Chemical Analysis Report

NW-DIST-2018-09-26-01

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

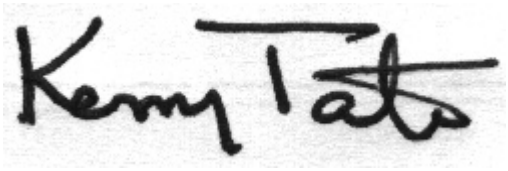
Event Description: **South SR County Run**
Request ID: **RQ-2018-09-24-13**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 19-OCT-2018 10:43



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: TOM KING CREEK **Collection Date/Time: 09/25/2018 10:40**

Field ID: G4NW0193 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028212	EPA 180.1 Rev. 2.0	Turbidity	25	A	NTU	P352392	
	EPA 300.0 Rev. 2.1	Chloride	8.6		mg Cl/L	P352579	
		Sulfate	4.0		mg SO4/L	P352581	
	SM 2120 B	Color (true)	82	A	PCU	P352322	
	SM 2320 B-97	Total Alkalinity	2.9		mg CaCO3/L	P352644	
	SM 2540 C-97	TDS	38		mg/L	P352740	
	SM 2540 D-97	TSS	8	I	mg/L	P352591	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P352649	
2028214	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P352715	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P352400	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P352488	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P352375	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P352428	
2028216	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P352313	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The result was confirmed on 10/05/2018.

Sample Location: Sandy Point Creek below Sandy Point Street **Collection Date/Time: 09/25/2018 12:10**

Field ID: G4NW0080 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028213	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P352392	
	EPA 300.0 Rev. 2.1	Chloride	6.7		mg Cl/L	P352579	
		Sulfate	1.0		mg SO4/L	P352581	
	SM 2120 B	Color (true)	260		PCU	P352317	
	SM 2320 B-97	Total Alkalinity	6.2		mg CaCO3/L	P352644	
	SM 2540 C-97	TDS	58		mg/L	P352740	
	SM 2540 D-97	TSS	5	I	mg/L	P352591	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P352649	
2028215	EPA 350.1 Rev. 2.0	Ammonia-N	0.048		mg N/L	P352715	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P352400	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P352488	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P352375	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P352428	
2028217	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P352313	

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

Sample Location: Jakes Bayou upstream of Robinson Point Rd **Collection Date/Time: 09/25/2018 12:20**

Field ID: G4NW0394 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2028218	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P352392	
	SM 2320 B-97	Total Alkalinity	9.3		mg CaCO3/L	P352644	
	SM 2540 D-97	TSS	6	I	mg/L	P352594	
	SM 4500 F-C-97	Fluoride	0.068	I	mg F/L	P352649	
2028219	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P352715	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P352400	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P352488	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P352375	
	SM 5310 B-00	Organic Carbon	9.1		mg C/L	P352428	
2028220	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P352313	

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: P352392

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352579

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352581

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352715

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352400

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352488

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352375

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352313

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

Reference Method: SM 2120 B
Batch ID: P352317

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2120 B
Batch ID: P352322

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P352644

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

Reference Method: SM 2540 C-97
Batch ID: P352740

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P352591

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P352594

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P352649

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P352428

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: P352579

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352715

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352400

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352488

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352375

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352313

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

Reference Method: SM 2120 B
Batch ID: P352317

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.7		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P352322

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P352644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P352649

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352428

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027984	Chloride	93.9		P	90 - 110
2028147	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027984	Sulfate	91.8		P	90 - 110
2028147	Sulfate	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028214	Ammonia-N	99.7	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028183	Kjeldahl Nitrogen	100	98.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352488

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028194	NO2NO3-N	98.5	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028183	Total-P	97.5	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352313

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028254	O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P352649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2027917	Fluoride	97.3	97.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P352428

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2028134	Organic Carbon	96.8	95.0	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028212	Turbidity	1.21	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027984	Chloride	3.49	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P352581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027984	Sulfate	3.61	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P352715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028214	Ammonia-N	0.582	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P352400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028183	Kjeldahl Nitrogen	1.39	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P352488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028194	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P352375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028183	Total-P	4.96	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352313

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028254	O-Phosphate-P	0.499	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2120 B
Batch ID: P352317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028245	Color (true)	0.0615	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P352322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028212	Color (true)	2.26	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P352644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027917	Total Alkalinity	0.121	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P352740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028182	TDS	6.06	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P352649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2027917	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P352428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2028134	Organic Carbon	1.67	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 365.1 Rev. 2.0 dissolved
Run ID: A86732
Included Lab Sample IDs: 2028216, 2028217, 2028220

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	98.3	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A86733
Included Lab Sample IDs: 2028212, 2028213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.7	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A86757
Included Lab Sample IDs: 2028212, 2028213, 2028218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	102	P/P	95 - 105

Reference Method: SM 5310 B-00
Run ID: A86766
Included Lab Sample IDs: 2028214, 2028215, 2028219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.0	94.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A86772
Included Lab Sample IDs: 2028214, 2028215, 2028219

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A86790
Included Lab Sample IDs: 2028214, 2028215, 2028219

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: A86794
Included Lab Sample IDs: 2028214, 2028215, 2028219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.9	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A86839
Included Lab Sample IDs: 2028212, 2028213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Chloride	99.0	102	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A86839
Included Lab Sample IDs: 2028212, 2028213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	102	102	P/P	90 - 110
Sulfate	98.0	102	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A86860
Included Lab Sample IDs: 2028212, 2028213, 2028218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A86860
Included Lab Sample IDs: 2028212, 2028213, 2028218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	97.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A86893
Included Lab Sample IDs: 2028214, 2028215, 2028219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	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	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					1.21	
EPA 300.0 Rev. 2.1	Chloride	97.0	93.9	101		3.49	
	Sulfate	95.6	91.8	99.5		3.61	
EPA 350.1 Rev. 2.0	Ammonia-N	97.5	99.7	99.0			0.582
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	100	98.1			1.39
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	98.5	97.5			1.02
EPA 365.1 Rev. 2.0	Total-P	101	97.5	103			4.96
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	99.9	100			0.499
SM 2120 B	Color (true)	97.7				0.0615	
	Color (true)	98.2				2.26	
SM 2320 B-97	Total Alkalinity	101				0.121	
SM 2540 C-97	TDS					6.06	
SM 4500 F-C-97	Fluoride	97.1	97.3	97.3			0.0
SM 5310 B-00	Organic Carbon	96.0	96.8	95.0			1.67

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2028212, 2028213, 2028218
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2028212, 2028213
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2028212, 2028213
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2028214, 2028215, 2028219
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2028214, 2028215, 2028219
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2028214, 2028215, 2028219
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2028214, 2028215, 2028219
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2028216, 2028217, 2028220
SM 2120 B / E31780	True Color measured at 450 nm	2028212, 2028213
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2028212, 2028213, 2028218
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2028212, 2028213
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2028212, 2028213, 2028218
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2028212, 2028213, 2028218
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2028214, 2028215, 2028219

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	09/26/2018			09/26/2018 16:41	Megan Treadwell	2028212, 2028213, 2028218
EPA 300.0 Rev. 2.1	09/26/2018			10/02/2018 05:37	Lipi Saha	2028212
	09/26/2018			10/02/2018 06:13	Lipi Saha	2028213
EPA 350.1 Rev. 2.0	09/26/2018			10/02/2018 11:47	Ping Hua	2028214
	09/26/2018			10/02/2018 11:51	Ping Hua	2028215
	09/26/2018			10/02/2018 11:53	Ping Hua	2028219
EPA 351.2 Rev. 2.0	09/26/2018	09/27/2018 15:15	Adrian Shelby	09/28/2018 14:43	Joseph Suarez	2028214
	09/26/2018	09/27/2018 15:15	Adrian Shelby	09/28/2018 14:45	Joseph Suarez	2028215
	09/26/2018	09/27/2018 15:15	Adrian Shelby	09/28/2018 14:46	Joseph Suarez	2028219
EPA 353.2 Rev. 2.0	09/26/2018			09/28/2018 13:01	Lauren Bottorf	2028214
	09/26/2018			09/28/2018 13:02	Lauren Bottorf	2028215
	09/26/2018			09/28/2018 13:03	Lauren Bottorf	2028219
EPA 365.1 Rev. 2.0	09/26/2018	09/27/2018 11:30	Sima Feizi	09/28/2018 11:08	Beverly Y. Sanders	2028214
	09/26/2018	09/27/2018 11:30	Sima Feizi	09/28/2018 11:09	Beverly Y. Sanders	2028215
	09/26/2018	09/27/2018 11:30	Sima Feizi	09/28/2018 11:10	Beverly Y. Sanders	2028219
EPA 365.1 Rev. 2.0 dissolved	09/26/2018			09/26/2018 15:26	Julia Storbeck	2028216
	09/26/2018			09/26/2018 15:27	Julia Storbeck	2028217
	09/26/2018			09/26/2018 15:28	Julia Storbeck	2028220
SM 2120 B	09/26/2018			09/26/2018 15:57	DeAsia Armster	2028212
	09/26/2018			09/26/2018 16:03	DeAsia Armster	2028213
SM 2320 B-97	09/26/2018			10/02/2018 15:56	Dale L. Simmons	2028212
	09/26/2018			10/02/2018 16:07	Dale L. Simmons	2028213
	09/26/2018			10/02/2018 16:28	Dale L. Simmons	2028218
SM 2540 C-97	09/26/2018			09/28/2018 15:48	Yijie Li	2028212, 2028213
SM 2540 D-97	09/26/2018			09/28/2018 15:48	Yijie Li	2028212, 2028213, 2028218
SM 4500 F-C-97	09/26/2018			10/02/2018 15:56	Dale L. Simmons	2028212
	09/26/2018			10/02/2018 16:07	Dale L. Simmons	2028213
	09/26/2018			10/02/2018 16:28	Dale L. Simmons	2028218
SM 5310 B-00	09/26/2018			09/27/2018 18:41	Megan Treadwell	2028214
	09/26/2018			09/27/2018 18:55	Megan Treadwell	2028215
	09/26/2018			09/27/2018 19:08	Megan Treadwell	2028219