Chemical Analysis Report

NW-DIST-2017-10-06-02

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

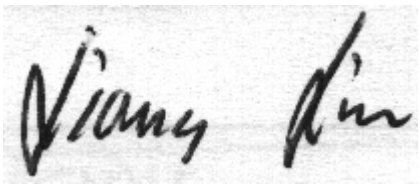
Event Description: **Baker Run West WBID 179 19 21 24C 271**
Request ID: **RQ-2017-10-02-40**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government St
Suite 208A
Pensacola, FL 32502-5794
Attn: Michael King

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

Certified by: Liang Lin, Environmental Administrator

Date Certified: 25-OCT-2017 14:32



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: Sweetwater Creek @ Sandy Landing Road **Collection Date/Time: 10/05/2017 11:45**

Field ID: G4NW0292 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935059	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P332899	
	EPA 300.0 Rev. 2.1	Chloride	2.7		mg Cl/L	P333239	
		Sulfate	0.66		mg SO4/L	P333242	
	SM 2120 B	Color (true)	38		PCU	P332895	
	SM 2320 B-97	Total Alkalinity	0.88	I	mg CaCO3/L	P333523	
	SM 2540 C-97	TDS	22	I	mg/L	P333157	
	SM 2540 D-97	TSS	3	I	mg/L	P333109	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P333526	
1935061	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	UY	mg N/L	P333392	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.094	IY	mg N/L	P333459	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.094	Y	mg N/L	P333229	
	EPA 365.1 Rev. 2.0	Total-P	0.005	IY	mg P/L	P333266	
	SM 5310 B-00	Organic Carbon	2.7	Y	mg C/L	P333653	
1935063	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332885	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 350.1 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.
EPA 351.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.
EPA 353.2 Rev. 2.0: NO2NO3-N: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.
EPA 365.1 Rev. 2.0: Total-P: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.
SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample. The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

Sample Location: Bear Creek @ Forest Road **Collection Date/Time: 10/05/2017 12:30**

Field ID: G4NW0380 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935060	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P332899	
	EPA 300.0 Rev. 2.1	Chloride	2.6		mg Cl/L	P333239	
		Sulfate	0.45	I	mg SO4/L	P333242	
	SM 2120 B	Color (true)	55		PCU	P332895	
	SM 2320 B-97	Total Alkalinity	4.0		mg CaCO3/L	P333523	
	SM 2540 C-97	TDS	15	I	mg/L	P333156	
	SM 2540 D-97	TSS	3	I	mg/L	P333108	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P333526	
1935062	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P333392	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P333459	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028		mg N/L	P333229	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P333267	
	SM 5310 B-00	Organic Carbon	2.2		mg C/L	P333653	
1935064	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332885	

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.

Non-Conformance Report

Non-Conformance Report

NCR ID: 6676

Event(s)	Job(s)	Sample(s)	Test(s)
NW-DIST-2017-10-06-02	TLH-2017-10-06-55	1935061	

NCR Type: SHIPPING/RECEIVING **NCR Category: Preservation Not Intact**

Observation: Sample not preserved to pH < 2.

Resolution: Sample preserved in the laboratory with sulfuric acid.

Authorized by/Date: Joshua Ayres 10/6/2017

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: P332899

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333239

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333242

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333392

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333459

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333229

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: P333266

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333267

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332885

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

Reference Method: SM 2120 B
Batch ID: P332895

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P333523

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

Reference Method: SM 2540 C-97
Batch ID: P333156

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P333157

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333108

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333109

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P333526

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P333653

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: P333239

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333392

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333459

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333229

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333266

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333267

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333267

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: P332885

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

Reference Method: SM 2320 B-97
Batch ID: P333523

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

Reference Method: SM 4500 F-C-97
Batch ID: P333526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P333653

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: P333239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935026	Chloride	101		P	90 - 110
1935059	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935026	Sulfate	95.9		P	90 - 110
1935059	Sulfate	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333392

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934982	Ammonia-N	99.8	101	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935028	Kjeldahl Nitrogen	107	110	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333229

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934982	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934699	Total-P	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333267

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935210	Total-P	102	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935063	O-Phosphate-P	97.2	97.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P333526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935177	Fluoride	101	102	P/P	91 - 105

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P332899

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934984	Turbidity	2.96	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935026	Chloride	1.25	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935026	Sulfate	1.07	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934982	Ammonia-N	0.348	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935028	Kjeldahl Nitrogen	2.34	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333229

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934982	NO2NO3-N	0.258	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934699	Total-P	0.261	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333267

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935210	Total-P	3.15	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935063	O-Phosphate-P	0.718	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P332895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935026	Color (true)	0.906	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-97
Batch ID: P333523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935177	Total Alkalinity	0.0131	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P333156

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934951	TDS	0.917	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P333157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934952	TDS	5.51	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P333526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935177	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P333653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934955	Organic Carbon	1.33	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A79397
Included Lab Sample IDs: 1935063, 1935064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.8	97.9	P/P	90 - 110
O-Phosphate-P	98.7	97.5	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A79399
Included Lab Sample IDs: 1935059, 1935060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A79400
Included Lab Sample IDs: 1935059, 1935060

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A79473
Included Lab Sample IDs: 1935059, 1935060

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A79506
Included Lab Sample IDs: 1935061, 1935062

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A79555
Included Lab Sample IDs: 1935061, 1935062

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A79578
Included Lab Sample IDs: 1935061, 1935062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	102	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A79620
Included Lab Sample IDs: 1935059, 1935060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.6	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A79620
Included Lab Sample IDs: 1935059, 1935060

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A79645
Included Lab Sample IDs: 1935061, 1935062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	105	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A79655
Included Lab Sample IDs: 1935061, 1935062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	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		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					2.96	
EPA 300.0 Rev. 2.1	Chloride	100	101	100		1.25	
	Sulfate	96.7	95.9	96.8		1.07	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	99.8	101			0.348
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.9	107	110			2.34
EPA 353.2 Rev. 2.0	NO2NO3-N	105	102	102			0.258
EPA 365.1 Rev. 2.0	Total-P	98.5	100	101			0.261
	Total-P	101	102	98.6			3.15
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	97.2	97.9			0.718
SM 2120 B	Color (true)					0.906	
SM 2320 B-97	Total Alkalinity	102				0.0131	
SM 2540 C-97	TDS					0.917	
	TDS					5.51	
SM 4500 F-C-97	Fluoride	99.0	101	102			0.473
SM 5310 B-00	Organic Carbon	101					1.33

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1935059, 1935060
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1935059, 1935060
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1935059, 1935060
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1935061, 1935062
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1935061, 1935062
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1935061, 1935062
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1935061, 1935062

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1935063, 1935064
SM 2120 B / E31780	True Color measured at 450 nm	1935059, 1935060
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1935059, 1935060
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1935059, 1935060
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1935059, 1935060
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1935059, 1935060
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1935061, 1935062

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	10/06/2017			10/06/2017 17:25	Tanya Welborn	1935059, 1935060
EPA 300.0 Rev. 2.1	10/06/2017			10/10/2017	Julia Storbeck	1935059, 1935060
EPA 350.1 Rev. 2.0	10/06/2017			10/13/2017	Sofia Elnemr	1935061, 1935062
EPA 351.2 Rev. 2.0	10/06/2017	10/16/2017	Sofia Elnemr	10/18/2017	Joseph Suarez	1935061, 1935062
EPA 353.2 Rev. 2.0	10/06/2017			10/12/2017	Beverly Y. Sanders	1935061, 1935062
EPA 365.1 Rev. 2.0	10/06/2017	10/12/2017	Sima Feizi	10/16/2017	Lipi Saha	1935061, 1935062
EPA 365.1 Rev. 2.0 dissolved	10/06/2017			10/06/2017 15:04	Megan Treadwell	1935063
	10/06/2017			10/06/2017 15:27	Megan Treadwell	1935064
SM 2120 B	10/06/2017			10/06/2017 16:14	Tanya Welborn	1935059
	10/06/2017			10/06/2017 16:15	Tanya Welborn	1935060
SM 2320 B-97	10/06/2017			10/17/2017	Dale L. Simmons	1935059, 1935060
SM 2540 C-97	10/06/2017			10/09/2017	Yijie Li	1935059, 1935060
SM 2540 D-97	10/06/2017			10/09/2017	Yijie Li	1935059, 1935060
SM 4500 F-C-97	10/06/2017			10/17/2017	Dale L. Simmons	1935059, 1935060
SM 5310 B-00	10/06/2017			10/18/2017	Ping Hua	1935061, 1935062