Chemical Analysis Report

TLH-ROC-2018-02-15-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **kit A w/ bacteria**
Request ID: **RQ-2018-01-29-48**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 08-MAR-2018 10:02

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 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: JUMPING GULLY CREEK **Collection Date/Time: 02/15/2018 11:00**

Field ID: G1TLHR0033 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1968067	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P340037	
	EPA 300.0 Rev. 2.1	Chloride	7.8	A	mg Cl/L	P340321	
		Sulfate	0.69	A	mg SO4/L	P340323	
	SM 2120 B	Color (true)	89		PCU	P340056	
	SM 2320 B-97	Total Alkalinity	3.7		mg CaCO3/L	P340528	
	SM 2540 C-97	TDS	43		mg/L	P340576	
	SM 2540 D-97	TSS	2	I	mg/L	P340248	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P340532	
1968069	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P340675	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P340262	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.065		mg N/L	P340421	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P340413	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P340500	
1968071	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.070		mg P/L	P340064	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LITTLE ALAPAHA RIVER **Collection Date/Time: 02/15/2018 11:40**

Field ID: G1TLHR0037 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1968068	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P340037	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P340321	
		Sulfate	0.60		mg SO4/L	P340323	
	SM 2120 B	Color (true)	490		PCU	P340057	
	SM 2320 B-97	Total Alkalinity	2.8		mg CaCO3/L	P340528	
	SM 2540 C-97	TDS	164		mg/L	P340576	
	SM 2540 D-97	TSS	5	I	mg/L	P340248	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P340532	
1968070	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P340675	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P340264	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P340421	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P340413	
	SM 5310 B-00	Organic Carbon	67		mg C/L	P340500	
1968072	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P340065	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340037

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340037

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340321

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340323

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340675

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340262

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340264

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340421

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340413

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340064

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340065

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

Reference Method: SM 2120 B
Batch ID: P340056

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P340057

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P340528

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

Reference Method: SM 2540 C-97
Batch ID: P340576

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P340248

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P340532

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P340500

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340321

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340321

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	91.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	90.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340675

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340262

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: P340264

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340413

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340064

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340065

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P340528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P340532

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P340500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.3		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1967813	Chloride	95.5		P	90 - 110
1968067	Chloride	93.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1967813	Sulfate	91.3		P	90 - 110
1968067	Sulfate	93.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1968069	Ammonia-N	98.9	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340264

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1968139	Kjeldahl Nitrogen	95.7	96.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1967616	NO2NO3-N	98.9	98.9	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1968023	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1967757	O-Phosphate-P	95.3	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1967809	O-Phosphate-P	96.9	97.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P340532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1968135	Fluoride	95.1	95.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P340500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1968030	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968096	Turbidity	0.643	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968067	Chloride	2.37	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968067	Sulfate	5.68	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968069	Ammonia-N	0.175	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968023	Kjeldahl Nitrogen	0.308	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968139	Kjeldahl Nitrogen	0.660	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1967616	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968023	Total-P	0.172	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1967757	O-Phosphate-P	0.523	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1967809	O-Phosphate-P	0.720	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P340056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1967805	Color (true)	1.58	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2120 B
Batch ID: P340057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968266	Color (true)	9.05	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P340528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968135	Total Alkalinity	0.719	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P340576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1967977	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P340532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968135	Fluoride	0.514	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P340500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1968030	Organic Carbon	0.236	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82096
Included Lab Sample IDs: 1968067, 1968068

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

Reference Method: SM 2120 B
Run ID: A82104
Included Lab Sample IDs: 1968067, 1968068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	105	103	P/P	85 - 115
Color (true)	99.5	98.8	P/P	85 - 115

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82105
Included Lab Sample IDs: 1968071, 1968072

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82190
Included Lab Sample IDs: 1968067, 1968068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	100	P/P	90 - 110
Chloride	99.3	102	P/P	90 - 110
Sulfate	102	99.0	P/P	90 - 110
Sulfate	97.1	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A82229
Included Lab Sample IDs: 1968069, 1968070

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A82230
Included Lab Sample IDs: 1968069, 1968070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	105	P/P	90 - 110
Kjeldahl Nitrogen	108	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A82255
Included Lab Sample IDs: 1968069, 1968070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.6	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A82257
Included Lab Sample IDs: 1968069, 1968070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	99.8	P/P	90 - 110
Organic Carbon	99.8	102	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A82266
Included Lab Sample IDs: 1968067, 1968068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	97.9	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500 F-C-97
Run ID: A82266
Included Lab Sample IDs: 1968067, 1968068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.7	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A82317
Included Lab Sample IDs: 1968069, 1968070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	101	P/P	90 - 110
Ammonia-N	98.4	95.5	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
EPA 180.1 Rev. 2.0	Turbidity					0.643	
EPA 300.0 Rev. 2.1	Chloride	91.2	93.2	95.5		2.37	
	Sulfate	90.1	93.5	91.3		5.68	
EPA 350.1 Rev. 2.0	Ammonia-N	98.7	98.9	99.1			0.175
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105					0.308
	Kjeldahl Nitrogen	102	95.7	96.9			0.660
EPA 353.2 Rev. 2.0	NO2NO3-N	104	98.9	98.9			0.0
EPA 365.1 Rev. 2.0	Total-P	103	104	104			0.172
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.9	95.3	95.8			0.523
	O-Phosphate-P	100	96.9	97.6			0.720
SM 2120 B	Color (true)					1.58	
	Color (true)					9.05	
SM 2320 B-97	Total Alkalinity	99.4				0.719	
SM 2540 C-97	TDS					0.0	
SM 4500 F-C-97	Fluoride	96.3	95.1	95.7			0.514
SM 5310 B-00	Organic Carbon	99.3	102	102			0.236

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1968067, 1968068
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1968067, 1968068
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1968067, 1968068
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1968069, 1968070
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1968069, 1968070
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1968069, 1968070

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1968069, 1968070
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1968071, 1968072
SM 2120 B / E31780	True Color measured at 450 nm	1968067, 1968068
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1968067, 1968068
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1968067, 1968068
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1968067, 1968068
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1968067, 1968068
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1968069, 1968070

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	02/15/2018			02/15/2018 16:53	Julia Storbeck	1968067, 1968068
EPA 300.0 Rev. 2.1	02/15/2018			02/20/2018	Julia Storbeck	1968067
	02/15/2018			02/21/2018	Julia Storbeck	1968068
EPA 350.1 Rev. 2.0	02/15/2018			02/27/2018	Ping Hua	1968069, 1968070
EPA 351.2 Rev. 2.0	02/15/2018	02/20/2018	Adrian Shelby	02/22/2018	Joseph Suarez	1968069, 1968070
EPA 353.2 Rev. 2.0	02/15/2018			02/22/2018	Lauren Bottorf	1968069, 1968070
EPA 365.1 Rev. 2.0	02/15/2018	02/22/2018	Sima Feizi	02/23/2018	Lipi Saha	1968069, 1968070
EPA 365.1 Rev. 2.0 dissolved	02/15/2018			02/15/2018 16:34	Megan Treadwell	1968071
	02/15/2018			02/15/2018 16:35	Megan Treadwell	1968072
SM 2120 B	02/15/2018			02/15/2018 16:26	Tanya Welborn	1968067
	02/15/2018			02/15/2018 18:26	Tanya Welborn	1968068
SM 2320 B-97	02/15/2018			02/24/2018	Dale L. Simmons	1968067, 1968068
SM 2540 C-97	02/15/2018			02/16/2018	DeAsia Armster	1968067, 1968068
SM 2540 D-97	02/15/2018			02/16/2018	DeAsia Armster	1968067, 1968068
SM 4500 F-C-97	02/15/2018			02/24/2018	Dale L. Simmons	1968067, 1968068
SM 5310 B-00	02/15/2018			02/22/2018	Megan Treadwell	1968069, 1968070