- C-2011	Fluoride	0.099	I	mg F/L	P427559	MS
2394357	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427496	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.090	I	mg N/L	P427463	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.4		mg N/L	P427402	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P427335	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P427682	

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: Double Run Spring Run DS of Double Run Rd Collection Date/Time: 03/15/2023 09:49

Field ID: G1CE0122

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2394354	DEP SOP: NU-094-1	Color (true)	12		PCU	P427261	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P427257	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P427728	
		Sulfate	18		mg SO4/L	P427731	
	SM 2320 B-2011	Total Alkalinity	52		mg CaCO3/L	P427557	
	SM 2540 C-2015	TDS	113		mg/L	P427922	
	SM 2540 D-2015	TSS	8	I	mg/L	P427592	
	SM 4500-F- C-2011	Fluoride	0.054	I	mg F/L	P427559	MS
2394358	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P427496	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P427463	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.7		mg N/L	P427402	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P427335	
	SM 5310 B-2011	Organic Carbon	2.0		mg C/L	P427682	

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: Blue Springs (Lake Country) @ Weir

Collection Date/Time: 03/15/2023 10:42

Field ID: G1CE0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2394355	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P427261	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	I	NTU	P427258	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P427728	
		Sulfate	9.3		mg SO4/L	P427731	
	SM 2320 B-2011	Total Alkalinity	100		mg CaCO3/L	P427557	
	SM 2540 C-2015	TDS	151		mg/L	P427922	
	SM 2540 D-2015	TSS	2	U	mg/L	P427592	
	SM 4500-F- C-2011	Fluoride	0.089	I	mg F/L	P427559	MS
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427496	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P427846	
2394359	EPA 353.2 Rev. 2.0	NO2NO3-N	2.6		mg N/L	P427402	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P427336	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P427682	

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: Bugg Spring @ Vent

Collection Date/Time: 03/15/2023 11:31

Field ID: G1CE0109

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2394356	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P427261	
	EPA 180.1 Rev. 2.0	Turbidity	0.55	I	NTU	P427258	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P427728	
		Sulfate	11		mg SO4/L	P427731	
	SM 2320 B-2011	Total Alkalinity	137		mg CaCO3/L	P427557	
	SM 2540 C-2015	TDS	197		mg/L	P427922	
	SM 2540 D-2015	TSS	2	I	mg/L	P427592	
	SM 4500-F- C-2011	Fluoride	0.057	I	mg F/L	P427559	MS
2394360	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P427496	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P428227	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.84		mg N/L	P427402	
	EPA 365.1 Rev. 2.0	Total-P	0.082		mg P/L	P427336	
	SM 5310 B-2011	Organic Carbon	1.1		mg C/L	P427682	

Ref. Method and Comment:

SM 2540 D-2015: 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: P427261

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427257

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427258

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427728

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427731

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427496

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427463

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427846

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428227

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427402

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427335

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427336

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

Reference Method: SM 2320 B-2011
Batch ID: P427557

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

Reference Method: SM 2540 C-2015
Batch ID: P427922

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P427592

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P427559

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P427682

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: P427261

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427257

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427258

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427728

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427731

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427496

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427463

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427846

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428227

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427402

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: P427335

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427336

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

Reference Method: SM 2320 B-2011
Batch ID: P427557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.8		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P427922

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.1		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P427592

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.4		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P427559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427682

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427728

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394293	Chloride	98.1		P	90 - 110
2394391	Chloride	97.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427731

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394293	Sulfate	98.0		P	90 - 110
2394391	Sulfate	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427496

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394334	Ammonia-N	98.8	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394297	Kjeldahl Nitrogen	91.3	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394438	Kjeldahl Nitrogen	95.9	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395053	Kjeldahl Nitrogen	104	114	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394374	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427335

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394295	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394359	Total-P	104	104	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P427559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394809	Fluoride	105	103	F/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2394434	Organic Carbon	96.4	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P427261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394294	Color (true)	0.981	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394243	Turbidity	3.53	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394429	Turbidity	0.399	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394293	Chloride	0.202	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427731

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394293	Sulfate	0.174	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394334	Ammonia-N	0.532	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394297	Kjeldahl Nitrogen	5.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394438	Kjeldahl Nitrogen	4.36	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395053	Kjeldahl Nitrogen	8.92	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394374	NO2NO3-N	0.489	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427335

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394295	Total-P	2.49	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394359	Total-P	0.332	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P427557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394809	Total Alkalinity	1.65	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P427922

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394298	TDS	1.25	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P427559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394809	Fluoride	0.992	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P427682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394434	Organic Carbon	1.42	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 180.1 Rev. 2.0

Run ID: A118040

Included Lab Sample IDs: 2394353, 2394354, 2394355, 2394356

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

Reference Method: DEP SOP: NU-094-1

Run ID: A118041

Included Lab Sample IDs: 2394353, 2394354, 2394355, 2394356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118094

Included Lab Sample IDs: 2394360

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118103

Included Lab Sample IDs: 2394357, 2394358, 2394359, 2394360

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118124

Included Lab Sample IDs: 2394353, 2394354, 2394355, 2394356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.6	97.7	P/P	90 - 110
Sulfate	96.8	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118134

Included Lab Sample IDs: 2394357, 2394358, 2394359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.8	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118136

Included Lab Sample IDs: 2394357, 2394358, 2394359, 2394360

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	97.4	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A118161

Included Lab Sample IDs: 2394353, 2394354, 2394355, 2394356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A118161

Included Lab Sample IDs: 2394353, 2394354, 2394355, 2394356

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.7	93.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A118161

Included Lab Sample IDs: 2394353, 2394354, 2394355, 2394356

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

Reference Method: SM 5310 B-2011

Run ID: A118205

Included Lab Sample IDs: 2394357, 2394358, 2394359, 2394360

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118232

Included Lab Sample IDs: 2394357

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.0	94.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118246

Included Lab Sample IDs: 2394358

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.2	91.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118343

Included Lab Sample IDs: 2394359

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118511

Included Lab Sample IDs: 2394360

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	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		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	102			0.981	
EPA 180.1 Rev. 2.0	Turbidity	100			3.53	
	Turbidity	101			0.399	
EPA 300.0 Rev. 2.1	Chloride	97.8	98.1	97.1	0.202	
	Sulfate	97.3	98.0	95.4	0.174	
EPA 350.1 Rev. 2.0	Ammonia-N	94.6	98.8	99.4		0.532
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	91.3	99.1		5.33
	Kjeldahl Nitrogen	104	95.9	101		4.36
	Kjeldahl Nitrogen	108	104	114		8.92
EPA 353.2 Rev. 2.0	NO2NO3-N	100	102	102		0.489
EPA 365.1 Rev. 2.0	Total-P	103	102	104		2.49
	Total-P	103	104	104		0.332
SM 2320 B-2011	Total Alkalinity	94.8			1.65	
SM 2540 C-2015	TDS	97.1			1.25	
SM 2540 D-2015	TSS	96.4				
SM 4500-F- C-2011	Fluoride	103	105	103		0.992
SM 5310 B-2011	Organic Carbon	94.2	96.4	98.2		1.42

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2394353, 2394354, 2394355, 2394356
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2394353, 2394354, 2394355, 2394356
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2394353, 2394354, 2394355, 2394356
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2394353, 2394354, 2394355, 2394356
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2394357, 2394358, 2394359, 2394360
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2394357, 2394358, 2394359, 2394360
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2394357, 2394358, 2394359, 2394360
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2394357, 2394358, 2394359, 2394360
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2394353, 2394354, 2394355, 2394356
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2394353, 2394354, 2394355, 2394356
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2394353, 2394354, 2394355, 2394356
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2394353, 2394354, 2394355, 2394356
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2394357, 2394358, 2394359, 2394360

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	03/16/2023			03/16/2023 14:27	Alexis Price	2394353
	03/16/2023			03/16/2023 14:28	Alexis Price	2394354, 2394355
	03/16/2023			03/16/2023 14:29	Alexis Price	2394356
EPA 180.1 Rev. 2.0	03/16/2023			03/16/2023 13:33	Chandler E Cox	2394353
	03/16/2023			03/16/2023 13:34	Chandler E Cox	2394354
	03/16/2023			03/16/2023 13:39	Chandler E Cox	2394355
EPA 300.0 Rev. 2.1	03/16/2023			03/16/2023 13:40	Chandler E Cox	2394356
	03/16/2023			03/23/2023 23:32	Judith K. Clark	2394353
	03/16/2023			03/23/2023 23:47	Judith K. Clark	2394354
EPA 350.1 Rev. 2.0	03/16/2023			03/24/2023 00:02	Judith K. Clark	2394355
	03/16/2023			03/24/2023 00:18	Judith K. Clark	2394356
	03/16/2023			03/22/2023 13:19	Khloe J Berg	2394357
EPA 351.2 Rev. 2.0	03/16/2023			03/22/2023 13:21	Khloe J Berg	2394358
	03/16/2023			03/22/2023 13:22	Khloe J Berg	2394359
	03/16/2023			03/22/2023 13:23	Khloe J Berg	2394360
EPA 353.2 Rev. 2.0	03/16/2023	03/23/2023 12:00	Simonne.V. Calhoun	03/28/2023 11:48	Judith K. Clark	2394357
	03/16/2023	03/23/2023 12:00	Simonne.V. Calhoun	03/28/2023 14:00	Judith K. Clark	2394358
	03/16/2023	03/30/2023 12:29	Samantha L Bates	04/03/2023 11:03	Samantha L Bates	2394359
EPA 365.1 Rev. 2.0	03/16/2023	04/10/2023 12:45	Simonne.V. Calhoun	04/11/2023 15:45	Samantha L Bates	2394360
	03/16/2023			03/21/2023 11:58	Beverly Y. Sanders	2394357
	03/16/2023			03/21/2023 12:03	Beverly Y. Sanders	2394358
SM 2320 B-2011	03/16/2023			03/21/2023 12:04	Beverly Y. Sanders	2394359
	03/16/2023			03/21/2023 12:05	Beverly Y. Sanders	2394360
	03/16/2023			03/21/2023 10:39	James L Waggeberby	2394360
SM 2540 C-2015	03/16/2023	03/20/2023 14:58	Adam P Silver	03/22/2023 11:40	James L Waggeberby	2394357
	03/16/2023	03/20/2023 14:58	Adam P Silver	03/22/2023 11:41	James L Waggeberby	2394358
	03/16/2023	03/20/2023 14:58	Adam P Silver	03/22/2023 11:43	James L Waggeberby	2394359
SM 2540 D-2015	03/16/2023			03/22/2023 17:12	Dale L. Simmons	2394353
	03/16/2023			03/22/2023 17:23	Dale L. Simmons	2394354
	03/16/2023			03/22/2023 17:37	Dale L. Simmons	2394355
SM 4500-F- C-2011	03/16/2023			03/22/2023 17:51	Dale L. Simmons	2394356
	03/16/2023			03/21/2023 16:04	Yijie Li	2394353, 2394354, 2394355, 2394356
	03/16/2023			03/21/2023 16:04	Yijie Li	2394353, 2394354, 2394355, 2394356
SM 5310 B-2011	03/16/2023			03/22/2023 17:12	Dale L. Simmons	2394353
	03/16/2023			03/22/2023 17:23	Dale L. Simmons	2394354
	03/16/2023			03/22/2023 17:37	Dale L. Simmons	2394355
	03/16/2023			03/22/2023 17:51	Dale L. Simmons	2394356
	03/16/2023			03/25/2023 00:19	Khloe J Berg	2394357
	03/16/2023			03/25/2023 00:37	Khloe J Berg	2394358
	03/16/2023			03/25/2023 00:53	Khloe J Berg	2394359

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	03/16/2023			03/25/2023 01:06	Khloe J Berg	2394360