

Chemical Analysis Report

SO-DIST-2016-10-19-02

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

Event Description: **SMP: Telegraph Roberts Olga**
Request ID: **RQ-2016-10-17-05**
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
Attn: Ben Paswater

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 14-NOV-2016 16:22

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

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: TELEGRAPH SWAMP SOUTH SITE

Collection Date/Time: 10/18/2016 11:05

Field ID: G3SD101816-5

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1841978	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P313522	
	EPA 300.0 Rev. 2.1	Chloride	64		mg Cl/L	P314094	
		Sulfate	16		mg SO4/L	P314090	
	SM 2120 B	Color (true)	160		PCU	P313496	
	SM 2320 B-97	Total Alkalinity	67		mg CaCO3/L	P313617	
	SM 2540 C-97	TDS	245		mg/L	P314157	
	SM 2540 D-97	TSS	6	I	mg/L	P314151	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P313619	
1841981	EPA 350.1 Rev. 2.0	Ammonia-N	0.092		mg N/L	P314551	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P314209	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.050		mg N/L	P313564	
	EPA 365.1 Rev. 2.0	Total-P	0.068		mg P/L	P314131	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P313573	
1841984	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P313492	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: BANANA BRANCH @ FT. DENAUD RD.

Collection Date/Time: 10/18/2016 12:30

Field ID: G3SD101816-6

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1841979	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P313522	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P314094	
		Sulfate	7.3		mg SO4/L	P314090	
	SM 2120 B	Color (true)	120		PCU	P313496	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P313617	
	SM 2540 C-97	TDS	213		mg/L	P314157	
	SM 2540 D-97	TSS	6	I	mg/L	P314151	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P313619	
1841982	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P314551	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P314209	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P313564	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P314131	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P313573	
1841985	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P313492	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: OLGA CREEK @ SR 80

Collection Date/Time: 10/18/2016 12:00

Field ID: G3SD101816-7

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1841980	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P313522	

Field ID: G3SD101816-7

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1841980	EPA 300.0 Rev. 2.1	Chloride	130		mg Cl/L	P314094	
		Sulfate	23		mg SO4/L	P314090	
	SM 2120 B	Color (true)	56	A	PCU	P313496	
	SM 2320 B-97	Total Alkalinity	301		mg CaCO3/L	P313617	
	SM 2540 C-97	TDS	544		mg/L	P314157	
	SM 2540 D-97	TSS	2	I	mg/L	P314151	
	SM 4500 F-C-97	Fluoride	0.37		mg F/L	P313619	
1841983	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P314551	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P314209	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P313564	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P314131	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P313573	
1841986	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P313492	

Ref. Method and Comment:
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P313522

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P314090

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P314094

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P314551

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P314209

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313564

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314131

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313492

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

Reference Method: SM 2120 B
Batch ID: P313496

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P313617

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

Reference Method: SM 2540 C-97
Batch ID: P314157

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P314151

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P313619

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P313573

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: P314090

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314094

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314551

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314209

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313564

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314131

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313492

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

Reference Method: SM 2320 B-97
Batch ID: P313617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P313619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P313573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842058	Sulfate	93.8		P	90 - 110
1842059	Sulfate	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314094

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842058	Chloride	98.3		P	90 - 110
1842059	Chloride	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841966	Ammonia-N	101	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314209

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841983	Kjeldahl Nitrogen	101	110	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313564

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841983	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841965	Total-P	107	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842029	O-Phosphate-P	99.2	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P313619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842085	Fluoride	99.8	101	P/P	91 - 105

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P313522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841729	Turbidity	4.19	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842058	Sulfate	0.606	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314094

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842058	Chloride	0.211	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841966	Ammonia-N	1.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841983	Kjeldahl Nitrogen	5.67	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313564

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841983	NO2NO3-N	0.856	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P314131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841965	Total-P	3.67	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P313492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842029	O-Phosphate-P	0.510	Spike	P	0 - 20

Reference Method: SM 2120 B

Batch ID: P313496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841980	Color (true)	1.37	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P313617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842085	Total Alkalinity	0.120	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97

Batch ID: P314157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841893	TDS	7.24	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97

Batch ID: P313619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842085	Fluoride	0.959	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00

Batch ID: P313573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841551	Organic Carbon	1.11	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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A72317

Included Lab Sample IDs: 1841984, 1841985, 1841986

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

Reference Method: SM 2120 B

Run ID: A72318

Included Lab Sample IDs: 1841978, 1841979, 1841980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115
Color (true)	104	104	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A72324

Included Lab Sample IDs: 1841978, 1841979, 1841980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A72340

Included Lab Sample IDs: 1841981, 1841982, 1841983

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

Reference Method: SM 5310 B-00

Run ID: A72343

Included Lab Sample IDs: 1841981, 1841982, 1841983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	94.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A72356

Included Lab Sample IDs: 1841978, 1841979, 1841980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	101	P/P	90 - 110
Total Alkalinity	100	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A72356

Included Lab Sample IDs: 1841978, 1841979, 1841980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	100	P/P	90 - 110
Fluoride	99.0	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A72453

Included Lab Sample IDs: 1841978, 1841979, 1841980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	101	P/P	90 - 110
Sulfate	102	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A72547

Included Lab Sample IDs: 1841981, 1841982

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A72551

Included Lab Sample IDs: 1841981, 1841982, 1841983

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A72562

Included Lab Sample IDs: 1841983

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A72604

Included Lab Sample IDs: 1841981, 1841982, 1841983

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	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	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				4.19	
EPA 300.0 Rev. 2.1	Chloride	101	98.3 99.8		0.211	
	Sulfate	96.4	93.8 95.8		0.606	
EPA 350.1 Rev. 2.0	Ammonia-N	104	101 104			1.84
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	101 110			5.67
EPA 353.2 Rev. 2.0	NO2NO3-N	106	104 105			0.856
EPA 365.1 Rev. 2.0	Total-P	99.2	107 102			3.67
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104	99.2 100			0.510
SM 2120 B	Color (true)				1.37	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
SM 2320 B-97	Total Alkalinity	103			0.120	
SM 2540 C-97	TDS				7.24	
SM 4500 F-C-97	Fluoride	98.5	99.8 101			0.959
SM 5310 B-00	Organic Carbon	94.6				1.11

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1841978, 1841979, 1841980
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1841978, 1841979, 1841980
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1841978, 1841979, 1841980
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1841981, 1841982, 1841983
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1841981, 1841982, 1841983
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1841981, 1841982, 1841983
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1841981, 1841982, 1841983
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1841984, 1841985, 1841986
SM 2120 B / E31780	True Color measured at 450 nm	1841978, 1841979, 1841980
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1841978, 1841979, 1841980
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1841978, 1841979, 1841980
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1841978, 1841979, 1841980
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1841978, 1841979, 1841980
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1841981, 1841982, 1841983

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	10/19/2016			10/19/2016 15:13	Sima Feizi	1841978, 1841979, 1841980
EPA 300.0 Rev. 2.1	10/19/2016			10/27/2016	Ping Hua	1841978, 1841979, 1841980
EPA 350.1 Rev. 2.0	10/19/2016			11/03/2016	Sofia Elnemr	1841981, 1841982, 1841983
EPA 351.2 Rev. 2.0	10/19/2016	10/31/2016	Adrian Shelby	11/01/2016	Joseph Suarez	1841981, 1841982, 1841983
EPA 353.2 Rev. 2.0	10/19/2016			10/20/2016	Beverly Y. Sanders	1841981, 1841982, 1841983
EPA 365.1 Rev. 2.0	10/19/2016	10/28/2016	Vijayalakshmi Reddy	10/31/2016	Lipi Saha	1841981, 1841982, 1841983
EPA 365.1 Rev. 2.0 dissolved	10/19/2016			10/19/2016 15:50	Julia Storbeck	1841984
	10/19/2016			10/19/2016 15:51	Julia Storbeck	1841985
	10/19/2016			10/19/2016 15:52	Julia Storbeck	1841986
SM 2120 B	10/19/2016			10/19/2016 16:12	Julie Michelle Frank	1841980
	10/19/2016			10/19/2016 16:14	Julie Michelle Frank	1841979
	10/19/2016			10/19/2016 16:39	Julie Michelle Frank	1841978
SM 2320 B-97	10/19/2016			10/20/2016	Dale L. Simmons	1841978, 1841979, 1841980
SM 2540 C-97	10/19/2016			10/22/2016	Yijie Li	1841978, 1841979, 1841980
SM 2540 D-97	10/19/2016			10/22/2016	Yijie Li	1841978, 1841979, 1841980
SM 4500 F-C-97	10/19/2016			10/20/2016	Dale L. Simmons	1841978, 1841979, 1841980
SM 5310 B-00	10/19/2016			10/20/2016	Julie Michelle Frank	1841981, 1841982, 1841983