

Chemical Analysis Report

SO-DIST-2017-04-26-01

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

Event Description: **SMP: Highlands Lakes**
Request ID: **RQ-2017-04-03-10**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Corey Anderson

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 22-MAY-2017 15:38



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: PEARL LAKE @ CENTER

Collection Date/Time: 04/25/2017 11:25

Field ID: G4HL042017-2

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892439	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P324091	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P324661	
		Sulfate	17		mg SO4/L	P324666	
	SM 2120 B	Color (true)	10		PCU	P324066	
	SM 2320 B-97	Total Alkalinity	3.9		mg CaCO3/L	P324656	
	SM 2540 C-97	TDS	65		mg/L	P324736	
	SM 2540 D-97	TSS	2	I	mg/L	P324780	
	SM 4500 F-C-97	Fluoride	0.047	I	mg F/L	P325522	
1892441	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P324252	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P324151	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324204	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P324119	
	SM 5310 B-00	Organic Carbon	6.3		mg C/L	P324172	
1892443	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324084	

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: LAKE SIRENA @ MIDDLE

Collection Date/Time: 04/25/2017 10:50

Field ID: G4HL042017-1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892440	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P324091	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P324661	
		Sulfate	26		mg SO4/L	P324666	
	SM 2120 B	Color (true)	5.3	I	PCU	P324066	
	SM 2320 B-97	Total Alkalinity	8.5		mg CaCO3/L	P324656	
	SM 2540 C-97	TDS	77		mg/L	P324736	
	SM 2540 D-97	TSS	2	I	mg/L	P324780	
	SM 4500 F-C-97	Fluoride	0.065	I	mg F/L	P325469	RPD
1892442	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P324252	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P324151	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324204	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P324119	
	SM 5310 B-00	Organic Carbon	6.0		mg C/L	P324172	
1892444	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324088	

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: P324091

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324661

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324666

Component	Result	Code	Units
Sulfate	0.20	U	mg SO ₄ /L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324252

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324151

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324204

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324119

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324084

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324088

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

Reference Method: SM 2120 B
Batch ID: P324066

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P324656

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P324736

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324780

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325469

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325522

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P324172

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: P324661

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324666

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324252

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P324252

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P324151

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P324204

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: P324119

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P324084

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P324088

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

Reference Method: SM 2320 B-97
 Batch ID: P324656

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
 Batch ID: P325469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	92 - 103

Reference Method: SM 4500 F-C-97
 Batch ID: P325522

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P324172

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892501	Chloride	98.1		P	90 - 110
1892553	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324666

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892501	Sulfate	99.9		P	90 - 110
1892553	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P324252

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892441	Ammonia-N	96.9	95.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P324151

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892441	Kjeldahl Nitrogen	100	95.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P324204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892289	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P324119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892442	Total-P	109	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P324084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892224	O-Phosphate-P	96.7	96.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892444	O-Phosphate-P	97.3	98.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P325469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892554	Fluoride	102	97.9	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P325522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892682	Fluoride	101	102	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P324172

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892220	Organic Carbon	106		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892216	Turbidity	3.61	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892553	Chloride	0.167	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892553	Sulfate	0.196	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892441	Ammonia-N	1.29	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892441	Kjeldahl Nitrogen	3.98	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892289	NO2NO3-N	0.482	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892442	Total-P	7.20	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892224	O-Phosphate-P	0.262	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892444	O-Phosphate-P	1.12	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P324066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892493	Color (true)	4.69	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P324656

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892272	Total Alkalinity	0.0449	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P324736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892274	TDS	2.68	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P325469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892554	Fluoride	3.65	Spike	F	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892682	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P324172

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892220	Organic Carbon	1.57	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: SM 2120 B
Run ID: A76015
Included Lab Sample IDs: 1892439, 1892440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.1	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A76020
Included Lab Sample IDs: 1892443, 1892444

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.3	97.6	P/P	90 - 110
O-Phosphate-P	97.2	96.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A76023
Included Lab Sample IDs: 1892439, 1892440

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

Reference Method: SM 5310 B-00
Run ID: A76046
Included Lab Sample IDs: 1892441, 1892442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76056

Included Lab Sample IDs: 1892441, 1892442

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76062

Included Lab Sample IDs: 1892441, 1892442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	98.5	P/P	90 - 110
Total-P	97.8	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76070

Included Lab Sample IDs: 1892441, 1892442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	91.1	91.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76098

Included Lab Sample IDs: 1892441, 1892442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	96.3	P/P	90 - 110
Kjeldahl Nitrogen	96.3	97.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A76148

Included Lab Sample IDs: 1892439, 1892440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	101	P/P	90 - 110
Sulfate	97.0	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76196

Included Lab Sample IDs: 1892439, 1892440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76498

Included Lab Sample IDs: 1892440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.0	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A76528

Included Lab Sample IDs: 1892439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	95.5	96.2	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	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				3.61	
EPA 300.0 Rev. 2.1	Chloride	101	99.0 98.1		0.167	
	Sulfate	102	100 99.9		0.196	
EPA 350.1 Rev. 2.0	Ammonia-N	95.7	96.9 95.7			1.29
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.8	100 95.2			3.98
EPA 353.2 Rev. 2.0	NO2NO3-N	104	104 104			0.482
EPA 365.1 Rev. 2.0	Total-P	102	109 102			7.20
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6	96.7 96.3			0.262
	O-Phosphate-P	96.3	97.3 98.4			1.12
SM 2120 B	Color (true)				4.69	
SM 2320 B-97	Total Alkalinity	102			0.0449	
SM 2540 C-97	TDS				2.68	
SM 4500 F-C-97	Fluoride	102	102 97.9			3.65
	Fluoride	101	101 102			0.473
SM 5310 B-00	Organic Carbon	97.5	106			1.57

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1892439, 1892440
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1892439, 1892440
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1892439, 1892440
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1892441, 1892442
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1892441, 1892442
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1892441, 1892442
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1892441, 1892442
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1892443, 1892444
SM 2120 B / E31780	True Color measured at 450 nm	1892439, 1892440
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1892439, 1892440
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1892439, 1892440
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1892439, 1892440
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1892439, 1892440

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1892441, 1892442

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	04/26/2017			04/26/2017 16:32	Sima Feizi	1892439, 1892440
EPA 300.0 Rev. 2.1	04/26/2017			05/03/2017	Ping Hua	1892439, 1892440
EPA 350.1 Rev. 2.0	04/26/2017			04/27/2017	Julie Michelle Frank	1892441, 1892442
EPA 351.2 Rev. 2.0	04/26/2017	04/28/2017	Adrian Shelby	05/01/2017	Joseph Suarez	1892441, 1892442
EPA 353.2 Rev. 2.0	04/26/2017			04/28/2017	Beverly Y. Sanders	1892441, 1892442
EPA 365.1 Rev. 2.0	04/26/2017	04/27/2017	Adrian Shelby	04/28/2017	Lipi Saha	1892441, 1892442
EPA 365.1 Rev. 2.0 dissolved	04/26/2017			04/26/2017 13:09	Anthony C. Onicha	1892443
	04/26/2017			04/26/2017 13:32	Anthony C. Onicha	1892444
SM 2120 B	04/26/2017			04/26/2017 15:08	Julia Storbeck	1892439
	04/26/2017			04/26/2017 15:09	Julia Storbeck	1892440
SM 2320 B-97	04/26/2017			05/04/2017	Dale L. Simmons	1892439, 1892440
SM 2540 C-97	04/26/2017			05/01/2017	Yijie Li	1892439, 1892440
SM 2540 D-97	04/26/2017			05/01/2017	Yijie Li	1892439, 1892440
SM 4500 F-C-97	04/26/2017			05/18/2017	Dale L. Simmons	1892440
	04/26/2017			05/19/2017	Dale L. Simmons	1892439
SM 5310 B-00	04/26/2017			04/27/2017	Julie Michelle Frank	1892441, 1892442