

Chemical Analysis Report

SW-DIST-2022-10-18-01

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

Event Description: **SMP: Wolf Branch**
Request ID: **RQ-2022-09-12-45**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Date Certified: 07-NOV-2022 10:08



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: Wolf Branch @ 12th Street NE

Collection Date/Time: 10/17/2022 11:00

Field ID: G1SW0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2362934	DEP SOP: NU-094-1	Color (true)	100		PCU	P421043	
	EPA 180.1 Rev. 2.0	Turbidity	9.2		NTU	P421048	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P421609	
		Sulfate	42		mg SO4/L	P421612	
	SM 2320 B-2011	Total Alkalinity	100		mg CaCO3/L	P421305	
	SM 2540 C-2015	TDS	255	A	mg/L	P421545	
	SM 2540 D-2015	TSS	31	A	mg/L	P421494	
	SM 4500-F- C-2011	Fluoride	0.30		mg F/L	P421310	
2362936	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P421406	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P421286	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P421175	
	EPA 365.1 Rev. 2.0	Total-P	0.61		mg P/L	P421086	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P421234	
2362938	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.23		mg P/L	P421038	

Sample Location: Heritage Park Creek

Collection Date/Time: 10/17/2022 11:45

Field ID: G2SW0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2362935	DEP SOP: NU-094-1	Color (true)	230		PCU	P421043	
	EPA 180.1 Rev. 2.0	Turbidity	1.7	A	NTU	P421048	
	EPA 300.0 Rev. 2.1	Chloride	360		mg Cl/L	P421609	
		Sulfate	84		mg SO4/L	P421612	
	SM 2320 B-2011	Total Alkalinity	94		mg CaCO3/L	P421306	
	SM 2540 C-2015	TDS	844		mg/L	P421545	
	SM 2540 D-2015	TSS	3	I	mg/L	P421494	
	SM 4500-F- C-2011	Fluoride	0.38		mg F/L	P421311	
2362937	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P421406	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P421288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.081		mg N/L	P421175	
	EPA 365.1 Rev. 2.0	Total-P	0.52		mg P/L	P421086	
	SM 5310 B-2011	Organic Carbon	29		mg C/L	P421234	
2362939	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.44		mg P/L	P421039	

Ref. Method and Comment:

SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 1598 µmhos/cm.

EPA 351.2 Rev. 2.0: 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: P421043

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421048

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421609

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421612

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421406

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421286

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421175

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421086

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: P421038

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P421039

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

Reference Method: SM 2320 B-2011
Batch ID: P421305

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

Reference Method: SM 2320 B-2011
Batch ID: P421306

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

Reference Method: SM 2540 C-2015
Batch ID: P421545

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P421494

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P421310

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P421311

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P421234

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: P421043

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.3		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421048

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421609

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421612

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421406

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421286

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421175

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421086

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P421038

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P421039

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

Reference Method: SM 2320 B-2011
Batch ID: P421305

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P421306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P421545

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

Reference Method: SM 2540 D-2015
Batch ID: P421494

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P421310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.2		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P421311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P421234

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P421609

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363186	Chloride	98.1		P	90 - 110
2363196	Chloride	94.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P421612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363186	Sulfate	99.5		P	90 - 110
2363196	Sulfate	94.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P421406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362936	Ammonia-N	97.4	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P421286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362972	Kjeldahl Nitrogen	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P421175

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362896	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P421086

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362919	Total-P	109	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P421038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362784	O-Phosphate-P	97.4	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P421039

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2362987	O-Phosphate-P	95.2	96.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Batch ID: P421310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363803	Fluoride	96.8	97.4	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P421311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363260	Fluoride	97.8	97.8	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P421234

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363238	Organic Carbon	97.0	98.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P421043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362895	Color (true)	2.30	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362935	Turbidity	8.60	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363186	Chloride	0.0789	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P421612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363186	Sulfate	0.888	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362936	Ammonia-N	1.73	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362972	Kjeldahl Nitrogen	0.220	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362751	Kjeldahl Nitrogen	5.39	Sample	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421175

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362896	NO2NO3-N	0.491	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P421086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362919	Total-P	2.39	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P421038

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362784	O-Phosphate-P	0.933	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P421039

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362987	O-Phosphate-P	1.03	Spike	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P421305

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363803	Total Alkalinity	0.742	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011

Batch ID: P421306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363260	Total Alkalinity	0.317	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P421545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362934	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 2540 D-2015

Batch ID: P421494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2362934	TSS	6.45	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P421310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363803	Fluoride	0.490	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P421311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363260	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P421234

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363238	Organic Carbon	0.722	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A115367

Included Lab Sample IDs: 2362938, 2362939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	99.6	P/P	90 - 110
O-Phosphate-P	99.6	99.4	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A115369

Included Lab Sample IDs: 2362934, 2362935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	97.1	P/P	90 - 110
Color (true)	97.7	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A115372

Included Lab Sample IDs: 2362934, 2362935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A115424

Included Lab Sample IDs: 2362936, 2362937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	97.0	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A115451

Included Lab Sample IDs: 2362936, 2362937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A115465

Included Lab Sample IDs: 2362936, 2362937

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

Reference Method: SM 2320 B-2011

Run ID: A115475

Included Lab Sample IDs: 2362934, 2362935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	95.7	P/P	90 - 110
Total Alkalinity	99.9	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A115475

Included Lab Sample IDs: 2362934, 2362935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	102	P/P	90 - 110
Fluoride	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115503

Included Lab Sample IDs: 2362936, 2362937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	106	P/P	90 - 110
Kjeldahl Nitrogen	105	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115509

Included Lab Sample IDs: 2362936, 2362937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	97.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A115558

Included Lab Sample IDs: 2362934, 2362935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.7	100	P/P	90 - 110
Sulfate	101	101	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)	97.3			2.30	
EPA 180.1 Rev. 2.0	Turbidity	100			8.60	
EPA 300.0 Rev. 2.1	Chloride	95.8	98.1	94.1	0.0789	
	Sulfate	96.5	99.5	94.1	0.888	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	97.4	100		1.73
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	100	100		0.220
	Kjeldahl Nitrogen	104			5.39	
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	102	102		0.491
EPA 365.1 Rev. 2.0	Total-P	107	109	106		2.39
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	97.4	98.5		0.933
	O-Phosphate-P	100	95.2	96.3		1.03
SM 2320 B-2011	Total Alkalinity	103			0.742	
	Total Alkalinity	99.3			0.317	
SM 2540 C-2015	TDS	102			3.92	
SM 2540 D-2015	TSS	91.1			6.45	
SM 4500-F- C-2011	Fluoride	99.2	96.8	97.4		0.490
	Fluoride	98.2	97.8	97.8		0.0
SM 5310 B-2011	Organic Carbon	97.2	97.0	98.3		0.722

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2362934, 2362935
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2362934, 2362935
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2362934, 2362935
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2362934, 2362935
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2362936, 2362937
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2362936, 2362937
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2362936, 2362937
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2362936, 2362937
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2362938, 2362939
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2362934, 2362935
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2362934, 2362935
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2362934, 2362935
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2362934, 2362935
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2362936, 2362937

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	10/18/2022			10/18/2022 15:07	Blanca Fach	2362935
	10/18/2022			10/18/2022 15:14	Blanca Fach	2362934
EPA 180.1 Rev. 2.0	10/18/2022			10/18/2022 14:21	Khloe J Berg	2362934
	10/18/2022			10/18/2022 14:23	Khloe J Berg	2362935
EPA 300.0 Rev. 2.1	10/18/2022			10/27/2022 16:44	Anna M. Plaviak	2362934
	10/18/2022			10/27/2022 16:59	Anna M. Plaviak	2362935
EPA 350.1 Rev. 2.0	10/18/2022			10/25/2022 15:32	Judith K. Clark	2362936
	10/18/2022			10/25/2022 15:37	Judith K. Clark	2362937
EPA 351.2 Rev. 2.0	10/18/2022	10/24/2022 14:48	Samantha L Bates	10/25/2022 11:13	Samantha L Bates	2362936
	10/18/2022	10/24/2022 14:48	Samantha L Bates	10/25/2022 12:19	Samantha L Bates	2362937
EPA 353.2 Rev. 2.0	10/18/2022			10/20/2022 09:18	Beverly Y. Sanders	2362936
	10/18/2022			10/20/2022 09:19	Beverly Y. Sanders	2362937
EPA 365.1 Rev. 2.0	10/18/2022	10/20/2022 15:06	Adam P Silver	10/23/2022 13:17	James L Waggeberby	2362936
	10/18/2022	10/20/2022 15:06	Adam P Silver	10/23/2022 13:18	James L Waggeberby	2362937
EPA 365.1 Rev. 2.0 dissolved	10/18/2022			10/18/2022 14:57	Elise M. Gillis	2362938
	10/18/2022			10/18/2022 15:13	Elise M. Gillis	2362939
SM 2320 B-2011	10/18/2022			10/22/2022 10:06	Dale L. Simmons	2362934
	10/18/2022			10/22/2022 16:28	Dale L. Simmons	2362935
SM 2540 C-2015	10/18/2022			10/19/2022 16:26	Yijie Li	2362934, 2362935
SM 2540 D-2015	10/18/2022			10/19/2022 16:26	Yijie Li	2362934, 2362935
SM 4500-F- C-2011	10/18/2022			10/22/2022 10:06	Dale L. Simmons	2362934
	10/18/2022			10/22/2022 16:28	Dale L. Simmons	2362935
SM 5310 B-2011	10/18/2022			10/20/2022 19:15	Khloe J Berg	2362936
	10/18/2022			10/20/2022 19:30	Khloe J Berg	2362937