

Chemical Analysis Report

NW-DIST-2018-03-16-01

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

Event Description: **BIOASSESSMENT**
Request ID: **RQ-2018-03-12-45**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government St
Suite 208A
Pensacola, FL 32502-5794
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 05-APR-2018 11:41

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: SEVEN RUNS END OF DEAD RIVER ROAD

Collection Date/Time: 03/15/2018 12:00

Field ID: G3NW0115

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1975391	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P341710	
	EPA 300.0 Rev. 2.1	Chloride	3.2		mg Cl/L	P342129	
		Sulfate	2.0		mg SO4/L	P342133	
	SM 2120 B	Color (true)	64	A	PCU	P341714	
	SM 2320 B-97	Total Alkalinity	9.2		mg CaCO3/L	P341963	
	SM 2540 C-97	TDS	23	I	mg/L	P342004	
	SM 2540 D-97	TSS	3	I	mg/L	P342014	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P341966	
1975393	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P342197	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20		mg N/L	P341916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P341815	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P341747	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P342276	
1975395	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P341721	

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: CHOCTAWHATCHEE RIVER UPSTREAM OF HOLMES CREEK

Collection Date/Time: 03/15/2018 14:25

Field ID: G3NW0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1975392	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P341710	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P342129	
		Sulfate	1.9		mg SO4/L	P342133	
	SM 2120 B	Color (true)	82		PCU	P341714	
	SM 2320 B-97	Total Alkalinity	25		mg CaCO3/L	P341963	
	SM 2540 C-97	TDS	33		mg/L	P342004	
	SM 2540 D-97	TSS	5	I	mg/L	P342014	
	SM 4500 F-C-97	Fluoride	0.037	I	mg F/L	P341966	
1975394	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P342197	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P341916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P341815	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P341935	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P342276	
1975396	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P341721	

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: P341710

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341710

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342129

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342133

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342197

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341916

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341815

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: P341747

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341935

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341721

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P341714

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P341963

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

Reference Method: SM 2540 C-97
Batch ID: P342004

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P342014

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P341966

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P342276

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: P342129

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342133

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342197

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: P342197

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341916

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341815

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: P341747

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341935

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341721

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.6		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P341963

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P341966

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.5		P	91 - 102

Reference Method: SM 5310 B-00
Batch ID: P342276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342129

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975282	Chloride	97.2		P	90 - 110
1975391	Chloride	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342133

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975282	Sulfate	102		P	90 - 110
1975391	Sulfate	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342197

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974646	Ammonia-N	94.2	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975394	Kjeldahl Nitrogen	98.5	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341815

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975369	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975292	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975394	Total-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341721

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975395	O-Phosphate-P	99.6	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P341966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975860	Fluoride	94.4	95.0	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P342276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975393	Organic Carbon	104	104	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975352	Turbidity	1.93	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975282	Chloride	0.508	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975282	Sulfate	0.995	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342197

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974646	Ammonia-N	1.79	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975394	Kjeldahl Nitrogen	3.18	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975369	NO2NO3-N	0.218	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975292	Total-P	0.880	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975394	Total-P	0.634	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341721

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975395	O-Phosphate-P	0.301	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P341714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975391	Color (true)	0.132	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975860	Total Alkalinity	1.30	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P342004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975466	TDS	0.656	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P341966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975860	Fluoride	0.480	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P342276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975393	Organic Carbon	0.429	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 180.1 Rev. 2.0
Run ID: A82668
Included Lab Sample IDs: 1975391, 1975392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.0	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A82670
Included Lab Sample IDs: 1975391, 1975392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	98.7	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82677
Included Lab Sample IDs: 1975395, 1975396

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	102	P/P	90 - 110
O-Phosphate-P	98.9	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A82728
Included Lab Sample IDs: 1975393, 1975394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82750
Included Lab Sample IDs: 1975391, 1975392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	102	103	P/P	90 - 110
Sulfate	104	102	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A82772
Included Lab Sample IDs: 1975391, 1975392

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	97.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A82772

Included Lab Sample IDs: 1975391, 1975392

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82796

Included Lab Sample IDs: 1975393, 1975394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.8	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82807

Included Lab Sample IDs: 1975393, 1975394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	99.0	P/P	90 - 110
Total-P	99.0	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82853

Included Lab Sample IDs: 1975393, 1975394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A82877

Included Lab Sample IDs: 1975393, 1975394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	103	P/P	90 - 110
Organic Carbon	105	100	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				1.93	
EPA 300.0 Rev. 2.1	Chloride	98.0	97.2 97.5		0.508	
	Sulfate	101	102 99.5		0.995	
EPA 350.1 Rev. 2.0	Ammonia-N	94.8	94.2 96.0			1.79
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.4	98.5 102			3.18
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102			0.218
EPA 365.1 Rev. 2.0	Total-P	104	104 105			0.880
	Total-P	101	101 102			0.634
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.6	99.6 99.9			0.301

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 2120 B	Color (true)					0.132	
SM 2320 B-97	Total Alkalinity	99.3				1.30	
SM 2540 C-97	TDS					0.656	
SM 4500 F-C-97	Fluoride	95.5	94.4	95.0			0.480
SM 5310 B-00	Organic Carbon	101	104	104			0.429

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1975391, 1975392
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1975391, 1975392
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1975391, 1975392
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1975393, 1975394
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1975393, 1975394
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1975393, 1975394
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1975393, 1975394
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1975395, 1975396
SM 2120 B / E31780	True Color measured at 450 nm	1975391, 1975392
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1975391, 1975392
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1975391, 1975392
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1975391, 1975392
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1975391, 1975392
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1975393, 1975394

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	03/16/2018			03/16/2018 15:05	DeAsia Armster	1975391, 1975392
EPA 300.0 Rev. 2.1	03/16/2018			03/22/2018	Julia Storbeck	1975391, 1975392
EPA 350.1 Rev. 2.0	03/16/2018			03/26/2018	Ping Hua	1975393, 1975394
EPA 351.2 Rev. 2.0	03/16/2018	03/21/2018	Adrian Shelby	03/22/2018	Joseph Suarez	1975393, 1975394
EPA 353.2 Rev. 2.0	03/16/2018			03/20/2018	Beverly Y. Sanders	1975393, 1975394
EPA 365.1 Rev. 2.0	03/16/2018	03/19/2018	Sima Feizi	03/22/2018	Lipi Saha	1975393
	03/16/2018	03/21/2018	Sima Feizi	03/22/2018	Lipi Saha	1975394
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SM 2120 B	03/16/2018			03/16/2018 16:21	Tanya Welborn	1975391, 1975392
SM 2320 B-97	03/16/2018			03/22/2018	Dale L. Simmons	1975391, 1975392
SM 2540 C-97	03/16/2018			03/20/2018	Yijie Li	1975391, 1975392
SM 2540 D-97	03/16/2018			03/20/2018	Yijie Li	1975391, 1975392
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