Chemical Analysis Report

NE-DIST-2017-04-20-01

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

Event Description: **SUW 1-4/19/17**
Request ID: **RQ-2017-04-10-08**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 15-MAY-2017 11:30

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: Jerry Br @ SE 25A **Collection Date/Time: 04/19/2017 10:20**

Field ID: G1NE045504192017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890931	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P323804	
	EPA 300.0 Rev. 2.1	Chloride	9.9		mg Cl/L	P324308	
		Sulfate	5.0		mg SO4/L	P324310	
	SM 2120 B	Color (true)	430		PCU	P323762	
	SM 2320 B-97	Total Alkalinity	5.8		mg CaCO3/L	P324445	
	SM 2540 C-97	TDS	80		mg/L	P324508	
	SM 2540 D-97	TSS	2	U	mg/L	P324215	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P324683	MS
1890934	EPA 350.1 Rev. 2.0	Ammonia-N	0.048		mg N/L	P323778	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P323411	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P324123	
	EPA 365.1 Rev. 2.0	Total-P	0.41		mg P/L	P323895	
	SM 5310 B-00	Organic Carbon	40		mg C/L	P323786	
1890937	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.32		mg P/L	P323756	

Ref. Method and Comment:
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Rocky Cr. @ CR136 **Collection Date/Time: 04/19/2017 11:00**

Field ID: G1NE023403272017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890932	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P323804	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P324308	
		Sulfate	1.2		mg SO4/L	P324310	
	SM 2120 B	Color (true)	500		PCU	P323762	
	SM 2320 B-97	Total Alkalinity	5.3		mg CaCO3/L	P324445	
	SM 2540 C-97	TDS	79		mg/L	P324508	
	SM 2540 D-97	TSS	3	I	mg/L	P324215	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P324683	MS
1890935	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P323778	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P323411	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P324123	
	EPA 365.1 Rev. 2.0	Total-P	0.68		mg P/L	P323895	
	SM 5310 B-00	Organic Carbon	39		mg C/L	P323786	
1890938	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.56		mg P/L	P323756	

Ref. Method and Comment:
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Peacock Lake Center **Collection Date/Time: 04/19/2017 12:15**

Field ID: G1NE041704192017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890933	EPA 180.1 Rev. 2.0	Turbidity	16	A	NTU	P323805	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P324308	
		Sulfate	4.4		mg SO4/L	P324310	

Field ID: G1NE041704192017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1890933	SM 2120 B	Color (true)	75		PCU	P323763	
	SM 2320 B-97	Total Alkalinity	6.8		mg CaCO3/L	P324445	
	SM 2540 C-97	TDS	45		mg/L	P324508	
	SM 2540 D-97	TSS	16		mg/L	P324215	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P324683	MS
1890936	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323778	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P324116	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324123	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P323895	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P323786	
1890939	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.090		mg P/L	P323756	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323804

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323805

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324308

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323778

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P3234115

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324116

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324123

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323895

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323756

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

Reference Method: SM 2120 B
Batch ID: P323762

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P323763

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P324445

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

Reference Method: SM 2540 C-97
Batch ID: P324508

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324215

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P324683

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P323786

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: P324308

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323778

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P3234115

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324116

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324123

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323895

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: P323895

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323756

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

Reference Method: SM 2320 B-97
Batch ID: P324445

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.2		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P324683

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P323786

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: P324308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890830	Chloride	102		P	90 - 110
1890931	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890830	Sulfate	99.8		P	90 - 110
1890931	Sulfate	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890797	Ammonia-N	101	104	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892221	Kjeldahl Nitrogen	115	113	F/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324123

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890934	NO2NO3-N	96.2	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890835	Total-P	100	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890689	O-Phosphate-P	97.4	97.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P324683

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890829	Fluoride	105	106	P/F	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P323786

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890686	Organic Carbon	102	103	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890872	Turbidity	3.09	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323805

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890933	Turbidity	11.1	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890830	Chloride	0.0935	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890830	Sulfate	2.10	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890797	Ammonia-N	2.50	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P3234115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890827	Kjeldahl Nitrogen	2.78	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892221	Kjeldahl Nitrogen	1.48	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324123

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890934	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890835	Total-P	3.38	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890689	O-Phosphate-P	0.480	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2120 B
Batch ID: P323762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890830	Color (true)	1.23	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P323763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890538	Color (true)	8.53	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P324445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890829	Total Alkalinity	0.0167	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P324508

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890825	TDS	1.27	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P324215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890825	TSS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P324683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890829	Fluoride	1.50	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P323786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890686	Organic Carbon	0.778	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: A75911
Included Lab Sample IDs: 1890937, 1890938, 1890939

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.8	96.9	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A75914
Included Lab Sample IDs: 1890931, 1890932, 1890933

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.7	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75919
Included Lab Sample IDs: 1890934, 1890935, 1890936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	103	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A75923
Included Lab Sample IDs: 1890934, 1890935, 1890936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	99.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A75925
Included Lab Sample IDs: 1890931, 1890932, 1890933

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A75977
Included Lab Sample IDs: 1890934, 1890935, 1890936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	105	P/P	90 - 110
Total-P	105	106	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A75999
Included Lab Sample IDs: 1890931, 1890932, 1890933

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	93.6	97.4	P/P	90 - 110
Sulfate	98.0	93.6	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A76029
Included Lab Sample IDs: 1890934, 1890935, 1890936

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A76054
Included Lab Sample IDs: 1890934, 1890935

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A76075
Included Lab Sample IDs: 1890936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.3	96.6	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A76137
Included Lab Sample IDs: 1890931, 1890932, 1890933

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

Reference Method: SM 4500 F-C-97
Run ID: A76201
Included Lab Sample IDs: 1890931, 1890932, 1890933

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	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					3.09	
	Turbidity					11.1	
EPA 300.0 Rev. 2.1	Chloride	102	102	101		0.0935	
	Sulfate	98.7	99.8	98.6		2.10	
EPA 350.1 Rev. 2.0	Ammonia-N	105	101	104			2.50
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103					2.78
	Kjeldahl Nitrogen	106	115	113			1.48
EPA 353.2 Rev. 2.0	NO2NO3-N	102	96.2	96.2			0.0
EPA 365.1 Rev. 2.0	Total-P	106	100	104			3.38
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.6	97.4	97.9			0.480
SM 2120 B	Color (true)					1.23	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
SM 2120 B	Color (true)					8.53	
SM 2320 B-97	Total Alkalinity	98.2				0.0167	
SM 2540 C-97	TDS					1.27	
SM 2540 D-97	TSS					0.0	
SM 4500 F-C-97	Fluoride	99.5	105	106			1.50
SM 5310 B-00	Organic Carbon	101	102	103			0.778

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1890931, 1890932, 1890933
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1890931, 1890932, 1890933
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1890931, 1890932, 1890933
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1890934, 1890935, 1890936
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1890934, 1890935, 1890936
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1890934, 1890935, 1890936
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1890934, 1890935, 1890936
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1890937, 1890938, 1890939
SM 2120 B / E31780	True Color measured at 450 nm	1890931, 1890932, 1890933
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1890931, 1890932, 1890933
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1890931, 1890932, 1890933
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1890931, 1890932, 1890933
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1890931, 1890932, 1890933
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1890934, 1890935, 1890936

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	04/20/2017			04/20/2017 16:03	Blanca Fach	1890931, 1890932, 1890933
EPA 300.0 Rev. 2.1	04/20/2017			04/28/2017	Ping Hua	1890931
	04/20/2017			04/29/2017	Ping Hua	1890932, 1890933
EPA 350.1 Rev. 2.0	04/20/2017			04/20/2017	Julie Michelle Frank	1890934, 1890935, 1890936
EPA 351.2 Rev. 2.0	04/20/2017	04/27/2017	Adrian Shelby	04/28/2017	Joseph Suarez	1890934, 1890935, 1890936
EPA 353.2 Rev. 2.0	04/20/2017			04/27/2017	Beverly Y. Sanders	1890934, 1890935, 1890936
EPA 365.1 Rev. 2.0	04/20/2017	04/24/2017	Vijayalakshmi Reddy	04/25/2017	Christopher Armour	1890934, 1890935, 1890936
EPA 365.1 Rev. 2.0 dissolved	04/20/2017			04/20/2017 15:46	Anthony C. Onicha	1890937
	04/20/2017			04/20/2017 15:50	Anthony C. Onicha	1890938
	04/20/2017			04/20/2017 15:52	Anthony C. Onicha	1890939
SM 2120 B	04/20/2017			04/20/2017 17:05	Julia Storbeck	1890933
	04/20/2017			04/20/2017 17:07	Julia Storbeck	1890931
	04/20/2017			04/20/2017 17:08	Julia Storbeck	1890932
SM 2320 B-97	04/20/2017			05/02/2017	Dale L. Simmons	1890931, 1890932, 1890933
SM 2540 C-97	04/20/2017			04/24/2017	Sima Feizi	1890931, 1890932, 1890933
SM 2540 D-97	04/20/2017			04/24/2017	Sima Feizi	1890931, 1890932, 1890933
SM 4500 F-C-97	04/20/2017			05/03/2017	Dale L. Simmons	1890931, 1890932, 1890933
SM 5310 B-00	04/20/2017			04/21/2017	Julie Michelle Frank	1890934, 1890935, 1890936