

Chemical Analysis Report

CEN-DIST-2017-03-17-01

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

Event Description: **Lk Blue Cove / Shady Brook**
Request ID: **RQ-2017-03-13-47**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Mike Linger

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 12-APR-2017 16:42

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

NON-CONFORMANCE REPORT INCLUDED

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: Lake Blue Cove @ 150m SW of Center

Collection Date/Time: 03/16/2017 12:00

Field ID: G4CE0022

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1881015	EPA 180.1 Rev. 2.0	Turbidity	3.4	A	NTU	P321762	
	EPA 300.0 Rev. 2.1	Chloride	2.9		mg Cl/L	P322279	
		Sulfate	0.20	U	mg SO4/L	P322281	
	SM 2120 B	Color (true)	8.0		PCU	P321752	
	SM 2320 B-97	Total Alkalinity	38		mg CaCO3/L	P322073	
	SM 2540 C-97	TDS	48		mg/L	P322322	
	SM 2540 D-97	TSS	4	I	mg/L	P322318	
	SM 4500 F-C-97	Fluoride	0.30		mg F/L	P322079	
1881017	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P321910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P321804	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P321992	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P321853	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P321796	
1881019	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P321747	

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: Shady Brook @ 90m East of US 301

Collection Date/Time: 03/16/2017 13:20

Field ID: G1CE0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1881016	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P321762	
	EPA 300.0 Rev. 2.1	Chloride	12	A	mg Cl/L	P322279	
		Sulfate	9.1	A	mg SO4/L	P322281	
	SM 2120 B	Color (true)	24	A	PCU	P321752	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P322073	
	SM 2540 C-97	TDS	198		mg/L	P322322	
	SM 2540 D-97	TSS	2	I	mg/L	P322318	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P322079	
1881018	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P321910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P321804	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P321992	
	EPA 365.1 Rev. 2.0	Total-P	0.072		mg P/L	P321853	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P321796	
1881020	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.064		mg P/L	P321747	

Ref. Method and Comment:

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

Non-Conformance Report

NCR ID: 6314

Event(s)

CEN-DIST-2017-03-17-01

Job(s)

Sample(s)

Test(s)

Non-Conformance Report

NCR ID: 6314

<u>Event(s)</u>	<u>Job(s)</u>	<u>Sample(s)</u>	<u>Test(s)</u>
NCR Type:	SHIPPING/RECEIVING	NCR Category:	Receiving
Observation:	RQ-2017-03-13-47 Location: Shady Brook @ 90m of US 301 No collection time recorded.		
Resolution:	Contacted customer(Lawrence Drennan) about the collection time. He provided the collection time. (1320) Email received 03/20/17		

Authorised by/Date: Ramsey K. White 3/22/2017

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321762

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322279

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322281

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321910

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321804

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321992

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321853

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321747

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

Reference Method: SM 2120 B
Batch ID: P321752

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P322073

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

Reference Method: SM 2540 C-97
Batch ID: P322322

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P322318

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P322079

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P321796

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: P322279

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322279

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322281

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321804

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: P321992

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: P321853

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321747

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.8		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P322073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P322079

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P321796

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881016	Chloride	99.8		P	90 - 110
1881292	Chloride	97.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P322281

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881016	Sulfate	99.6		P	90 - 110
1881292	Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P321910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881000	Ammonia-N	99.7	97.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P321804

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881002	Kjeldahl Nitrogen	101	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P321992

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881018	NO2NO3-N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P321853

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881039	Total-P	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P321747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881007	O-Phosphate-P	98.8	96.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P322079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881033	Fluoride	97.2	98.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P321796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1881017	Organic Carbon	94.8	94.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P321762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881015	Turbidity	9.33	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881016	Chloride	0.000520	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P322281

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881016	Sulfate	0.813	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P321910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881000	Ammonia-N	1.42	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P321804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881002	Kjeldahl Nitrogen	1.97	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321992

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P321992

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881018	NO2NO3-N	0.480	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P321853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881039	Total-P	1.54	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P321747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881007	O-Phosphate-P	2.09	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P321752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881016	Color (true)	1.65	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P322073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881033	Total Alkalinity	0.558	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P322322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1880961	TDS	3.30	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P322079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881033	Fluoride	1.00	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P321796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1881017	Organic Carbon	0.318	Spike	P	0 - 20

Quality Assurance Report Precision

* 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: A75172

Included Lab Sample IDs: 1881019, 1881020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	99.4	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A75173

Included Lab Sample IDs: 1881015, 1881016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	107	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75180

Included Lab Sample IDs: 1881015, 1881016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105

Reference Method: SM 5310 B-00

Run ID: A75192

Included Lab Sample IDs: 1881017, 1881018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	95.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75245

Included Lab Sample IDs: 1881017, 1881018

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75255

Included Lab Sample IDs: 1881017, 1881018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.2	91.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75261

Included Lab Sample IDs: 1881017, 1881018

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	107	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A75268
 Included Lab Sample IDs: 1881017, 1881018

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

Reference Method: SM 2320 B-97
 Run ID: A75310
 Included Lab Sample IDs: 1881015, 1881016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	105	P/P	90 - 110

Reference Method: SM 4500 F-C-97
 Run ID: A75310
 Included Lab Sample IDs: 1881015, 1881016

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

Reference Method: EPA 300.0 Rev. 2.1
 Run ID: A75396
 Included Lab Sample IDs: 1881015, 1881016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	101	99.6	P/P	90 - 110
Sulfate	94.3	98.5	P/P	90 - 110
Sulfate	98.5	93.8	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				9.33	
EPA 300.0 Rev. 2.1	Chloride	101	99.8	97.3	0.0005	
	Sulfate	99.0	99.6	98.4	0.813	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	99.7	97.9		1.42
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	101	98.5		1.97
EPA 353.2 Rev. 2.0	NO2NO3-N	104	103			0.480
EPA 365.1 Rev. 2.0	Total-P	104	106	108		1.54
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	98.8	96.6		2.09
SM 2120 B	Color (true)				1.65	
SM 2320 B-97	Total Alkalinity	104			0.558	
SM 2540 C-97	TDS				3.30	
SM 4500 F-C-97	Fluoride	97.4	97.2	98.3		1.00
SM 5310 B-00	Organic Carbon	96.9	94.8	94.4		0.318

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1881015, 1881016
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1881015, 1881016
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1881015, 1881016
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1881017, 1881018
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1881017, 1881018
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1881017, 1881018
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1881017, 1881018
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1881019, 1881020
SM 2120 B / E31780	True Color measured at 450 nm	1881015, 1881016
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1881015, 1881016
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1881015, 1881016
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1881015, 1881016
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1881015, 1881016
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1881017, 1881018

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	03/17/2017			03/17/2017 15:10	Sima Feizi	1881015, 1881016
EPA 300.0 Rev. 2.1	03/17/2017			03/27/2017	Ping Hua	1881015, 1881016
EPA 350.1 Rev. 2.0	03/17/2017			03/21/2017	Julie Michelle Frank	1881017, 1881018
EPA 351.2 Rev. 2.0	03/17/2017	03/20/2017	Adrian Shelby	03/22/2017	Joseph Suarez	1881017, 1881018
EPA 353.2 Rev. 2.0	03/17/2017			03/22/2017	Beverly Y. Sanders	1881017, 1881018
EPA 365.1 Rev. 2.0	03/17/2017	03/21/2017	Adrian Shelby	03/22/2017	Lipi Saha	1881017, 1881018
EPA 365.1 Rev. 2.0 dissolved	03/17/2017			03/17/2017 12:14	Ping Hua	1881019
	03/17/2017			03/17/2017 12:15	Ping Hua	1881020
SM 2120 B	03/17/2017			03/17/2017 14:34	Julie Michelle Frank	1881016
	03/17/2017			03/17/2017 14:35	Julie Michelle Frank	1881015
SM 2320 B-97	03/17/2017			03/23/2017	Dale L. Simmons	1881015, 1881016
SM 2540 C-97	03/17/2017			03/21/2017	Yijie Li	1881015, 1881016
SM 2540 D-97	03/17/2017			03/21/2017	Yijie Li	1881015, 1881016
SM 4500 F-C-97	03/17/2017			03/23/2017	Dale L. Simmons	1881015, 1881016
SM 5310 B-00	03/17/2017			03/17/2017	Julie Michelle Frank	1881017
	03/17/2017			03/18/2017	Julie Michelle Frank	1881018