

Chemical Analysis Report

CEN-DIST-2017-05-10-01

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

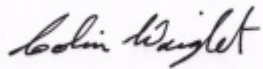
Event Description: **Spring Garden lake/ Spring Garden Creek**
Request ID: **RQ-2017-03-06-42**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 05-JUN-2017 14:30



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: Deep Creek @ 150m US of Spring Garden Creek

Collection Date/Time: 05/09/2017 10:28

Field ID: G2CE0115

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897728	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P325037	
	EPA 300.0 Rev. 2.1	Chloride	250		mg Cl/L	P325826	
		Sulfate	39		mg SO4/L	P325830	
	SM 2120 B	Color (true)	26		PCU	P325026	
	SM 2320 B-97	Total Alkalinity	111		mg CaCO3/L	P325466	
	SM 2540 C-97	TDS	580		mg/L	P325629	
	SM 2540 D-97	TSS	4	I	mg/L	P325667	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P325468	
1897730	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P325053	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P325158	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P325199	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P325211	
	SM 5310 B-00	Organic Carbon	6.9		mg C/L	P325231	
1897732	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P325041	

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: Spring Garden Lake @ 800m N of Center

Collection Date/Time: 05/09/2017 10:55

Field ID: G2CE0117

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1897729	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P325037	
	EPA 300.0 Rev. 2.1	Chloride	230		mg Cl/L	P325826	
		Sulfate	33		mg SO4/L	P325830	
	SM 2120 B	Color (true)	20		PCU	P325026	
	SM 2320 B-97	Total Alkalinity	113		mg CaCO3/L	P325520	
	SM 2540 C-97	TDS	533		mg/L	P325629	
	SM 2540 D-97	TSS	7	I	mg/L	P325667	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P325809	RPD
1897731	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P325053	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P325158	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325199	
	EPA 365.1 Rev. 2.0	Total-P	0.056		mg P/L	P325211	
	SM 5310 B-00	Organic Carbon	5.9		mg C/L	P325231	
1897733	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P325041	

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: P325037

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325037

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325826

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325830

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325053

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325158

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325199

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325211

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325041

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

Reference Method: SM 2120 B
Batch ID: P325026

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P325466

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

Reference Method: SM 2320 B-97
Batch ID: P325520

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

Reference Method: SM 2540 C-97
Batch ID: P325629

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P325667

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325468

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325809

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P325231

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: P325826

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325830

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325830

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325053

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	108		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325158

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: P325199

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325211

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325041

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.9		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P325466

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

Reference Method: SM 2320 B-97
Batch ID: P325520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P325468

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.0		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P325809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P325231

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325826

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898024	Chloride	101		P	90 - 110
1898025	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898024	Sulfate	98.7		P	90 - 110
1898025	Sulfate	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325053

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897698	Ammonia-N	107	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897698	Kjeldahl Nitrogen	94.7	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325199

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897687	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897730	Total-P	106	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325041

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897732	O-Phosphate-P	95.9	97.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P325468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897159	Fluoride	97.9	99.1	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P325809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898240	Fluoride	93.8	98.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P325231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1897116	Organic Carbon	91.9	94.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897686	Turbidity	0.643	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898024	Chloride	0.249	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P325830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898024	Sulfate	6.13	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325053

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897698	Ammonia-N	0.846	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897698	Kjeldahl Nitrogen	1.36	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325199

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897687	NO2NO3-N	0.501	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897730	Total-P	0.800	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325041

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897732	O-Phosphate-P	1.16	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P325026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897739	Color (true)	1.58	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P325466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897159	Total Alkalinity	0.405	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P325520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898240	Total Alkalinity	0.00206	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P325629

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897697	TDS	2.04	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P325468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897159	Fluoride	1.02	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898240	Fluoride	4.09	Spike	F	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P325231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1897116	Organic Carbon	1.30	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: A76330
Included Lab Sample IDs: 1897728, 1897729

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	105	103	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A76333
Included Lab Sample IDs: 1897732, 1897733

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	99.5	P/P	90 - 110
O-Phosphate-P	99.5	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A76334
Included Lab Sample IDs: 1897728, 1897729

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A76336
Included Lab Sample IDs: 1897730, 1897731

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76377

Included Lab Sample IDs: 1897730, 1897731

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

Reference Method: SM 5310 B-00

Run ID: A76393

Included Lab Sample IDs: 1897730, 1897731

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76415

Included Lab Sample IDs: 1897730, 1897731

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	103	P/P	90 - 110
Total-P	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76495

Included Lab Sample IDs: 1897730, 1897731

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

Reference Method: SM 2320 B-97

Run ID: A76498

Included Lab Sample IDs: 1897728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	107	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76498

Included Lab Sample IDs: 1897728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.1	97.0	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76528

Included Lab Sample IDs: 1897729

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

Reference Method: SM 4500 F-C-97

Run ID: A76661

Included Lab Sample IDs: 1897729

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	96.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A76672
Included Lab Sample IDs: 1897728, 1897729

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Sulfate	100	96.0	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				0.643	
EPA 300.0 Rev. 2.1	Chloride	103	101 101		0.249	
	Sulfate	99.9	98.7 97.6		6.13	
EPA 350.1 Rev. 2.0	Ammonia-N	108	107 106			0.846
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	94.7 97.0			1.36
EPA 353.2 Rev. 2.0	NO2NO3-N	103	99.5 100			0.501
EPA 365.1 Rev. 2.0	Total-P	102	106 105			0.800
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.9	95.9 97.1			1.16
SM 2120 B	Color (true)				1.58	
SM 2320 B-97	Total Alkalinity	103			0.405	
	Total Alkalinity	104			0.0020	
SM 2540 C-97	TDS				2.04	
SM 4500 F-C-97	Fluoride	94.0	97.9 99.1			1.02
	Fluoride	99.9	93.8 98.5			4.09
SM 5310 B-00	Organic Carbon	99.2	91.9 94.0			1.30

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1897728, 1897729
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1897728, 1897729
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1897728, 1897729
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1897730, 1897731
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1897730, 1897731
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1897730, 1897731
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1897730, 1897731
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1897732, 1897733
SM 2120 B / E31780	True Color measured at 450 nm	1897728, 1897729
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1897728, 1897729
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1897728, 1897729
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1897728, 1897729

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1897728, 1897729
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1897730, 1897731

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	05/10/2017			05/10/2017 15:36	Sima Feizi	1897728, 1897729
EPA 300.0 Rev. 2.1	05/10/2017			05/24/2017	Ping Hua	1897728, 1897729
EPA 350.1 Rev. 2.0	05/10/2017			05/10/2017	Julie Michelle Frank	1897730, 1897731
EPA 351.2 Rev. 2.0	05/10/2017	05/12/2017	Adrian Shelby	05/17/2017	Joseph Suarez	1897730, 1897731
EPA 353.2 Rev. 2.0	05/10/2017			05/12/2017	Beverly Y. Sanders	1897730, 1897731
EPA 365.1 Rev. 2.0	05/10/2017	05/12/2017	Vijayalakshmi Reddy	05/15/2017	Lipi Saha	1897730, 1897731
EPA 365.1 Rev. 2.0 dissolved	05/10/2017			05/10/2017 14:58	Anthony C. Onicha	1897732
	05/10/2017			05/10/2017 15:14	Anthony C. Onicha	1897733
SM 2120 B	05/10/2017			05/10/2017 15:03	Julia Storbeck	1897728
	05/10/2017			05/10/2017 15:04	Julia Storbeck	1897729
SM 2320 B-97	05/10/2017			05/18/2017	Dale L. Simmons	1897728, 1897729
SM 2540 C-97	05/10/2017			05/12/2017	Yijie Li	1897728, 1897729
SM 2540 D-97	05/10/2017			05/12/2017	Yijie Li	1897728, 1897729
SM 4500 F-C-97	05/10/2017			05/18/2017	Dale L. Simmons	1897728
	05/10/2017			05/24/2017	Dale L. Simmons	1897729
SM 5310 B-00	05/10/2017			05/11/2017	Christopher Armour	1897730
	05/10/2017			05/12/2017	Christopher Armour	1897731