

Chemical Analysis Report

NW-DIST-2018-11-01-01

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

Event Description: **Dune Lakes Run**
Request ID: **RQ-2018-10-08-57**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 27-NOV-2018 12:08



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: FULLER LAKE (MIDDLE)

Collection Date/Time: 10/31/2018 10:35

Field ID: G3NW0084

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038307	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P354073	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P355053	
		Sulfate	4.1		mg SO4/L	P355058	
	SM 2120 B	Color (true)	120		PCU	P354451	
	SM 2320 B-97	Total Alkalinity	0.69	I	mg CaCO3/L	P354358	
	SM 2540 C-97	TDS	60		mg/L	P354608	
	SM 2540 D-97	TSS	3	I	mg/L	P354529	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P354364	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P354510	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P354345	
2038309	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P354298	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P354275	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P354327	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P354083	
	dissolved						
2038311	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P354083	

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: MORRIS LAKE

Collection Date/Time: 10/31/2018 11:05

Field ID: G3NW0126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038322	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P354074	
	SM 2320 B-97	Total Alkalinity	1.4	I	mg CaCO3/L	P354554	
	SM 2540 D-97	TSS	3	I	mg/L	P354532	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P354934	MS
2038323	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P354511	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P354345	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P354373	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P354275	
	SM 5310 B-00	Organic Carbon	8.4		mg C/L	P354327	
2038324	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354084	

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: Stallworth Lake (Center)

Collection Date/Time: 10/31/2018 11:45

Field ID: G3NW0083

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038313	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P354074	
	SM 2320 B-97	Total Alkalinity	28		mg CaCO3/L	P354555	
	SM 2540 D-97	TSS	2	I	mg/L	P354531	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P354932	
2038316	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P354271	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P354343	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P354584	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P354380	
	SM 5310 B-00	Organic Carbon	8.4		mg C/L	P354327	
2038319	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354085	

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: ALLEN LAKE (MIDDLE)

Collection Date/Time: 10/31/2018 12:10

Field ID: G3NW0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038308	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P354074	
	EPA 300.0 Rev. 2.1	Chloride	19	A	mg Cl/L	P354918	
		Sulfate	3.8	A	mg SO4/L	P354920	
	SM 2120 B	Color (true)	140		PCU	P354451	
	SM 2320 B-97	Total Alkalinity	1.5	I	mg CaCO3/L	P354358	
	SM 2540 C-97	TDS	65		mg/L	P354608	
	SM 2540 D-97	TSS	2	I	mg/L	P354529	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P354364	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P354510	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P354345	
2038310	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P354298	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P354275	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P354327	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P354084	
	dissolved						

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: OYSTER LAKE CENTER

Collection Date/Time: 10/31/2018 12:30

Field ID: G3NW0165

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038314	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P354074	
	SM 2320 B-97	Total Alkalinity	63		mg CaCO3/L	P354555	
	SM 2540 D-97	TSS	3	IA	mg/L	P354532	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P354932	
2038317	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P354271	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P354343	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P354231	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P354380	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P354327	
2038320	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354085	

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: LITTLE REDFISH LAKE

Collection Date/Time: 10/31/2018 13:05

Field ID: G3NW0125

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038315	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P354074	
	SM 2320 B-97	Total Alkalinity	49		mg CaCO3/L	P354556	
	SM 2540 D-97	TSS	3	U	mg/L	P354533	
	SM 4500 F-C-97	Fluoride	0.39	I	mg F/L	P354932	
2038318	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P354271	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P354343	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P354231	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P354380	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P354205	
2038321	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354085	

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: P354073

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354074

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P354918

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P354920

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354271

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354511

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354343

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354231

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354298

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354373

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354584

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354275

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354380

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354083

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354084

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354085

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

Reference Method: SM 2120 B
Batch ID: P354451

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P354358

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

Reference Method: SM 2320 B-97
Batch ID: P354554

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

Reference Method: SM 2320 B-97
Batch ID: P354555

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

Reference Method: SM 2320 B-97
Batch ID: P354556

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

Reference Method: SM 2540 C-97
Batch ID: P354608

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354529

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P354531

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354532

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354533

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P354364

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P354932

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P354934

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P354205

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00
Batch ID: P354327

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: P354918

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P354920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354271

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354511

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354231

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: P354298

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354373

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354584

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: P354275

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354380

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354083

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354084

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354085

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P354451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.0		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P354358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P354554

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

Reference Method: SM 2320 B-97
Batch ID: P354555

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

Reference Method: SM 2320 B-97
Batch ID: P354556

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

Reference Method: SM 4500 F-C-97
Batch ID: P354364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P354932

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P354934

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.8		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P354327

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P354918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038308	Chloride	90.9		P	90 - 110
2038703	Chloride	90.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P354920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038308	Sulfate	94.2		P	90 - 110
2038703	Sulfate	91.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2037915	Chloride	99.3		P	90 - 110
2038130	Chloride	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2037915	Sulfate	98.1		P	90 - 110
2038130	Sulfate	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2036297	Ammonia-N	100	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038236	Ammonia-N	99.0	99.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354511

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038323	Ammonia-N	100	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038147	Kjeldahl Nitrogen	98.7	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038300	Kjeldahl Nitrogen	99.3	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038147	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038309	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2037558	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038316	NO2NO3-N	98.4	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038323	Total-P	98.1	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038719	Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038301	O-Phosphate-P	96.6	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038324	O-Phosphate-P	96.4	98.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354085

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038148	O-Phosphate-P	95.8	98.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P354364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038075	Fluoride	101	101	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P354932

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039192	Fluoride	98.4	97.7	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P354934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038777	Fluoride	105	105	F/F	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2037757	Organic Carbon	91.0	93.1	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P354327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038205	Organic Carbon	101	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038223	Turbidity	1.77	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038342	Turbidity	11.5	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P354918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038308	Chloride	1.61	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P354920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038308	Sulfate	2.12	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2037915	Chloride	0.165	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2037915	Sulfate	0.664	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2036297	Ammonia-N	1.34	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038236	Ammonia-N	0.114	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354511

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038323	Ammonia-N	1.43	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038147	Kjeldahl Nitrogen	0.875	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038300	Kjeldahl Nitrogen	0.763	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038147	NO2NO3-N	0.327	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038309	NO2NO3-N	1.47	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2037558	NO2NO3-N	1.14	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038316	NO2NO3-N	0.509	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038323	Total-P	2.29	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038719	Total-P	1.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038301	O-Phosphate-P	2.35	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038324	O-Phosphate-P	1.75	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354085

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038148	O-Phosphate-P	2.17	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P354451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038223	Color (true)	2.60	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P354358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038075	Total Alkalinity	0.592	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P354554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038777	Total Alkalinity	0.322	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P354555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038712	Total Alkalinity	0.586	Sample	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P354556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2037844	Total Alkalinity	1.23	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P354608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038235	TDS	1.70	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P354364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038075	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P354932

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039192	Fluoride	0.476	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P354934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038777	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P354205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2037757	Organic Carbon	1.47	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P354327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038205	Organic Carbon	0.742	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 180.1 Rev. 2.0

Run ID: A87461

Included Lab Sample IDs: 2038307, 2038308, 2038313, 2038314, 2038315, 2038322

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A87463

Included Lab Sample IDs: 2038311, 2038312, 2038319, 2038320, 2038321, 2038324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	99.9	P/P	90 - 110
O-Phosphate-P	99.3	101	P/P	90 - 110
O-Phosphate-P	99.9	99.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A87523

Included Lab Sample IDs: 2038318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.4	93.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87531

Included Lab Sample IDs: 2038317, 2038318

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87556

Included Lab Sample IDs: 2038316, 2038317, 2038318

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87560

Included Lab Sample IDs: 2038309, 2038310

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: A87585

Included Lab Sample IDs: 2038309, 2038310, 2038316, 2038317, 2038323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	97.6	P/P	90 - 110
Organic Carbon	97.6	96.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87596

Included Lab Sample IDs: 2038309, 2038310, 2038323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	101	P/P	90 - 110
Total-P	101	99.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A87599

Included Lab Sample IDs: 2038307, 2038308

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A87599

Included Lab Sample IDs: 2038307, 2038308

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87603

Included Lab Sample IDs: 2038323

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

Reference Method: SM 2120 B

Run ID: A87642

Included Lab Sample IDs: 2038307, 2038308

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87646

Included Lab Sample IDs: 2038316, 2038317, 2038318

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87656

Included Lab Sample IDs: 2038316, 2038317, 2038318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87660

Included Lab Sample IDs: 2038309, 2038310, 2038323

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87674

Included Lab Sample IDs: 2038309, 2038310, 2038323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A87701

Included Lab Sample IDs: 2038313, 2038314, 2038315, 2038322

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.4	P/P	90 - 110
Total Alkalinity	102	99.7	P/P	90 - 110
Total Alkalinity	99.1	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87719

Included Lab Sample IDs: 2038316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87809

Included Lab Sample IDs: 2038308

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A87869

Included Lab Sample IDs: 2038313, 2038314, 2038315, 2038322

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87936

Included Lab Sample IDs: 2038307

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	101	102	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		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				1.77	
	Turbidity				11.5	
EPA 300.0 Rev. 2.1	Chloride	100	90.9	90.2	1.61	
	Chloride	102	99.3	98.0	0.165	
	Sulfate	98.5	94.2	91.4	2.12	
	Sulfate	101	98.1	95.4	0.664	
EPA 350.1 Rev. 2.0	Ammonia-N	99.3	100	98.4		1.34
	Ammonia-N	101	99.0	99.1		0.114
	Ammonia-N	96.4	100	98.6		1.43
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.5	98.7	97.6		0.875
	Kjeldahl Nitrogen	102	99.3	98.4		0.763
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	102		0.327
	NO2NO3-N	103	101	102		1.47
	NO2NO3-N	101	100	102		1.14
	NO2NO3-N	100	98.4	97.9		0.509
EPA 365.1 Rev. 2.0	Total-P	99.0	98.1	95.8		2.29
	Total-P	99.5	102	101		1.16
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	96.6	98.9		2.35
	O-Phosphate-P	98.4	96.4	98.1		1.75
	O-Phosphate-P	101	95.8	98.2		2.17
SM 2120 B	Color (true)	98.0			2.60	
SM 2320 B-97	Total Alkalinity	103			0.592	
	Total Alkalinity	102			0.322	
	Total Alkalinity	102			0.586	
	Total Alkalinity	102			1.23	
SM 2540 C-97	TDS				1.70	
SM 4500 F-C-97	Fluoride	102	101	101		0.0
	Fluoride	96.1	98.4	97.7		0.476
	Fluoride	98.0	105	105		0.0
SM 5310 B-00	Organic Carbon	92.8	91.0	93.1		1.47
	Organic Carbon	95.2	101	100		0.742

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2038307, 2038308, 2038313, 2038314, 2038315, 2038322
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2038307, 2038308
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2038307, 2038308
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2038309, 2038310, 2038316, 2038317, 2038318, 2038323
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2038309, 2038310, 2038316, 2038317, 2038318, 2038323
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2038309, 2038310, 2038316, 2038317, 2038318, 2038323
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2038309, 2038310, 2038316, 2038317, 2038318, 2038323
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2038311, 2038312, 2038319, 2038320, 2038321, 2038324
SM 2120 B / E31780	True Color measured at 450 nm	2038307, 2038308
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2038307, 2038308, 2038313, 2038314, 2038315, 2038322
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2038307, 2038308

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2038307, 2038308, 2038313, 2038314, 2038315, 2038322
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2038307, 2038308, 2038313, 2038314, 2038315, 2038322
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2038309, 2038310, 2038316, 2038317, 2038318, 2038323

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	11/01/2018			11/01/2018 16:10	Megan Treadwell	2038307, 2038308, 2038313, 2038314, 2038315, 2038322
EPA 300.0 Rev. 2.1	11/01/2018			11/17/2018 03:57	Julia Storbeck	2038308
	11/01/2018			11/21/2018 23:36	Lipi Saha	2038307
EPA 350.1 Rev. 2.0	11/01/2018			11/06/2018 13:04	Julia Storbeck	2038316
	11/01/2018			11/06/2018 13:13	Julia Storbeck	2038317
	11/01/2018			11/06/2018 13:15	Julia Storbeck	2038318
	11/01/2018			11/08/2018 13:23	Ping Hua	2038309
	11/01/2018			11/08/2018 13:25	Ping Hua	2038310
	11/01/2018			11/08/2018 13:31	Ping Hua	2038323
EPA 351.2 Rev. 2.0	11/01/2018	11/07/2018 11:50	Adrian Shelby	11/08/2018 13:23	Joseph Suarez	2038316
	11/01/2018	11/07/2018 11:50	Adrian Shelby	11/08/2018 13:25	Joseph Suarez	2038317
	11/01/2018	11/07/2018 11:50	Adrian Shelby	11/08/2018 13:26	Joseph Suarez	2038318
	11/01/2018	11/07/2018 11:50	Adrian Shelby	11/09/2018 10:11	Joseph Suarez	2038309
	11/01/2018	11/07/2018 11:50	Adrian Shelby	11/09/2018 10:13	Joseph Suarez	2038310
	11/01/2018	11/07/2018 11:50	Adrian Shelby	11/09/2018 10:14	Joseph Suarez	2038323
EPA 353.2 Rev. 2.0	11/01/2018			11/05/2018 14:09	Lauren Bottorf	2038317
	11/01/2018			11/05/2018 14:10	Lauren Bottorf	2038318
	11/01/2018			11/06/2018 13:29	Lauren Bottorf	2038309
	11/01/2018			11/06/2018 13:35	Lauren Bottorf	2038310
	11/01/2018			11/07/2018 12:16	Lauren Bottorf	2038323
	11/01/2018			11/13/2018 10:52	Lauren Bottorf	2038316
EPA 365.1 Rev. 2.0	11/01/2018	11/06/2018 12:45	Sima Feizi	11/07/2018 12:22	Beverly Y. Sanders	2038309
	11/01/2018	11/06/2018 12:45	Sima Feizi	11/07/2018 12:30	Beverly Y. Sanders	2038310
	11/01/2018	11/06/2018 12:45	Sima Feizi	11/07/2018 12:31	Beverly Y. Sanders	2038323
	11/01/2018	11/07/2018 14:05	Sima Feizi	11/08/2018 13:17	Beverly Y. Sanders	2038316
	11/01/2018	11/07/2018 14:05	Sima Feizi	11/08/2018 13:18	Beverly Y. Sanders	2038317
	11/01/2018	11/07/2018 14:05	Sima Feizi	11/08/2018 13:19	Beverly Y. Sanders	2038318
EPA 365.1 Rev. 2.0 dissolved	11/01/2018			11/01/2018 15:02	Julia Storbeck	2038324
	11/01/2018			11/01/2018 15:29	Julia Storbeck	2038311
	11/01/2018			11/01/2018 15:30	Julia Storbeck	2038312
	11/01/2018			11/01/2018 15:44	Julia Storbeck	2038319, 2038320
	11/01/2018			11/01/2018 15:45	Julia Storbeck	2038321
SM 2120 B	11/01/2018			11/01/2018 15:40	Chelsea Hernandez	2038307
	11/01/2018			11/01/2018 15:41	Chelsea Hernandez	2038308
SM 2320 B-97	11/01/2018			11/07/2018 10:26	Dale L. Simmons	2038307
	11/01/2018			11/07/2018 10:38	Dale L. Simmons	2038308
	11/01/2018			11/09/2018 00:59	Dale L. Simmons	2038322
	11/01/2018			11/09/2018 06:07	Dale L. Simmons	2038313
	11/01/2018			11/09/2018 06:31	Dale L. Simmons	2038314

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	11/01/2018			11/09/2018 10:26	Dale L. Simmons	2038315
SM 2540 C-97	11/01/2018			11/06/2018 15:10	Yijie Li	2038307, 2038308
SM 2540 D-97	11/01/2018			11/06/2018 15:10	Yijie Li	2038307, 2038308, 2038313, 2038314, 2038315, 2038322
SM 4500 F-C-97	11/01/2018			11/07/2018 10:26	Dale L. Simmons	2038307
	11/01/2018			11/07/2018 10:38	Dale L. Simmons	2038308
	11/01/2018			11/15/2018 01:45	Dale L. Simmons	2038313
	11/01/2018			11/15/2018 01:49	Dale L. Simmons	2038314
	11/01/2018			11/15/2018 02:12	Dale L. Simmons	2038315
SM 5310 B-00	11/01/2018			11/15/2018 06:07	Dale L. Simmons	2038322
	11/01/2018			11/03/2018 12:03	Megan Treadwell	2038318
	11/01/2018			11/06/2018 10:14	Megan Treadwell	2038309
	11/01/2018			11/06/2018 10:55	Megan Treadwell	2038310
	11/01/2018			11/06/2018 11:07	Megan Treadwell	2038316
	11/01/2018			11/06/2018 11:21	Megan Treadwell	2038317
	11/01/2018			11/06/2018 11:36	Megan Treadwell	2038323