

Chemical Analysis Report

CEN-DIST-2016-06-10-02

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

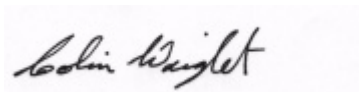
Event Description: **Toho Drain+D&B**
Request ID: **RQ-2016-06-06-49**
Customer: **CEN-DIST**
Project ID: **SMP**

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

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Certified by: Colin Wright, Environmental Administrator

Date Certified: 06-JUL-2016 12:59

A handwritten signature in black ink, appearing to read "Colin Wright", is written 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: Boggy Creek @ 1100m South of Boggy Creek Rd **Collection Date/Time: 06/09/2016 10:55**

Field ID: G4CE0127

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1807327	EPA 180.1 Rev. 2.0	Turbidity	2.7	A	NTU	P306017	
	EPA 300.0 Rev. 2.1	Chloride	12	A	mg Cl/L	P306581	
		Sulfate	4.7	A	mg SO4/L	P306583	
	SM 2120 B	Color (true)	130		PCU	P305973	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P306170	
	SM 2540 C-97	TDS	96		mg/L	P306552	
	SM 2540 D-97	TSS	6	I	mg/L	P306464	
	SM 4500 F-C-97	Fluoride	0.074	I	mg F/L	P306174	
1807330	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P306275	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P306107	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P306307	
	EPA 365.1 Rev. 2.0	Total-P	0.055		mg P/L	P306295	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P306389	
1807333	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P305999	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: Boggy Creek @ 1100m South of Boggy Creek Rd **Collection Date/Time: 06/09/2016 10:55**

Field ID: G4CE0127_D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1807328	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P306017	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P306581	
		Sulfate	4.8		mg SO4/L	P306583	
	SM 2120 B	Color (true)	130		PCU	P305972	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P306170	
	SM 2540 C-97	TDS	103		mg/L	P306552	
	SM 2540 D-97	TSS	6	I	mg/L	P306464	
	SM 4500 F-C-97	Fluoride	0.076	I	mg F/L	P306174	
1807331	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P306275	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P306107	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P306307	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P306295	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P306389	
1807334	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P305999	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Sample Location: Boggy Creek @ 1100m South of Boggy Creek Rd **Collection Date/Time: 06/09/2016 11:15**

Field ID: Field Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1807329	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P306017	

Field ID: Field Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1807329	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P306581	
		Sulfate	0.20	U	mg SO4/L	P306583	
	SM 2120 B	Color (true)	2.5	U	PCU	P305972	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P306170	
	SM 2540 C-97	TDS	15	U	mg/L	P306552	
	SM 2540 D-97	TSS	2	U	mg/L	P306464	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P306174	
1807332	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P306275	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P306107	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P306307	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P306295	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P306389	
1807335	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P305999	

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P306017

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P306581

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P306583

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P306275

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P306107

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: P306307

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306295

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305999

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

Reference Method: SM 2120 B
Batch ID: P305972

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P305973

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P306170

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

Reference Method: SM 2540 C-97
Batch ID: P306552

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P306464

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P306174

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P306389

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: P306581

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P306583

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	90.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P306307

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306295

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305999

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

Reference Method: SM 2320 B-97
Batch ID: P306170

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

Reference Method: SM 2320 B-97
Batch ID: P306170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P306174

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P306389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P306581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807297	Chloride	96.2		P	90 - 110
1807327	Chloride	97.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P306583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807297	Sulfate	97.2		P	90 - 110
1807327	Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807348	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807253	Kjeldahl Nitrogen	99.5	85.6	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P306307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807331	NO2NO3-N	96.5	98.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807347	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305999

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807355	O-Phosphate-P	98.8	99.0	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P306174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807236	Fluoride	96.8	97.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P306389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1807249	Organic Carbon	100	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P306017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807327	Turbidity	9.63	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P306581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807327	Chloride	0.257	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P306583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807327	Sulfate	0.961	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P306275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807348	Ammonia-N	0.0718	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P306107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807253	Kjeldahl Nitrogen	15.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P306307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807331	NO2NO3-N	1.99	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P306295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807347	Total-P	0.154	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P305999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807355	O-Phosphate-P	0.202	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P305972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807343	Color (true)	2.31	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P305973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807410	Color (true)	0.403	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P306170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807236	Total Alkalinity	0.311	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P306552

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807300	TDS	4.96	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P306174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807236	Fluoride	0.479	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P306389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1807249	Organic Carbon	1.49	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: A69967
Included Lab Sample IDs: 1807327, 1807328, 1807329

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.2	P/P	90 - 115
Color (true)	98.1	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A69977
Included Lab Sample IDs: 1807333, 1807334, 1807335

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A69982
Included Lab Sample IDs: 1807327, 1807328, 1807329

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	98.5	P/P	95 - 105

Reference Method: SM 2320 B-97
Run ID: A70028
Included Lab Sample IDs: 1807327, 1807328, 1807329

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

Reference Method: SM 4500 F-C-97
Run ID: A70028
Included Lab Sample IDs: 1807327, 1807328, 1807329

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A70045

Included Lab Sample IDs: 1807327, 1807328, 1807329

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.6	P/P	90 - 110
Chloride	100	99.9	P/P	90 - 110
Sulfate	94.8	97.8	P/P	90 - 110
Sulfate	95.2	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A70068

Included Lab Sample IDs: 1807330, 1807331, 1807332

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A70076

Included Lab Sample IDs: 1807330, 1807331, 1807332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.6	94.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A70077

Included Lab Sample IDs: 1807330, 1807331, 1807332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A70101

Included Lab Sample IDs: 1807330, 1807331, 1807332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.1	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A70120

Included Lab Sample IDs: 1807330, 1807331, 1807332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.5	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				9.63	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 300.0 Rev. 2.1	Chloride	97.7	97.1	96.2		0.257	
	Sulfate	90.8	96.6	97.2		0.961	
EPA 350.1 Rev. 2.0	Ammonia-N	98.7	101	101			0.0718
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	99.5	85.6			15.0
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	96.5	98.5			1.99
EPA 365.1 Rev. 2.0	Total-P	103	104	104			0.154
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	98.8	99.0			0.202
SM 2120 B	Color (true)					2.31	
	Color (true)					0.403	
SM 2320 B-97	Total Alkalinity	104				0.311	
SM 2540 C-97	TDS					4.96	
SM 4500 F-C-97	Fluoride	97.0	96.8	97.4			0.479
SM 5310 B-00	Organic Carbon	101	100	102			1.49

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1807327, 1807328, 1807329
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1807327, 1807328, 1807329
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1807327, 1807328, 1807329
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1807330, 1807331, 1807332
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1807330, 1807331, 1807332
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1807330, 1807331, 1807332
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1807330, 1807331, 1807332
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1807333, 1807334, 1807335
SM 2120 B / E31780	True Color measured at 450 nm	1807327, 1807328, 1807329
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1807327, 1807328, 1807329
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1807327, 1807328, 1807329
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1807327, 1807328, 1807329
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1807327, 1807328, 1807329
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1807330, 1807331, 1807332

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	06/10/2016			06/10/2016 15:18	Rochelle Y Jackson	1807327, 1807328, 1807329
EPA 300.0 Rev. 2.1	06/10/2016			06/15/2016	Elisa J Lutz	1807327
	06/10/2016			06/16/2016	Elisa J Lutz	1807328, 1807329
EPA 350.1 Rev. 2.0	06/10/2016			06/15/2016	Diana M. Turner	1807330, 1807331, 1807332
EPA 351.2 Rev. 2.0	06/10/2016	06/14/2016	Sofia Elnemr	06/16/2016	Christopher Armour	1807330, 1807331, 1807332
EPA 353.2 Rev. 2.0	06/10/2016			06/15/2016	Beverly Y. Sanders	1807330, 1807331, 1807332
EPA 365.1 Rev. 2.0	06/10/2016	06/16/2016	Vijayalakshmi Reddy	06/17/2016	Lipi Saha	1807330, 1807331, 1807332
EPA 365.1 Rev. 2.0 dissolved	06/10/2016			06/10/2016 15:04	Julia Storbeck	1807333
	06/10/2016			06/10/2016 15:05	Julia Storbeck	1807334
	06/10/2016			06/10/2016 15:06	Julia Storbeck	1807335
SM 2120 B	06/10/2016			06/10/2016 11:41	Rochelle Y Jackson	1807328, 1807329
	06/10/2016			06/10/2016 12:04	Rochelle Y Jackson	1807327
SM 2320 B-97	06/10/2016			06/14/2016	Dale L. Simmons	1807327, 1807328, 1807329
SM 2540 C-97	06/10/2016			06/14/2016	Yijie Li	1807327, 1807328, 1807329
SM 2540 D-97	06/10/2016			06/14/2016	Yijie Li	1807327, 1807328, 1807329
SM 4500 F-C-97	06/10/2016			06/14/2016	Dale L. Simmons	1807327, 1807328, 1807329
SM 5310 B-00	06/10/2016			06/16/2016	Diana M. Turner	1807330, 1807331, 1807332