

Chemical Analysis Report

CEN-DIST-2017-09-26-01

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

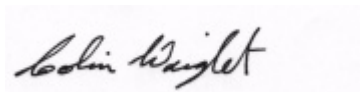
Event Description: **Silver Lk (Sem) / Noname Lk / Greenwood Lk**
Request ID: **RQ-2017-09-25-44**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Mike Linger

For additional information please contact
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Certified by: Colin Wright, Program Administrator

Date Certified: 11-OCT-2017 11:45

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: GREENWOOD LAKE WEST LOBE @ CENTER **Collection Date/Time: 09/25/2017 10:45**

Field ID: G2CE0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931316	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P332253	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P332302	
		Sulfate	2.9		mg SO4/L	P332303	
	SM 2120 B	Color (true)	50		PCU	P332276	
	SM 2320 B-97	Total Alkalinity	31		mg CaCO3/L	P332631	
	SM 2540 C-97	TDS	92		mg/L	P332560	
	SM 2540 D-97	TSS	4	I	mg/L	P332586	
	SM 4500 F-C-97	Fluoride	0.044	I	mg F/L	P332635	
1931319	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P332538	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P332355	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332459	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P332394	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P332408	
1931322	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332271	

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 HOPE @ CENTER

Collection Date/Time: 09/25/2017 12:05

Field ID: G2CE0106

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931317	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P332253	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P332302	
		Sulfate	19		mg SO4/L	P332303	
	SM 2120 B	Color (true)	31		PCU	P332276	
	SM 2320 B-97	Total Alkalinity	33		mg CaCO3/L	P332631	
	SM 2540 C-97	TDS	142		mg/L	P332560	
	SM 2540 D-97	TSS	2	I	mg/L	P332586	
	SM 4500 F-C-97	Fluoride	0.066	I	mg F/L	P332635	
1931320	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P332538	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P332355	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332607	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P332394	
	SM 5310 B-00	Organic Carbon	5.8		mg C/L	P332408	
1931323	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332271	

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: NONAME LAKE @ CENTER

Collection Date/Time: 09/25/2017 12:50

Field ID: G2CE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931318	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P332253	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P332302	
		Sulfate	10		mg SO4/L	P332303	

Field ID: G2CE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1931318	SM 2120 B	Color (true)	21		PCU	P332276	
	SM 2320 B-97	Total Alkalinity	15		mg CaCO3/L	P332631	
	SM 2540 C-97	TDS	78		mg/L	P332561	
	SM 2540 D-97	TSS	3	I	mg/L	P332587	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P332635	
1931321	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P332538	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P332355	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P332607	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P332394	
	SM 5310 B-00	Organic Carbon	5.6		mg C/L	P332408	
1931324	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P332271	

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: P332253

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P332302

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P332303

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P332538

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P332355

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P332459

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332607

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332394

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

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

Reference Method: SM 2120 B
Batch ID: P332276

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P332631

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

Reference Method: SM 2540 C-97
Batch ID: P332560

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P332561

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P332586

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P332587

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P332635

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P332408

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: P332302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332303

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332538

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332355

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332459

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332607

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: P332394

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
Batch ID: P332394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.0		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P332631

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

Reference Method: SM 4500 F-C-97
Batch ID: P332635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P332408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930998	Chloride	95.6		P	90 - 110
1930999	Chloride	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332303

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1930998	Sulfate	108		P	90 - 110
1930999	Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931296	Ammonia-N	98.8	97.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332355

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931296	Kjeldahl Nitrogen	97.3	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931319	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332607

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931296	NO2NO3-N	108	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931320	Total-P	97.1	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931323	O-Phosphate-P	95.4	96.3	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P332635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931611	Fluoride	95.8	96.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P332408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1931188	Organic Carbon	94.1	94.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P332253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931251	Turbidity	1.44	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930998	Chloride	1.93	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P332303

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1930998	Sulfate	3.49	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931296	Ammonia-N	0.921	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P332355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931296	Kjeldahl Nitrogen	2.65	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931319	NO2NO3-N	1.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P332607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931296	NO2NO3-N	0.930	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P332394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931320	Total-P	1.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P332271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931323	O-Phosphate-P	0.939	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P332276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931251	Color (true)	4.12	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P332631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931611	Total Alkalinity	0.333	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
 Batch ID: P332560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931251	TDS	3.31	Sample	P	0 - 10

Reference Method: SM 2540 C-97
 Batch ID: P332561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931332	TDS	4.63	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P332635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931611	Fluoride	0.495	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P332408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1931188	Organic Carbon	0.0262	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 300.0 Rev. 2.1
 Run ID: A79147
 Included Lab Sample IDs: 1931316, 1931317, 1931318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	100	P/P	90 - 110
Chloride	100	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A79147

Included Lab Sample IDs: 1931316, 1931317, 1931318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	104	99.4	P/P	90 - 110
Sulfate	99.0	104	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A79162

Included Lab Sample IDs: 1931316, 1931317, 1931318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A79167

Included Lab Sample IDs: 1931322, 1931323, 1931324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	101	P/P	90 - 110
O-Phosphate-P	98.4	102	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A79170

Included Lab Sample IDs: 1931316, 1931317, 1931318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.9	99.3	P/P	85 - 115

Reference Method: SM 5310 B-00

Run ID: A79215

Included Lab Sample IDs: 1931319, 1931320, 1931321

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	93.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79237

Included Lab Sample IDs: 1931319

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79267

Included Lab Sample IDs: 1931319, 1931320, 1931321

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79291

Included Lab Sample IDs: 1931319, 1931320, 1931321

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79291

Included Lab Sample IDs: 1931319, 1931320, 1931321

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79298

Included Lab Sample IDs: 1931320, 1931321

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79299

Included Lab Sample IDs: 1931319, 1931320, 1931321

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.5	P/P	90 - 110
Total-P	101	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A79305

Included Lab Sample IDs: 1931316, 1931317, 1931318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.5	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79305

Included Lab Sample IDs: 1931316, 1931317, 1931318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.1	99.0	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.44	
EPA 300.0 Rev. 2.1	Chloride	98.8	95.6 95.8		1.93	
	Sulfate	106	108 105		3.49	
EPA 350.1 Rev. 2.0	Ammonia-N	100	98.8 97.8			0.921
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	97.3 101			2.65
EPA 353.2 Rev. 2.0	NO2NO3-N	105	104 105			1.44
	NO2NO3-N	106	108 107			0.930
EPA 365.1 Rev. 2.0	Total-P	98.1	97.1 98.1			1.00
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.0	95.4 96.3			0.939
SM 2120 B	Color (true)				4.12	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 2320 B-97	Total Alkalinity	102				0.333	
SM 2540 C-97	TDS					3.31	
	TDS					4.63	
SM 4500 F-C-97	Fluoride	97.2	95.8	96.3			0.495
SM 5310 B-00	Organic Carbon	94.8	94.1	94.2			0.0262

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1931316, 1931317, 1931318
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1931316, 1931317, 1931318
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1931316, 1931317, 1931318
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1931319, 1931320, 1931321
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1931319, 1931320, 1931321
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1931319, 1931320, 1931321
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1931319, 1931320, 1931321
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1931322, 1931323, 1931324
SM 2120 B / E31780	True Color measured at 450 nm	1931316, 1931317, 1931318
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1931316, 1931317, 1931318
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1931316, 1931317, 1931318
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1931316, 1931317, 1931318
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1931316, 1931317, 1931318
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1931319, 1931320, 1931321

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	09/26/2017			09/26/2017 15:39	Tanya Welborn	1931316, 1931317, 1931318
EPA 300.0 Rev. 2.1	09/26/2017			09/26/2017	Julia Storbeck	1931316, 1931317, 1931318
EPA 350.1 Rev. 2.0	09/26/2017			09/29/2017	Sofia Elnemr	1931319, 1931320, 1931321
EPA 351.2 Rev. 2.0	09/26/2017	09/28/2017	Adrian Shelby	10/02/2017	Tanya Welborn	1931319, 1931320, 1931321
EPA 353.2 Rev. 2.0	09/26/2017			09/29/2017	Beverly Y. Sanders	1931319
	09/26/2017			10/03/2017	Beverly Y. Sanders	1931320, 1931321
EPA 365.1 Rev. 2.0	09/26/2017	09/28/2017	Sima Feizi	10/03/2017	Lipi Saha	1931319, 1931320, 1931321
EPA 365.1 Rev. 2.0 dissolved	09/26/2017			09/26/2017 14:47	Megan Treadwell	1931323
	09/26/2017			09/26/2017 15:11	Megan Treadwell	1931324
	09/26/2017			09/26/2017 15:12	Megan Treadwell	1931322
SM 2120 B	09/26/2017			09/26/2017 15:28	DeAsia Armster	1931316
	09/26/2017			09/26/2017 15:29	DeAsia Armster	1931317
	09/26/2017			09/26/2017 15:30	DeAsia Armster	1931318
SM 2320 B-97	09/26/2017			10/02/2017	Dale L. Simmons	1931316, 1931317, 1931318
SM 2540 C-97	09/26/2017			09/27/2017	Yijie Li	1931316, 1931317, 1931318
SM 2540 D-97	09/26/2017			09/27/2017	Yijie Li	1931316, 1931317, 1931318
SM 4500 F-C-97	09/26/2017			10/02/2017	Dale L. Simmons	1931316, 1931317, 1931318
SM 5310 B-00	09/26/2017			09/28/2017	Ping Hua	1931319, 1931320, 1931321