

Chemical Analysis Report

CEN-DIST-2018-10-24-01

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

Event Description: **Searcy / Hope / Noname**

Request ID: **RQ-2018-10-22-38**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

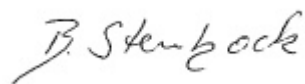
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Date Certified: 16-NOV-2018 15:46



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 Hope @ Center

Collection Date/Time: 10/23/2018 09:38

Field ID: G2CE0106

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2035468	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P353758	
	EPA 300.0 Rev. 2.1	Chloride	50	A	mg Cl/L	P353867	
		Sulfate	22	A	mg SO4/L	P353869	
	SM 2120 B	Color (true)	21		PCU	P353618	
	SM 2320 B-97	Total Alkalinity	44		mg CaCO3/L	P353898	
	SM 2540 C-97	TDS	158		mg/L	P354124	
	SM 2540 D-97	TSS	2	I	mg/L	P354020	
	SM 4500 F-C-97	Fluoride	0.072	I	mg F/L	P353903	
2035471	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P354089	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P353913	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P353775	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P353664	
	SM 5310 B-00	Organic Carbon	5.7		mg C/L	P353794	
2035474	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P353642	

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: 10/23/2018 10:26

Field ID: G2CE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2035469	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P353758	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P353867	
		Sulfate	10		mg SO4/L	P353869	
	SM 2120 B	Color (true)	21		PCU	P353618	
	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P353898	
	SM 2540 C-97	TDS	72		mg/L	P354124	
	SM 2540 D-97	TSS	4	I	mg/L	P354020	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P353903	
2035472	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P354089	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P353913	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P353775	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P353664	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P353794	
2035475	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P353642	

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 Searcy @ Center

Collection Date/Time: 10/23/2018 11:16

Field ID: G2CE0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2035470	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P353758	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P353867	
		Sulfate	3.6		mg SO4/L	P353869	
	SM 2120 B	Color (true)	65		PCU	P353618	
	SM 2320 B-97	Total Alkalinity	28		mg CaCO3/L	P353898	
	SM 2540 C-97	TDS	102		mg/L	P354124	
	SM 2540 D-97	TSS	7	I	mg/L	P354020	
	SM 4500 F-C-97	Fluoride	0.082	I	mg F/L	P353903	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P354089	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P353913	
2035473	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P353963	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P353664	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P353794	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P353642	
	dissolved						

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: P353758

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353867

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353869

Component	Result	Code	Units
Sulfate	0.20	U	mg SO ₄ /L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354089

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353913

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353775

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353963

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P353664

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P353642

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P353618

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P353898

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P354124

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354020

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P353903

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P353794

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: P353867

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353869

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354089

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: P353913

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353775

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353963

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P353664

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: P353642

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

Reference Method: SM 2120 B
Batch ID: P353618

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P353898

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P353903

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P353794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035468	Chloride	96.4		P	90 - 110
2035859	Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353869

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035468	Sulfate	98.8		P	90 - 110
2035859	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035461	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035471	Kjeldahl Nitrogen	101	99.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035461	NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035473	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P353664

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035471	Total-P	98.8	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P353642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035474	O-Phosphate-P	96.6	97.3	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P353903

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035886	Fluoride	98.9	100	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P353794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2035305	Organic Carbon	95.2	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P353758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035470	Turbidity	1.48	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035468	Chloride	0.272	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035468	Sulfate	0.0136	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035461	Ammonia-N	0.605	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035471	Kjeldahl Nitrogen	0.703	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035461	NO2NO3-N	0.324	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035473	NO2NO3-N	0.962	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P353664

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035471	Total-P	2.96	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P353642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035474	O-Phosphate-P	0.722	Spike	P	0 - 20

Reference Method: SM 2120 B
 Batch ID: P353618

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035460	Color (true)	3.82	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P353898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035886	Total Alkalinity	0.504	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P354124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035460	TDS	7.96	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P353903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035886	Fluoride	0.940	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P353794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2035305	Organic Carbon	0.231	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: SM 2120 B

Run ID: A87259

Included Lab Sample IDs: 2035468, 2035469, 2035470

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A87273

Included Lab Sample IDs: 2035474, 2035475, 2035476

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	99.3	P/P	90 - 110
O-Phosphate-P	99.9	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87310

Included Lab Sample IDs: 2035473

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87319

Included Lab Sample IDs: 2035471, 2035472

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A87320

Included Lab Sample IDs: 2035468, 2035469, 2035470

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87323

Included Lab Sample IDs: 2035471, 2035472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A87335

Included Lab Sample IDs: 2035471, 2035472, 2035473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87368

Included Lab Sample IDs: 2035468, 2035469, 2035470

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87368

Included Lab Sample IDs: 2035468, 2035469, 2035470

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

Reference Method: SM 2320 B-97

Run ID: A87382

Included Lab Sample IDs: 2035468, 2035469, 2035470

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A87382

Included Lab Sample IDs: 2035468, 2035469, 2035470

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87412

Included Lab Sample IDs: 2035473

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87414

Included Lab Sample IDs: 2035471, 2035472, 2035473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	109	P/P	90 - 110
Kjeldahl Nitrogen	104	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87465

Included Lab Sample IDs: 2035471, 2035472, 2035473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	105	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					1.48	
EPA 300.0 Rev. 2.1	Chloride	101	96.4	99.8		0.272	
	Sulfate	99.7	98.8	100		0.0136	
EPA 350.1 Rev. 2.0	Ammonia-N	102	103	102			0.605
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	101	99.9			0.703
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	99.0	99.5			0.324
	NO ₂ NO ₃ -N	101	104	104			0.962
EPA 365.1 Rev. 2.0	Total-P	99.0	98.8	102			2.96
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	96.6	97.3			0.722
SM 2120 B	Color (true)	102				3.82	
SM 2320 B-97	Total Alkalinity	102				0.504	
SM 2540 C-97	TDS					7.96	
SM 4500 F-C-97	Fluoride	99.1	98.9	100			0.940
SM 5310 B-00	Organic Carbon	96.1	95.2	95.6			0.231

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2035468, 2035469, 2035470
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2035468, 2035469, 2035470
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2035468, 2035469, 2035470
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2035471, 2035472, 2035473
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2035471, 2035472, 2035473
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2035471, 2035472, 2035473
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2035471, 2035472, 2035473
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2035474, 2035475, 2035476
SM 2120 B / E31780	True Color measured at 450 nm	2035468, 2035469, 2035470
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2035468, 2035469, 2035470
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2035468, 2035469, 2035470
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2035468, 2035469, 2035470
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2035468, 2035469, 2035470
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2035471, 2035472, 2035473

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	10/24/2018			10/24/2018 17:02	Megan Treadwell	2035468, 2035469, 2035470
EPA 300.0 Rev. 2.1	10/24/2018			10/29/2018 23:58	Irina Carbone	2035468
	10/24/2018			10/30/2018 00:47	Irina Carbone	2035469
	10/24/2018			10/30/2018 00:59	Irina Carbone	2035470
EPA 350.1 Rev. 2.0	10/24/2018			11/01/2018 12:24	Ping Hua	2035471
	10/24/2018			11/01/2018 12:26	Ping Hua	2035472
	10/24/2018			11/01/2018 12:27	Ping Hua	2035473
EPA 351.2 Rev. 2.0	10/24/2018	10/30/2018 11:55	Adrian Shelby	10/31/2018 12:17	Virginia P. Brown	2035471
	10/24/2018	10/30/2018 11:55	Adrian Shelby	10/31/2018 12:22	Virginia P. Brown	2035472
	10/24/2018	10/30/2018 11:55	Adrian Shelby	10/31/2018 12:27	Virginia P. Brown	2035473
EPA 353.2 Rev. 2.0	10/24/2018			10/26/2018 14:31	Lauren Bottorf	2035471
	10/24/2018			10/26/2018 14:33	Lauren Bottorf	2035472
	10/24/2018			10/31/2018 10:07	Beverly Y. Sanders	2035473
EPA 365.1 Rev. 2.0	10/24/2018	10/25/2018 12:50	Sima Feizi	10/26/2018 09:40	Beverly Y. Sanders	2035473
	10/24/2018	10/25/2018 12:50	Sima Feizi	10/26/2018 13:39	Beverly Y. Sanders	2035471
	10/24/2018	10/25/2018 12:50	Sima Feizi	10/26/2018 13:40	Beverly Y. Sanders	2035472
EPA 365.1 Rev. 2.0 dissolved	10/24/2018			10/24/2018 16:10	Julia Storbeck	2035474
	10/24/2018			10/24/2018 18:15	Julia Storbeck	2035475
	10/24/2018			10/24/2018 18:16	Julia Storbeck	2035476
SM 2120 B	10/24/2018			10/24/2018 16:30	Chelsea Hernandez	2035468
	10/24/2018			10/24/2018 16:31	Chelsea Hernandez	2035469
	10/24/2018			10/24/2018 16:32	Chelsea Hernandez	2035470
SM 2320 B-97	10/24/2018			10/29/2018 04:56	Dale L. Simmons	2035468
	10/24/2018			10/29/2018 05:08	Dale L. Simmons	2035469
	10/24/2018			10/29/2018 05:18	Dale L. Simmons	2035470
SM 2540 C-97	10/24/2018			10/25/2018 15:41	Yijie Li	2035468, 2035469, 2035470
SM 2540 D-97	10/24/2018			10/25/2018 15:41	Yijie Li	2035468, 2035469, 2035470
SM 4500 F-C-97	10/24/2018			10/29/2018 04:56	Dale L. Simmons	2035468
	10/24/2018			10/29/2018 05:08	Dale L. Simmons	2035469
	10/24/2018			10/29/2018 05:18	Dale L. Simmons	2035470
SM 5310 B-00	10/24/2018			10/27/2018 12:27	Megan Treadwell	2035471
	10/24/2018			10/27/2018 12:39	Megan Treadwell	2035472
	10/24/2018			10/27/2018 12:53	Megan Treadwell	2035473