

Chemical Analysis Report

NE-DIST-2016-08-24-01

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

Event Description: **Alachua Lakes**
Request ID: **RQ-2016-08-22-11**
Customer: **NE-DIST**
Project ID: **SMP**

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8800 Baymeadows Way
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Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 14-SEP-2016 12:34

A handwritten signature in black ink, appearing to read 'Timothy W. Fitzpatrick', with a stylized flourish at the end.

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 WAUBERG

Collection Date/Time: 08/23/2016 11:05

Field ID: G1NE0114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1826625	EPA 180.1 Rev. 2.0	Turbidity	9.8	A	NTU	P310295	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P310944	
		Sulfate	0.20	U	mg SO4/L	P310947	
	SM 2120 B	Color (true)	19		PCU	P310278	
	SM 2320 B-97	Total Alkalinity	20		mg CaCO3/L	P310443	
	SM 2540 C-97	TDS	50		mg/L	P310886	
	SM 2540 D-97	TSS	13	I	mg/L	P310783	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P310447	
1826628	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P310470	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P310468	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P310621	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P310411	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P310694	
1826631	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018		mg P/L	P310273	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated due to sample matrix interference.

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

Sample Location: MOON LAKE CENTER

Collection Date/Time: 08/23/2016 12:30

Field ID: G1NE0197

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1826626	EPA 180.1 Rev. 2.0	Turbidity	7.9		NTU	P310295	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P310944	
		Sulfate	14		mg SO4/L	P310947	
	SM 2120 B	Color (true)	50	A	PCU	P310278	
	SM 2320 B-97	Total Alkalinity	18		mg CaCO3/L	P310443	
	SM 2540 C-97	TDS	77		mg/L	P310886	
	SM 2540 D-97	TSS	6	I	mg/L	P310783	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P310447	
1826629	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P310470	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P310468	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P310621	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P310411	
	SM 5310 B-00	Organic Carbon	9.3		mg C/L	P310694	
1826632	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.056		mg P/L	P310273	

Ref. Method and Comment:

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

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

Sample Location: HAMMOCK LAKE

Collection Date/Time: 08/23/2016 13:05

Field ID: G1NE0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1826627	EPA 180.1 Rev. 2.0	Turbidity	19		NTU	P310295	

Field ID: G1NE0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1826627	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P310944	
		Sulfate	4.9		mg SO4/L	P310947	
	SM 2120 B	Color (true)	35		PCU	P310278	
	SM 2320 B-97	Total Alkalinity	87		mg CaCO3/L	P310443	
	SM 2540 C-97	TDS	176		mg/L	P310887	
	SM 2540 D-97	TSS	20		mg/L	P310784	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P310447	
1826630	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P310470	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P310468	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P310622	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P310411	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P310694	
1826633	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P310273	

Ref. Method and Comment:

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

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P310295

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P310944

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P310947

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P310470

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P310468

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310621

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310622

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310411

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310273

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

Reference Method: SM 2120 B
Batch ID: P310278

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P310443

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

Reference Method: SM 2540 C-97
Batch ID: P310886

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P310887

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P310783

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P310784

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P310447

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P310694

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: P310944

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P310947

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310470

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310468

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: P310621

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310622

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310411

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310273

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

Reference Method: SM 2320 B-97
Batch ID: P310443

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P310447

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P310694

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P310944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826517	Chloride	99.7		P	90 - 110
1826626	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P310947

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826517	Sulfate	99.0		P	90 - 110
1826626	Sulfate	96.8		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310470

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826454	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826511	NO2NO3-N	105	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826630	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826521	Total-P	103	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826631	O-Phosphate-P	96.7	97.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P310447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826790	Fluoride	98.5	99.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P310694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1826504	Organic Carbon	102	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P310295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826625	Turbidity	2.75	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P310944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826517	Chloride	0.446	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P310947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826517	Sulfate	0.227	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P310470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826454	Ammonia-N	1.51	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P310468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826628	Kjeldahl Nitrogen	2.10	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826511	NO2NO3-N	1.12	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P310622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826630	NO2NO3-N	0.473	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P310411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826521	Total-P	3.95	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P310273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826631	O-Phosphate-P	0.696	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P310278

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826626	Color (true)	3.33	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P310443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826790	Total Alkalinity	0.576	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P310886

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826501	TDS	3.58	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P310887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826790	TDS	2.53	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P310447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826790	Fluoride	0.940	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P310694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1826504	Organic Carbon	0.977	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: A71305
Included Lab Sample IDs: 1826631, 1826632, 1826633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	101	P/P	90 - 110
O-Phosphate-P	99.9	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A71307

Included Lab Sample IDs: 1826625, 1826626, 1826627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	103	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A71313

Included Lab Sample IDs: 1826625, 1826626, 1826627

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

Reference Method: SM 2320 B-97

Run ID: A71361

Included Lab Sample IDs: 1826625, 1826626, 1826627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A71361

Included Lab Sample IDs: 1826625, 1826626, 1826627

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A71368

Included Lab Sample IDs: 1826628, 1826629, 1826630

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A71373

Included Lab Sample IDs: 1826628, 1826629, 1826630

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A71414

Included Lab Sample IDs: 1826628, 1826629, 1826630

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A71425

Included Lab Sample IDs: 1826628, 1826629, 1826630

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

Reference Method: SM 5310 B-00

Run ID: A71453

Included Lab Sample IDs: 1826628, 1826629, 1826630

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A71540

Included Lab Sample IDs: 1826625, 1826626, 1826627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	98.1	99.6	P/P	90 - 110
Sulfate	99.8	98.1	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					2.75	
EPA 300.0 Rev. 2.1	Chloride	101	99.7	99.9		0.446	
	Sulfate	98.6	99.0	96.8		0.227	
EPA 350.1 Rev. 2.0	Ammonia-N	101	102	101			1.51
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106					2.10
EPA 353.2 Rev. 2.0	NO2NO3-N	104	105	103			1.12
	NO2NO3-N	106	106	106			0.473
EPA 365.1 Rev. 2.0	Total-P	99.0	103	96.8			3.95
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	96.7	97.5			0.696
SM 2120 B	Color (true)					3.33	
SM 2320 B-97	Total Alkalinity	103				0.576	
SM 2540 C-97	TDS					3.58	
	TDS					2.53	
SM 4500 F-C-97	Fluoride	98.9	98.5	99.7			0.940
SM 5310 B-00	Organic Carbon	103	102	103			0.977

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
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Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1826625, 1826626, 1826627
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1826625, 1826626, 1826627
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1826625, 1826626, 1826627
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1826628, 1826629, 1826630
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1826628, 1826629, 1826630
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1826628, 1826629, 1826630
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1826628, 1826629, 1826630
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1826631, 1826632, 1826633
SM 2120 B / E31780	True Color measured at 450 nm	1826625, 1826626, 1826627
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1826625, 1826626, 1826627
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1826625, 1826626, 1826627
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1826625, 1826626, 1826627
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1826625, 1826626, 1826627
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1826628, 1826629, 1826630

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	08/24/2016			08/24/2016 15:45	Sima Feizi	1826625, 1826626, 1826627
EPA 300.0 Rev. 2.1	08/24/2016			09/10/2016	Ping Hua	1826625, 1826626, 1826627
EPA 350.1 Rev. 2.0	08/24/2016			08/29/2016	Joseph Suarez	1826628, 1826629, 1826630
EPA 351.2 Rev. 2.0	08/24/2016	08/29/2016	Adrian Shelby	08/30/2016	Christopher Armour	1826628, 1826629, 1826630
EPA 353.2 Rev. 2.0	08/24/2016			08/31/2016	Beverly Y. Sanders	1826628, 1826629, 1826630
EPA 365.1 Rev. 2.0	08/24/2016	08/26/2016	Vijayalakshmi Reddy	08/26/2016	Lipi Saha	1826628, 1826629, 1826630
EPA 365.1 Rev. 2.0 dissolved	08/24/2016			08/24/2016 15:56	Julia Storbeck	1826631
	08/24/2016			08/24/2016 16:46	Julia Storbeck	1826632
	08/24/2016			08/24/2016 16:47	Julia Storbeck	1826633
	08/24/2016			08/24/2016 18:04	Rochelle Y Jackson	1826625
SM 2120 B	08/24/2016			08/24/2016 18:05	Rochelle Y Jackson	1826626
	08/24/2016			08/24/2016 18:06	Rochelle Y Jackson	1826627
	08/24/2016			08/27/2016	Dale L. Simmons	1826625, 1826626, 1826627
SM 2320 B-97	08/24/2016			08/29/2016	Yijie Li	1826625, 1826626, 1826627
SM 2540 C-97	08/24/2016			08/29/2016	Yijie Li	1826625, 1826626, 1826627
SM 2540 D-97	08/24/2016			08/27/2016	Dale L. Simmons	1826625, 1826626, 1826627
SM 4500 F-C-97	08/24/2016			08/31/2016	Sofia Elnemr	1826628, 1826629, 1826630
SM 5310 B-00	08/24/2016					