Chemical Analysis Report

SE-DIST-2023-01-24-01

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

Event Description: **Lake Kenansville**
Request ID: **RQ-2023-01-23-15**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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2199 South Rock Road
Fort Pierce, FL 34945
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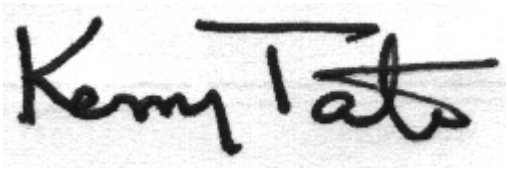
Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 14-FEB-2023 10:14



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: Kenansville Center **Collection Date/Time: 01/23/2023 10:30**

Field ID: G3SE0047 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382289	DEP SOP: NU-094-1	Color (true)	72	A	PCU	P424923	
	EPA 180.1 Rev. 2.0	Turbidity	3.2	A	NTU	P424930	
	EPA 300.0 Rev. 2.1	Chloride	75		mg Cl/L	P425174	
		Sulfate	10		mg SO4/L	P425176	
	SM 2320 B-2011	Total Alkalinity	117		mg CaCO3/L	P425184	
	SM 2540 C-2015	TDS	278		mg/L	P425331	
	SM 2540 D-2015	TSS	4	I	mg/L	P425212	
	SM 4500-F- C-2011	Fluoride	0.14		mg F/L	P425188	
2382290	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P425533	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P425001	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P425092	
	EPA 365.1 Rev. 2.0	Total-P	0.089		mg P/L	P425127	
	SM 5310 B-2011	Organic Carbon	25		mg C/L	P425085	
2382291	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P424927	

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: FB **Collection Date/Time: 01/23/2023 11:05**

Field ID: FB_01232023 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2382292	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P424923	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P424930	
	EPA 300.0 Rev. 2.1	Chloride	0.84		mg Cl/L	P425521	MS
		Sulfate	0.20	U	mg SO4/L	P425176	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P425395	
	SM 2540 C-2015	TDS	15	U	mg/L	P425331	
	SM 2540 D-2015	TSS	2	U	mg/L	P425212	
	SM 4500-F- C-2011	Fluoride	0.30		mg F/L	P425399	RPD
2382293	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P425533	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P425001	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P425092	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P425498	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P425085	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: The result was confirmed on 02/09/2023.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500-F- C-2011: The result was confirmed on 02/06/2023.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P424923

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424930

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425174

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425176

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425521

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425533

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425001

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425092

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425127

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
Batch ID: P425498

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424927

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

Reference Method: SM 2320 B-2011
Batch ID: P425184

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

Reference Method: SM 2320 B-2011
Batch ID: P425395

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

Reference Method: SM 2540 C-2015
Batch ID: P425331

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P425212

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P425399

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P425085

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: P424923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424930

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425174

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425176

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425521

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425001

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	92.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425092

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425127

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
Batch ID: P425498

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.7		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P425184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P425395

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.0		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P425331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.9		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P425212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	99.0		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P425399

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P425085

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382230	Chloride	98.9		P	90 - 110
2382405	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382230	Sulfate	94.2		P	90 - 110
2382405	Sulfate	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382684	Chloride	96.8		P	90 - 110
2382767	Chloride	88.9		F	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382268	Ammonia-N	107	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382232	Kjeldahl Nitrogen	93.8	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382208	NO2NO3-N	99.0	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382290	Total-P	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2384949	Total-P	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382249	O-Phosphate-P	98.2	98.5	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382077	Fluoride	101	100	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P425399

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382909	Fluoride	103	100	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P425085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382116	Organic Carbon	102	104	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P424923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382289	Color (true)	0.374	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382289	Turbidity	1.26	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382230	Chloride	0.406	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382230	Sulfate	0.354	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382684	Chloride	2.80	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382268	Ammonia-N	8.61	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382232	Kjeldahl Nitrogen	5.85	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382208	NO2NO3-N	0.506	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382290	Total-P	0.0192	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2384949	Total-P	0.199	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P424927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382249	O-Phosphate-P	0.233	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P425184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382077	Total Alkalinity	0.401	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P425395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382909	Total Alkalinity	0.110	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P425331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382201	TDS	6.71	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P425188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382077	Fluoride	1.00	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P425399

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382909	Fluoride	1.95	Spike	F	0 - 1.6

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2011
Batch ID: P425085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382116	Organic Carbon	1.00	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: A117051
Included Lab Sample IDs: 2382289

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	100	P/P	90 - 110
Sulfate	97.2	98.5	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1
Run ID: A117071
Included Lab Sample IDs: 2382289, 2382292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.9	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A117072
Included Lab Sample IDs: 2382291

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.3	99.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A117073
Included Lab Sample IDs: 2382289, 2382292

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

Reference Method: SM 5310 B-2011
Run ID: A117136
Included Lab Sample IDs: 2382290, 2382293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	107	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A117138
Included Lab Sample IDs: 2382290, 2382293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	97.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A117153
Included Lab Sample IDs: 2382290, 2382293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.3	94.6	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A117172
Included Lab Sample IDs: 2382289

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.3	94.5	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500-F- C-2011
Run ID: A117172
Included Lab Sample IDs: 2382289

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A117176
Included Lab Sample IDs: 2382290

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	101	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A117270
Included Lab Sample IDs: 2382292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.1	96.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A117270
Included Lab Sample IDs: 2382292

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A117317
Included Lab Sample IDs: 2382292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	93.6	97.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A117326
Included Lab Sample IDs: 2382290, 2382293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.3	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A117353
Included Lab Sample IDs: 2382293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.0	95.8	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	SMP	MS
DEP SOP: NU-094-1	Color (true)	99.3				0.374	
EPA 180.1 Rev. 2.0	Turbidity	101				1.26	
EPA 300.0 Rev. 2.1	Chloride	99.1	98.9	102		0.406	
	Chloride	98.0	96.8	88.9		2.80	
	Sulfate	97.3	94.2	99.8		0.354	
EPA 350.1 Rev. 2.0	Ammonia-N	94.2	107	96.8			8.61
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	92.9	93.8	103			5.85
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	99.0	98.5			0.506
EPA 365.1 Rev. 2.0	Total-P	105	108	108			0.0192
	Total-P	105	106	106			0.199
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7	98.2	98.5			0.233
SM 2320 B-2011	Total Alkalinity	96.6				0.401	
	Total Alkalinity	97.0				0.110	
SM 2540 C-2015	TDS	96.9				6.71	
SM 2540 D-2015	TSS	99.0					
SM 4500-F- C-2011	Fluoride	101	101	100			1.00
	Fluoride	101	103	100			1.95
SM 5310 B-2011	Organic Carbon	104	102	104			1.00

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2382289, 2382292
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2382289, 2382292
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2382289, 2382292
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2382289, 2382292
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2382290, 2382293
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2382290, 2382293
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2382290, 2382293
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2382290, 2382293
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2382291
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2382289, 2382292
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2382289, 2382292
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2382289, 2382292
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2382289, 2382292
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2382290, 2382293

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	01/24/2023			01/24/2023 14:14	Alexis Price	2382289
	01/24/2023			01/24/2023 14:15	Alexis Price	2382292
EPA 180.1 Rev. 2.0	01/24/2023			01/24/2023 13:35	Khloe J Berg	2382289
	01/24/2023			01/24/2023 13:38	Khloe J Berg	2382292
EPA 300.0 Rev. 2.1	01/24/2023			01/27/2023 21:45	Anna M. Plaviak	2382289
	01/24/2023			01/27/2023 22:00	Anna M. Plaviak	2382292
	01/24/2023			02/07/2023 15:11	Anna M. Plaviak	2382292
EPA 350.1 Rev. 2.0	01/24/2023			02/08/2023 12:19	Ping Hua	2382290
	01/24/2023			02/08/2023 12:20	Ping Hua	2382293
EPA 351.2 Rev. 2.0	01/24/2023	01/26/2023 15:30	Simonne.V. Calhoun	01/30/2023 10:49	Samantha L Bates	2382290
	01/24/2023	01/26/2023 15:30	Simonne.V. Calhoun	01/30/2023 10:51	Samantha L Bates	2382293
EPA 353.2 Rev. 2.0	01/24/2023			01/27/2023 11:18	Beverly Y. Sanders	2382290
	01/24/2023			01/27/2023 11:19	Beverly Y. Sanders	2382293
EPA 365.1 Rev. 2.0	01/24/2023	01/30/2023 14:03	Adam P Silver	01/31/2023 09:28	James L Waggerby	2382290
	01/24/2023	02/08/2023 16:06	Adam P Silver	02/09/2023 11:36	Simonne.V. Calhoun	2382293
EPA 365.1 Rev. 2.0 dissolved	01/24/2023			01/24/2023 14:20	Chandler E Cox	2382291
SM 2320 B-2011	01/24/2023			01/30/2023 22:32	Dale L. Simmons	2382289
	01/24/2023			02/03/2023 00:18	Dale L. Simmons	2382292
SM 2540 C-2015	01/24/2023			01/25/2023 12:55	Yijie Li	2382289, 2382292
SM 2540 D-2015	01/24/2023			01/25/2023 12:55	Yijie Li	2382289, 2382292
SM 4500-F- C-2011	01/24/2023			01/30/2023 22:32	Dale L. Simmons	2382289
	01/24/2023			02/03/2023 00:18	Dale L. Simmons	2382292
SM 5310 B-2011	01/24/2023			01/27/2023 08:51	Khloe J Berg	2382290
	01/24/2023			01/27/2023 09:04	Khloe J Berg	2382293