

Chemical Analysis Report

NE-DIST-2017-04-19-01

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

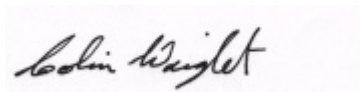
Event Description: **SUW 4- 4/18/17**
Request ID: **RQ-2017-04-10-07**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
NE ROC
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Certified by: Colin Wright, Program Administrator

Date Certified: 15-MAY-2017 13:18

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular 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: Lake Sampson near E shore

Collection Date/Time: 04/18/2017 10:10

Field ID: G1NE0511 04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889970	EPA 180.1 Rev. 2.0	Turbidity	2.1	A	NTU	P323701	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P324026	
		Sulfate	9.0		mg SO4/L	P324023	
	SM 2120 B	Color (true)	21	A	PCU	P323667	
	SM 2320 B-97	Total Alkalinity	34		mg CaCO3/L	P324162	
	SM 2540 C-97	TDS	115		mg/L	P324028	
	SM 2540 D-97	TSS	2	I	mg/L	P324267	
	SM 4500 F-C-97	Fluoride	0.065	I	mg F/L	P324682	
1889973	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P323680	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P323955	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323908	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P323739	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P323789	
1889976	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323662	

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: Lake Alto center

Collection Date/Time: 04/18/2017 12:05

Field ID: G1NE0528 04112017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889971	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P323701	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P324026	
		Sulfate	4.5		mg SO4/L	P324023	
	SM 2120 B	Color (true)	90		PCU	P323667	
	SM 2320 B-97	Total Alkalinity	2.6		mg CaCO3/L	P324162	
	SM 2540 C-97	TDS	75		mg/L	P324029	
	SM 2540 D-97	TSS	4	I	mg/L	P324268	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P324682	
1889974	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323680	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P323955	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323908	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P323739	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P323789	
1889977	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323662	

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: Blank

Collection Date/Time: 04/18/2017 11:00

Field ID: BLANK 04112017

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889972	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P323701	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P324026	
		Sulfate	0.20	U	mg SO4/L	P324023	

Field ID: BLANK 04112017

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889972	SM 2120 B	Color (true)	2.5	U	PCU	P323667	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P324162	
	SM 2540 C-97	TDS	15	U	mg/L	P324028	
	SM 2540 D-97	TSS	2	U	mg/L	P324267	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P324682	
1889975	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P323680	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P323955	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P323908	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P323739	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P323785	
1889978	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P323662	

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: P323701

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P324023

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P324026

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P323680

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P323955

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P323908

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: P323739

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323662

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

Reference Method: SM 2120 B
Batch ID: P323667

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P324162

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

Reference Method: SM 2540 C-97
Batch ID: P324028

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P324029

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324267

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324268

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P324682

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P323785

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00
Batch ID: P323789

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: P324023

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324026

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323680

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323955

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323739

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323662

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323662

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: P324162

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

Reference Method: SM 4500 F-C-97
Batch ID: P324682

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P323785

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P323789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889995	Sulfate	98.3		P	90 - 110
1890093	Sulfate	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324026

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889995	Chloride	99.2		P	90 - 110
1890093	Chloride	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889946	Ammonia-N	101	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889996	Kjeldahl Nitrogen	94.2	94.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889974	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889973	Total-P	97.6	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889952	O-Phosphate-P	97.6	98.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P324682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890031	Fluoride	97.0	94.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P323785

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890444	Organic Carbon	107		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P323789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889973	Organic Carbon	99.2	99.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889970	Turbidity	3.37	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890093	Sulfate	0.0502	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890093	Chloride	0.245	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889946	Ammonia-N	0.0785	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889996	Kjeldahl Nitrogen	0.187	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P323908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889974	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889973	Total-P	2.51	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889952	O-Phosphate-P	0.587	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P323667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889970	Color (true)	1.47	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P324162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890031	Total Alkalinity	0.0193	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P324028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889863	TDS	4.36	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P324029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890087	TDS	7.02	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P324682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890031	Fluoride	0.461	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P323785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890444	Organic Carbon	0.176	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P323789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889973	Organic Carbon	0.245	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: A75883
Included Lab Sample IDs: 1889976, 1889977, 1889978

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A75886

Included Lab Sample IDs: 1889970, 1889971, 1889972

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.5	101	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75889

Included Lab Sample IDs: 1889973, 1889974, 1889975

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75900

Included Lab Sample IDs: 1889970, 1889971, 1889972

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

Reference Method: SM 5310 B-00

Run ID: A75923

Included Lab Sample IDs: 1889975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.5	98.6	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A75924

Included Lab Sample IDs: 1889973, 1889974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.5	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75932

Included Lab Sample IDs: 1889973, 1889974, 1889975

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75962

Included Lab Sample IDs: 1889973, 1889974, 1889975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75996

Included Lab Sample IDs: 1889973, 1889974, 1889975

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75999

Included Lab Sample IDs: 1889970, 1889971, 1889972

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	98.3	93.7	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76045

Included Lab Sample IDs: 1889970, 1889971, 1889972

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

Reference Method: SM 4500 F-C-97

Run ID: A76201

Included Lab Sample IDs: 1889970, 1889971, 1889972

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	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				3.37	
EPA 300.0 Rev. 2.1	Chloride	101	99.5 99.2		0.245	
	Sulfate	98.9	98.8 98.3		0.0502	
EPA 350.1 Rev. 2.0	Ammonia-N	102	101 101			0.0785
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.0	94.2 94.0			0.187
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	102 100			0.990
EPA 365.1 Rev. 2.0	Total-P	103	97.6 100			2.51
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	97.6 98.2			0.587
SM 2120 B	Color (true)				1.47	
SM 2320 B-97	Total Alkalinity	102			0.0193	
SM 2540 C-97	TDS				4.36	
	TDS				7.02	
SM 4500 F-C-97	Fluoride	98.1	97.0 94.7			0.461
SM 5310 B-00	Organic Carbon	100	107			0.176
	Organic Carbon	99.6	99.2 99.6			0.245

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1889970, 1889971, 1889972
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1889970, 1889971, 1889972

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1889970, 1889971, 1889972
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1889973, 1889974, 1889975
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1889973, 1889974, 1889975
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1889973, 1889974, 1889975
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1889973, 1889974, 1889975
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1889976, 1889977, 1889978
SM 2120 B / E31780	True Color measured at 450 nm	1889970, 1889971, 1889972
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1889970, 1889971, 1889972
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1889970, 1889971, 1889972
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1889970, 1889971, 1889972
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1889970, 1889971, 1889972
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1889973, 1889974, 1889975

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	04/19/2017			04/19/2017 16:06	Sima Feizi	1889970, 1889971, 1889972
EPA 300.0 Rev. 2.1	04/19/2017			04/26/2017	Ping Hua	1889970, 1889971, 1889972
EPA 350.1 Rev. 2.0	04/19/2017			04/19/2017	Julie Michelle Frank	1889973, 1889974, 1889975
EPA 351.2 Rev. 2.0	04/19/2017	04/25/2017	Adrian Shelby	04/26/2017	Joseph Suarez	1889973, 1889974, 1889975
EPA 353.2 Rev. 2.0	04/19/2017			04/24/2017	Beverly Y. Sanders	1889973, 1889974, 1889975
EPA 365.1 Rev. 2.0	04/19/2017	04/20/2017	Adrian Shelby	04/21/2017	Lipi Saha	1889973, 1889974, 1889975
EPA 365.1 Rev. 2.0 dissolved	04/19/2017			04/19/2017 14:26	Anthony C. Onicha	1889976
	04/19/2017			04/19/2017 14:27	Anthony C. Onicha	1889977
	04/19/2017			04/19/2017 14:28	Anthony C. Onicha	1889978
	04/19/2017			04/19/2017 15:36	Julia Storbeck	1889970
	04/19/2017			04/19/2017 15:42	Julia Storbeck	1889971
SM 2120 B	04/19/2017			04/19/2017 15:43	Julia Storbeck	1889972
SM 2320 B-97	04/19/2017			04/27/2017	Dale L. Simmons	1889970, 1889971, 1889972
SM 2540 C-97	04/19/2017			04/21/2017	Yijie Li	1889970, 1889971, 1889972
SM 2540 D-97	04/19/2017			04/21/2017	Yijie Li	1889970, 1889971, 1889972
SM 4500 F-C-97	04/19/2017			05/03/2017	Dale L. Simmons	1889970, 1889971, 1889972
SM 5310 B-00	04/19/2017			04/19/2017	Julie Michelle Frank	1889973, 1889974
	04/19/2017			04/20/2017	Julie Michelle Frank	1889975