Chemical Analysis Report

NW-DIST-2016-03-17-02

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

Event Description: **TMDL Bioassessment**
Request ID: **RQ-2016-02-01-57**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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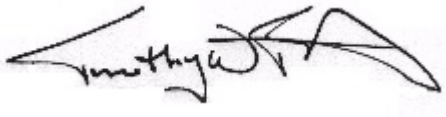
Date Certified: 07-APR-2016 09:30



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: CATFISH BRANCH @ EGLIN 736 **Collection Date/Time: 03/16/2016 15:00**

Field ID: G4NW0104 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1781298	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P300582	
	EPA 300.0 Rev. 2.1	Chloride	3.9		mg Cl/L	P300753	
		Sulfate	1.4		mg SO4/L	P300755	
	SM 2120 B	Color (true)	23		PCU	P300604	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P301027	
	SM 2540 C-97	TDS	15	U	mg/L	P301170	
	SM 2540 D-97	TSS	3	I	mg/L	P300954	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P301031	
1781300	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P301196	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.11	I	mg N/L	P301408	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P300809	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P301134	
	SM 5310 B-00	Organic Carbon	1.7		mg C/L	P300982	
1781302	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.066		mg P/L	P300550	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 04/06/2016.
EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The result was confirmed on 04/01/2016.

Sample Location: JONES CREEK @ BRIGADIER RD PJC CAMPUS RD. **Collection Date/Time: 03/16/2016 12:00**

Field ID: G4NW0122 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1781299	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P300582	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P300888	
		Sulfate	3.8		mg SO4/L	P300890	
	SM 2120 B	Color (true)	150		PCU	P300604	
	SM 2320 B-97	Total Alkalinity	3.9		mg CaCO3/L	P301027	
	SM 2540 C-97	TDS	54		mg/L	P301170	
	SM 2540 D-97	TSS	3	I	mg/L	P300954	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P301031	
1781301	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P301196	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63	J	mg N/L	P301408	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028		mg N/L	P300809	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P301134	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P300982	
1781303	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P300550	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: The precision data is unavailable due to low analyte concentration in the QC sample.
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300582

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300753

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300755

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300888

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300890

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P301196

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P301408

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300809

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P301134

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: P300550

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

Reference Method: SM 2120 B
Batch ID: P300604

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P301027

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

Reference Method: SM 2540 C-97
Batch ID: P301170

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P300954

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P300982

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: P300753

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300755

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: P300755

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300888

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300890

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P301196

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P301408

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300809

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P301134

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300550

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

Reference Method: SM 2320 B-97
Batch ID: P301027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 105

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	94 - 108

Reference Method: SM 5310 B-00
Batch ID: P300982

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1780694	Chloride	100		P	90 - 110
1781235	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1780694	Sulfate	100		P	90 - 110
1781235	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781331	Chloride	102		P	90 - 110
1781485	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781331	Sulfate	99.4		P	90 - 110
1781485	Sulfate	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P301196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781231	Ammonia-N	100	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P301408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781301	Kjeldahl Nitrogen	94.9	89.3	P/F	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781249	NO2NO3-N	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P301134

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781250	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781303	O-Phosphate-P	96.8	97.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781511	Fluoride	99.1	99.1	P/P	94 - 107

Reference Method: SM 5310 B-00
Batch ID: P300982

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781249	Organic Carbon	96.4	97.8	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781248	Turbidity	5.35	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780694	Chloride	0.0612	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780694	Sulfate	0.359	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781331	Chloride	0.240	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P301196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781231	Ammonia-N	1.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P301408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781301	Kjeldahl Nitrogen	3.89	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781249	NO2NO3-N	2.30	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P301134

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781250	Total-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781303	O-Phosphate-P	1.07	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P300604

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781331	Color (true)	0.723	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P301027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781511	Total Alkalinity	0.218	Sample	P	0 - 4.8

Quality Assurance Report
Precision

Reference Method: SM 2540 C-97
Batch ID: P301170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781230	TDS	7.32	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781511	Fluoride	0.0	Spike	P	0 - 3.7

Reference Method: SM 5310 B-00
Batch ID: P300982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781249	Organic Carbon	0.853	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 300.0 Rev. 2.1
Run ID: A68261
Included Lab Sample IDs: 1781298

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	98.3	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A68283
Included Lab Sample IDs: 1781302, 1781303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	99.2	P/P	90 - 110
O-Phosphate-P	98.4	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68294
Included Lab Sample IDs: 1781298, 1781299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.0	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A68303
Included Lab Sample IDs: 1781298, 1781299

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A68303
Included Lab Sample IDs: 1781298, 1781299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.9	99.1	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A68374
Included Lab Sample IDs: 1781300, 1781301

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A68401
Included Lab Sample IDs: 1781299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.2	99.9	P/P	90 - 110
Sulfate	98.4	98.9	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A68423
Included Lab Sample IDs: 1781300, 1781301

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

Reference Method: SM 2320 B-97
Run ID: A68432
Included Lab Sample IDs: 1781298, 1781299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A68432
Included Lab Sample IDs: 1781298, 1781299

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A68500
Included Lab Sample IDs: 1781300, 1781301

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A68532
Included Lab Sample IDs: 1781300, 1781301

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A68631
Included Lab Sample IDs: 1781300, 1781301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.6	99.5	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					5.35	
EPA 300.0 Rev. 2.1	Chloride	100	100	101		0.0612	
	Chloride	102	102	103		0.240	
	Sulfate	101	100	100		0.359	
	Sulfate	99.5	99.4	99.8			
EPA 350.1 Rev. 2.0	Ammonia-N	99.5	100	102			1.06
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.0	94.9	89.3			3.89
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	101	104			2.30
EPA 365.1 Rev. 2.0	Total-P	107	107	107			0.0
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	96.8	97.9			1.07
SM 2120 B	Color (true)					0.723	
SM 2320 B-97	Total Alkalinity	103				0.218	
SM 2540 C-97	TDS					7.32	
SM 4500 F-C-97	Fluoride	97.5	99.1	99.1			0.0
SM 5310 B-00	Organic Carbon	97.8	96.4	97.8			0.853

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1781298, 1781299
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1781298, 1781299
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1781298, 1781299
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1781300, 1781301
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1781300, 1781301
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1781300, 1781301
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1781300, 1781301
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1781302, 1781303
SM 2120 B / E31780	True Color measured at 450 nm	1781298, 1781299
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1781298, 1781299
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1781298, 1781299
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1781298, 1781299
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1781298, 1781299

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1781300, 1781301

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	03/17/2016			03/17/2016 16:13	Sima Feizi	1781298, 1781299
EPA 300.0 Rev. 2.1	03/17/2016			03/19/2016	Ping Hua	1781298
	03/17/2016			03/22/2016	Julia Storbeck	1781299
EPA 350.1 Rev. 2.0	03/17/2016			03/28/2016	Diana M. Turner	1781300, 1781301
EPA 351.2 Rev. 2.0	03/17/2016	04/01/2016	Sofia Elnemr	04/04/2016	Virginia P. Brown	1781300, 1781301
EPA 353.2 Rev. 2.0	03/17/2016			03/22/2016	Peter D. Kaus	1781300, 1781301
EPA 365.1 Rev. 2.0	03/17/2016	03/28/2016	Christopher Armour	03/30/2016	Lipi Saha	1781300, 1781301
EPA 365.1 Rev. 2.0 dissolved	03/17/2016			03/17/2016 12:00	Julia Storbeck	1781303
	03/17/2016			03/17/2016 12:12	Julia Storbeck	1781302
SM 2120 B	03/17/2016			03/18/2016 08:23	Rochelle Y Jackson	1781298, 1781299
SM 2320 B-97	03/17/2016			03/24/2016	Dale L. Simmons	1781298, 1781299
SM 2540 C-97	03/17/2016			03/21/2016	Yijie Li	1781298, 1781299
SM 2540 D-97	03/17/2016			03/21/2016	Yijie Li	1781298, 1781299
SM 4500 F-C-97	03/17/2016			03/24/2016	Dale L. Simmons	1781298, 1781299
SM 5310 B-00	03/17/2016			03/24/2016	Diana M. Turner	1781300, 1781301