

Chemical Analysis Report

CEN-DIST-2018-10-09-01

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

Event Description: **Reedy Creek + D&B**

Request ID: **RQ-2018-10-08-45**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

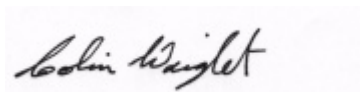
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Certified by: Colin Wright, Program Administrator

Date Certified: 31-OCT-2018 12:26

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored 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: Reedy Creek @ 200m upstream of confluence w/Dead River (3170A) **Collection Date/Time: 10/08/2018 11:22**

Field ID: G4CE0145

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2032438	EPA 180.1 Rev. 2.0	Turbidity	5.2		NTU	P352988	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P353437	
		Sulfate	0.76		mg SO4/L	P353442	
	SM 2120 B	Color (true)	460		PCU	P353000	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P353318	
	SM 2540 C-97	TDS	173		mg/L	P353227	
	SM 2540 D-97	TSS	14		mg/L	P353229	
	SM 4500 F-C-97	Fluoride	0.083	I	mg F/L	P353321	
2032439	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P353483	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P353283	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P353213	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P353208	
	SM 5310 B-00	Organic Carbon	38		mg C/L	P353425	
2032440	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.060		mg P/L	P352987	

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: Reedy Creek @ 200m upstream of confluence
 w/Dead River (3170A)**

Collection Date/Time: 10/08/2018 11:27

Field ID: G4CE0145_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2032441	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P352988	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P353437	
		Sulfate	0.78		mg SO4/L	P353442	
	SM 2120 B	Color (true)	460		PCU	P353000	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P353318	
	SM 2540 C-97	TDS	172		mg/L	P353227	
	SM 2540 D-97	TSS	15		mg/L	P353229	
	SM 4500 F-C-97	Fluoride	0.084	I	mg F/L	P353321	
2032442	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P353483	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P353283	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P353213	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P353208	
	SM 5310 B-00	Organic Carbon	37		mg C/L	P353425	
2032443	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.059		mg P/L	P352987	

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: DI source-Washroom

Collection Date/Time: 10/08/2018 12:22

Field ID: Blank_10082018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2032444	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P352988	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P353437	
		Sulfate	0.20	U	mg SO4/L	P353442	
	SM 2120 B	Color (true)	2.5	U	PCU	P353000	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P353318	
	SM 2540 C-97	TDS	15	U	mg/L	P353227	
	SM 2540 D-97	TSS	2	U	mg/L	P353229	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P353321	
2032445	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P353483	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P353283	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P353214	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P353208	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P353425	
2032446	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P352987	

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: P352988

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353437

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353442

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353483

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353283

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353213

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: P353214

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: P353208

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352987

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: P353000

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P353318

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

Reference Method: SM 2540 C-97
Batch ID: P353227

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P353229

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P353321

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P353425

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: P353437

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353442

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353483

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353283

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353213

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353214

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P353208

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.7		P	90 - 110

Reference Method: SM 2120 B
Batch ID: P353000

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.3		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P353318

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

Reference Method: SM 4500 F-C-97
Batch ID: P353321

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.4		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P353425

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353437

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032005	Chloride	104		P	90 - 110
2032381	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032005	Sulfate	103		P	90 - 110
2032381	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353483

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032387	Ammonia-N	96.2	98.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353283

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032453	Kjeldahl Nitrogen	94.9	91.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032383	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353214

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032457	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P353208

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032455	Total-P	101	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P352987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032494	O-Phosphate-P	100	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P353321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2032005	Fluoride	98.4	98.4	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P353425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031937	Organic Carbon	97.5	96.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P352988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032489	Turbidity	7.25	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032005	Chloride	3.78	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P353442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032005	Sulfate	5.36	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P353483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032387	Ammonia-N	1.88	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P353283

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032453	Kjeldahl Nitrogen	3.13	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032383	NO2NO3-N	1.66	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P353214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032457	NO2NO3-N	0.635	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P353208

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032455	Total-P	0.905	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P352987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032494	O-Phosphate-P	1.29	Spike	P	0 - 20

Reference Method: SM 2120 B
 Batch ID: P353000

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032489	Color (true)	0.646	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P353318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032005	Total Alkalinity	0.713	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P353227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032501	TDS	5.56	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P353321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2032005	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P353425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2031937	Organic Carbon	0.385	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: A86998

Included Lab Sample IDs: 2032440, 2032443, 2032446

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A86999

Included Lab Sample IDs: 2032438, 2032441, 2032444

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

Reference Method: SM 2120 B

Run ID: A87004

Included Lab Sample IDs: 2032438, 2032441, 2032444

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.8	99.0	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87095

Included Lab Sample IDs: 2032439, 2032442, 2032445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	100	P/P	90 - 110
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87105

Included Lab Sample IDs: 2032438, 2032441, 2032444

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Chloride	103	103	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87113

Included Lab Sample IDs: 2032439, 2032442

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87128

Included Lab Sample IDs: 2032445

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A87130

Included Lab Sample IDs: 2032438, 2032441, 2032444

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A87130

Included Lab Sample IDs: 2032438, 2032441, 2032444

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

Reference Method: SM 5310 B-00

Run ID: A87189

Included Lab Sample IDs: 2032439, 2032442, 2032445

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87205

Included Lab Sample IDs: 2032439, 2032442, 2032445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87206

Included Lab Sample IDs: 2032439, 2032442, 2032445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	101	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					7.25	
EPA 300.0 Rev. 2.1	Chloride	105	104	101		3.78	
	Sulfate	105	103	103		5.36	
EPA 350.1 Rev. 2.0	Ammonia-N	96.9	96.2	98.3			1.88
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	94.9	91.3			3.13
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.0	100	102			1.66
	NO ₂ NO ₃ -N	100	102	102			0.635
EPA 365.1 Rev. 2.0	Total-P	101	101	99.9			0.905
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.7	100	102			1.29
SM 2120 B	Color (true)	98.3				0.646	
SM 2320 B-97	Total Alkalinity	102				0.713	
SM 2540 C-97	TDS					5.56	
SM 4500 F-C-97	Fluoride	98.4	98.4	98.4			0.0
SM 5310 B-00	Organic Carbon	98.8	97.5	96.9			0.385

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2032438, 2032441, 2032444
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2032438, 2032441, 2032444
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2032438, 2032441, 2032444
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2032439, 2032442, 2032445
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2032439, 2032442, 2032445
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2032439, 2032442, 2032445
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2032439, 2032442, 2032445
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2032440, 2032443, 2032446
SM 2120 B / E31780	True Color measured at 450 nm	2032438, 2032441, 2032444
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2032438, 2032441, 2032444
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2032438, 2032441, 2032444
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2032438, 2032441, 2032444
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2032438, 2032441, 2032444
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2032439, 2032442, 2032445

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	10/09/2018			10/09/2018 13:42	Sima Feizi	2032438, 2032441, 2032444
EPA 300.0 Rev. 2.1	10/09/2018			10/20/2018 18:45	Lipi Saha	2032438
	10/09/2018			10/20/2018 18:57	Lipi Saha	2032441
	10/09/2018			10/20/2018 19:33	Lipi Saha	2032444
EPA 350.1 Rev. 2.0	10/09/2018			10/22/2018 14:39	Ping Hua	2032439
	10/09/2018			10/22/2018 14:40	Ping Hua	2032442
	10/09/2018			10/22/2018 14:46	Ping Hua	2032445
EPA 351.2 Rev. 2.0	10/09/2018	10/18/2018 11:30	Adrian Shelby	10/22/2018 13:22	Joseph Suarez	2032439
	10/09/2018	10/18/2018 11:30	Adrian Shelby	10/22/2018 13:24	Joseph Suarez	2032442
	10/09/2018	10/18/2018 11:30	Adrian Shelby	10/22/2018 13:25	Joseph Suarez	2032445
EPA 353.2 Rev. 2.0	10/09/2018			10/17/2018 11:47	Lauren Bottorf	2032439
	10/09/2018			10/17/2018 11:48	Lauren Bottorf	2032442
	10/09/2018			10/17/2018 12:01	Lauren Bottorf	2032445
EPA 365.1 Rev. 2.0	10/09/2018	10/17/2018 13:20	Sima Feizi	10/18/2018 10:14	Beverly Y. Sanders	2032439
	10/09/2018	10/17/2018 13:20	Sima Feizi	10/18/2018 10:15	Beverly Y. Sanders	2032442
	10/09/2018	10/17/2018 13:20	Sima Feizi	10/18/2018 13:31	Beverly Y. Sanders	2032445
EPA 365.1 Rev. 2.0 dissolved	10/09/2018			10/09/2018 13:02	Anthony C. Onicha	2032440
	10/09/2018			10/09/2018 13:03	Anthony C. Onicha	2032443
	10/09/2018			10/09/2018 13:04	Anthony C. Onicha	2032446
SM 2120 B	10/09/2018			10/09/2018 13:39	Blanca Fach	2032438
	10/09/2018			10/09/2018 13:40	Blanca Fach	2032441
	10/09/2018			10/09/2018 13:41	Blanca Fach	2032444
SM 2320 B-97	10/09/2018			10/18/2018 02:44	Dale L. Simmons	2032438
	10/09/2018			10/18/2018 02:55	Dale L. Simmons	2032441
	10/09/2018			10/18/2018 03:08	Dale L. Simmons	2032444
SM 2540 C-97	10/09/2018			10/15/2018 11:12	Yijie Li	2032438, 2032441, 2032444
SM 2540 D-97	10/09/2018			10/15/2018 10:45	Yijie Li	2032438
	10/09/2018			10/15/2018 10:48	Yijie Li	2032441
	10/09/2018			10/15/2018 10:51	Yijie Li	2032444
SM 4500 F-C-97	10/09/2018			10/18/2018 02:44	Dale L. Simmons	2032438
	10/09/2018			10/18/2018 02:55	Dale L. Simmons	2032441
	10/09/2018			10/18/2018 03:08	Dale L. Simmons	2032444
SM 5310 B-00	10/09/2018			10/19/2018 11:44	Megan Treadwell	2032439
	10/09/2018			10/19/2018 11:56	Megan Treadwell	2032442
	10/09/2018			10/20/2018 12:08	Megan Treadwell	2032445