

Chemical Analysis Report

NE-DIST-2019-06-12-02

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

Event Description: **LSJR East**
Request ID: **RQ-2019-06-10-19**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 03-JUL-2019 13:03



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 groups are included in this report: Metals and 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 by the Florida Department of Health Environmental Laboratory Certification Program 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: MILLER CREEK AT ATLANTIC BLVD

Collection Date/Time: 06/11/2019 11:10

Field ID: G2NE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2094770	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P365511	
	EPA 300.0	Bromide	0.086		mg Br/L	P365717	
	SM 2320 B-97	Total Alkalinity	87		mg CaCO3/L	P366105	
	SM 2540 D-97	TSS	4	I	mg/L	P365844	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P366011	
2094771	EPA 350.1 Rev. 2.0	Ammonia-N	0.29		mg N/L	P366166	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P365748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P365758	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P365750	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P365744	
2094772	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.029		mg P/L	P365518	

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: NEWCASTLE CR @ FT CAROLINE HILLS RD

Collection Date/Time: 06/11/2019 10:10

Field ID: 20030872

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2094779	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P365511	
	EPA 300.0 Rev. 2.1	Chloride	34		mg Cl/L	P365810	
		Sulfate	29		mg SO4/L	P365812	
	SM 2120 B	Color (true)	14		PCU	P365546	
	SM 2320 B-97	Total Alkalinity	36	A	mg CaCO3/L	P366105	
	SM 2540 C-97	TDS	124		mg/L	P365856	
	SM 2540 D-97	TSS	4	I	mg/L	P365844	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P366011	
2094782	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P365955	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P365748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P365758	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P365750	
	SM 5310 B-00	Organic Carbon	2.7		mg C/L	P365744	
2094785	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P365518	

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: NEWCASTLE CR @ FT CAROLINE HILLS RD

Collection Date/Time: 06/11/2019 10:15

Field ID: 20030872 dup

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2094780	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P365512	
	EPA 300.0 Rev. 2.1	Chloride	34		mg Cl/L	P365810	
		Sulfate	29		mg SO4/L	P365812	
		Color (true)	15		PCU	P365546	
	SM 2320 B-97	Total Alkalinity	37		mg CaCO3/L	P366105	
	SM 2540 C-97	TDS	118		mg/L	P365856	
	SM 2540 D-97	TSS	5	I	mg/L	P365844	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P366011	
2094783	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P365955	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P365748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P365758	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P365750	
	SM 5310 B-00	Organic Carbon	2.7		mg C/L	P365745	
2094786	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P365518	

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: NEWCASTLE CR @ FT CAROLINE HILLS RD

Collection Date/Time: 06/11/2019 10:20

Field ID: FB 06112019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2094788	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P365512	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P365811	
		Sulfate	0.20	U	mg SO4/L	P365814	
		Color (true)	2.5	U	PCU	P365547	
	SM 2120 B	Total Alkalinity	0.65	U	mg CaCO3/L	P366009	
	SM 2540 C-97	TDS	15	U	mg/L	P365850	
	SM 2540 D-97	TSS	2	U	mg/L	P365838	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P366012	
2094789	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P365957	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P365748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P365758	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P365750	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P365745	
2094790	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P365518	
2094799	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P365602	
		Calcium	0.075	U	mg/L	P365602	
		Iron	30	U	ug/L	P365602	
		Magnesium	0.040	U	mg/L	P365602	
		Manganese	1.0	U	ug/L	P365602	
		Potassium	0.30	U	mg/L	P365602	
		Sodium	0.50	U	mg/L	P365602	
		Zinc	5.0	U	ug/L	P365602	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P365602	
		Antimony	0.050	U	ug/L	P365602	
		Arsenic	0.050	U	ug/L	P365602	
		Boron**	2.0	U	ug/L	P365602	
		Cadmium	0.020	U	ug/L	P365602	
		Chromium	0.40	U	ug/L	P365602	
		Copper	0.40	U	ug/L	P365602	
		Lead	0.20	U	ug/L	P365602	
		Nickel	0.50	U	ug/L	P365602	
		Selenium	0.20	U	ug/L	P365602	
		Silver	0.010	U	ug/L	P365602	
		Thallium	0.10	U	ug/L	P365602	

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: STRAWBERRY CR AT END OF BOWLAN RD

Collection Date/Time: 06/11/2019 09:35

Field ID: 20030579

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2094781	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P365512	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P365810	
		Sulfate	30		mg SO4/L	P365812	
	SM 2120 B	Color (true)	32	A	PCU	P365547	
	SM 2320 B-97	Total Alkalinity	75		mg CaCO3/L	P366105	
	SM 2540 C-97	TDS	198	A	mg/L	P365856	
	SM 2540 D-97	TSS	3	IA	mg/L	P365844	
	SM 4500 F-C-97	Fluoride	0.061	I	mg F/L	P366011	
2094784	EPA 350.1 Rev. 2.0	Ammonia-N	0.089		mg N/L	P365957	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P365748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.42		mg N/L	P365758	
	EPA 365.1 Rev. 2.0	Total-P	0.051		mg P/L	P365750	
	SM 5310 B-00	Organic Carbon	6.1		mg C/L	P365745	
2094787	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P365518	

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: GREENFIELD CREEK @ QUEENS HARBOUR
BLVD**

Collection Date/Time: 06/11/2019 09:05

Field ID: 20030809

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2094773	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P365511	
	EPA 300.0 Rev. 2.1	Chloride	8.0E+03		mg Cl/L	P365810	
		Sulfate	1.1E+03		mg SO4/L	P365812	
		Color (true)	58		PCU	P365546	
	SM 2320 B-97	Total Alkalinity	118		mg CaCO3/L	P365667	
	SM 2540 C-97	TDS	1.35E+04		mg/L	P366182	
	SM 2540 D-97	TSS	14		mg/L	P366151	
	SM 4500 F-C-97	Fluoride	0.54		mg F/L	P365675	
2094775	EPA 350.1 Rev. 2.0	Ammonia-N	0.090		mg N/L	P365767	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P366187	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.057		mg N/L	P365943	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P365751	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P365742	
2094777	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.073		mg P/L	P365514	
2094797	EPA 200.7 Rev. 4.4	Barium	47		ug/L	P365498	
		Calcium	194		mg/L	P365498	
		Iron	410		ug/L	P365498	
		Magnesium	523		mg/L	P365498	
		Manganese	67		ug/L	P365498	
		Potassium	165		mg/L	P365498	
		Sodium	4.33E+03		mg/L	P365498	
		Zinc	15	U	ug/L	P365498	
		Aluminum	219		ug/L	P365498	
		Antimony	0.20	U	ug/L	P365498	
	EPA 200.8 Rev. 5.4	Arsenic	2.8		ug/L	P365498	
		Boron**	2.19E+03		ug/L	P365498	
		Cadmium	0.080	U	ug/L	P365498	
		Chromium	1.6	U	ug/L	P365498	
		Copper	1.6	U	ug/L	P366019	
		Lead	0.80	U	ug/L	P365498	
		Nickel	2.0	U	ug/L	P365498	
		Selenium	0.80	U	ug/L	P365498	
		Silver	0.040	U	ug/L	P365498	
		Thallium	0.40	U	ug/L	P365498	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium and sodium are unavailable because of high analyte concentration in the QC sample. Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable because of high analyte concentration in the QC sample.

Sample Location: PUNCHEON ABOVE POINT MEADOWS DR

Collection Date/Time: 06/11/2019 11:50

Field ID: G2NE1181

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2094774	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P365511	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P365810	
		Sulfate	70		mg SO4/L	P365812	
		Color (true)	36		PCU	P365546	
	SM 2320 B-97	Total Alkalinity	81		mg CaCO3/L	P366105	
	SM 2540 C-97	TDS	268		mg/L	P365855	
	SM 2540 D-97	TSS	3	I	mg/L	P365843	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P366011	
2094776	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P366166	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P365748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P365758	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P365750	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P365744	
2094778	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.048		mg P/L	P365518	
2094798	EPA 200.7 Rev. 4.4	Barium	50.8		ug/L	P365602	
		Calcium	52.7		mg/L	P365602	
		Iron	110	I	ug/L	P365602	
		Magnesium	10.3		mg/L	P365602	
		Manganese	13.6		ug/L	P365602	
		Potassium	3.6		mg/L	P365602	
		Sodium	22.7		mg/L	P365602	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P365602	
		Aluminum	178		ug/L	P365602	
		Antimony	0.070	I	ug/L	P365602	
		Arsenic	0.70		ug/L	P365602	
		Boron**	29.6		ug/L	P365602	
		Cadmium	0.020	U	ug/L	P365602	
		Chromium	0.40	U	ug/L	P365602	
		Copper	1.38		ug/L	P365602	
		Lead	0.20	U	ug/L	P365602	
		Nickel	0.56	I	ug/L	P365602	
		Selenium	0.20	U	ug/L	P365602	
		Silver	0.010	U	ug/L	P365602	
		Thallium	0.10	U	ug/L	P365602	

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: P365511

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365512

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365498

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365602

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365498

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365602

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366019

Component	Result	Code	Units
Copper	0.40	U	ug/L

Reference Method: EPA 300.0
Batch ID: P365717

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365810

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365811

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365812

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365814

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365767

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365955

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365957

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366166

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365748

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366187

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365758

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365943

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365750

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365751

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365514

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365518

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

Reference Method: SM 2120 B
Batch ID: P365546

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P365547

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P365667

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

Reference Method: SM 2320 B-97
Batch ID: P366009

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

Reference Method: SM 2320 B-97
Batch ID: P366105

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

Reference Method: SM 2540 C-97
Batch ID: P365850

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P365855

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P365856

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P366182

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P365838

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P365843

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P365844

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P366151

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P365675

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P366011

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P366012

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P365742

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

Reference Method: SM 5310 B-00
Batch ID: P365744

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

Reference Method: SM 5310 B-00
Batch ID: P365745

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365498

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	99.1		P	85 - 115
Calcium	103		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Manganese	97.6		P	85 - 115
Potassium	104		P	85 - 115
Sodium	107		P	85 - 115
Zinc	97.5		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365602

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	100		P	85 - 115
Calcium	102		P	85 - 115
Iron	104		P	85 - 115
Magnesium	106		P	85 - 115
Manganese	98.2		P	85 - 115
Potassium	104		P	85 - 115
Sodium	106		P	85 - 115
Zinc	94.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365498

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.4		P	85 - 115
Antimony	96.9		P	85 - 115
Arsenic	100		P	85 - 115
Boron	105		P	85 - 115
Cadmium	98.2		P	85 - 115
Chromium	98.0		P	85 - 115
Lead	99.1		P	85 - 115
Nickel	100		P	85 - 115
Selenium	97.9		P	85 - 115
Silver	98.4		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365602

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.0		P	85 - 115
Antimony	98.2		P	85 - 115
Arsenic	101		P	85 - 115
Boron	98.7		P	85 - 115
Cadmium	99.5		P	85 - 115
Chromium	97.5		P	85 - 115
Copper	98.1		P	85 - 115
Lead	93.2		P	85 - 115
Nickel	99.7		P	85 - 115
Selenium	99.2		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365602

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	98.4		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366019

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

Reference Method: EPA 300.0
Batch ID: P365717

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365811

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365812

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365814

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365767

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365955

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365957

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366166

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365748

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366187

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365758

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: P365943

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365750

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365751

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365514

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365518

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

Reference Method: SM 2120 B
Batch ID: P365546

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.1		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P365547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P365667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P366009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P366105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P365675

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P366011

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P366012

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P365742

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

Reference Method: SM 5310 B-00
Batch ID: P365744

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P365745

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2090382	Barium	96.5		P	70 - 130
2090382	Iron	101		P	70 - 130
2090382	Zinc	101		P	70 - 130
2093165	Barium	94.2	92.3	P/P	70 - 130
2093165	Iron	101	98.4	P/P	70 - 130
2093165	Manganese	92.6	91.1	P/P	70 - 130
2093165	Zinc	97.8	96.4	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094589	Barium	100		P	80 - 120
2094589	Calcium	106		P	80 - 120
2094589	Iron	103		P	80 - 120
2094589	Magnesium	105		P	80 - 120
2094589	Manganese	98.2		P	80 - 120
2094589	Potassium	105		P	80 - 120
2094589	Sodium	108		P	80 - 120
2094589	Zinc	95.5		P	80 - 120
2094637	Barium	99.8	99.2	P/P	80 - 120
2094637	Calcium	103		P	80 - 120
2094637	Iron	105	104	P/P	80 - 120
2094637	Magnesium	103	100	P/P	80 - 120
2094637	Manganese	98.9	97.9	P/P	80 - 120
2094637	Potassium	104		P	80 - 120
2094637	Sodium	107		P	80 - 120
2094637	Zinc	96.9	94.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2090382	Aluminum	98.7		P	80 - 120
2090382	Antimony	102		P	80 - 120
2090382	Arsenic	101		P	80 - 120
2090382	Cadmium	100		P	80 - 120
2090382	Chromium	93.8		P	80 - 120
2090382	Lead	99.2		P	80 - 120
2090382	Nickel	100		P	80 - 120
2090382	Selenium	99.7		P	80 - 120
2090382	Silver	97.2		P	80 - 120
2090382	Thallium	99.9		P	80 - 120
2093165	Aluminum	114	113	P/P	80 - 120
2093165	Antimony	117	118	P/P	80 - 120
2093165	Arsenic	109	109	P/P	80 - 120
2093165	Cadmium	114	112	P/P	80 - 120
2093165	Chromium	98.8	99.3	P/P	80 - 120
2093165	Lead	120	117	P/P	80 - 120
2093165	Nickel	115	115	P/P	80 - 120
2093165	Selenium	116	117	P/P	80 - 120
2093165	Silver	108	109	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2093165	Thallium	116	117	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094589	Aluminum	98.6		P	80 - 120
2094589	Antimony	98.7		P	80 - 120
2094589	Arsenic	102		P	80 - 120
2094589	Boron	99.8		P	80 - 120
2094589	Cadmium	99.5		P	80 - 120
2094589	Chromium	101		P	80 - 120
2094589	Copper	101		P	80 - 120
2094589	Lead	94.4		P	80 - 120
2094589	Nickel	101		P	80 - 120
2094589	Selenium	100		P	80 - 120
2094589	Silver	98.9		P	80 - 120
2094589	Thallium	102		P	80 - 120
2094637	Aluminum	99.2	96.4	P/P	80 - 120
2094637	Antimony	101	99.0	P/P	80 - 120
2094637	Arsenic	102	100	P/P	80 - 120
2094637	Boron	100	97.1	P/P	80 - 120
2094637	Cadmium	102	99.8	P/P	80 - 120
2094637	Chromium	101	98.3	P/P	80 - 120
2094637	Copper	101	98.3	P/P	80 - 120
2094637	Lead	96.5	94.1	P/P	80 - 120
2094637	Nickel	101	98.6	P/P	80 - 120
2094637	Selenium	98.7	97.5	P/P	80 - 120
2094637	Silver	101	99.9	P/P	80 - 120
2094637	Thallium	105	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366019

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2092244	Copper	102	84.3	P/P	70 - 130
2093164	Copper	103		P	70 - 130

Reference Method: EPA 300.0
Batch ID: P365717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094494	Bromide	94.5	95.0	P/P	90 - 110
2094770	Bromide	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094653	Chloride	97.5		P	90 - 110
2094733	Chloride	98.1		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095051	Chloride	99.7		P	90 - 110
2095133	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094653	Sulfate	97.8		P	90 - 110
2094733	Sulfate	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095051	Sulfate	101		P	90 - 110
2095133	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094808	Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094736	Ammonia-N	107	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365957

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094831	Ammonia-N	107	108	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366166

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094681	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365748

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094771	Kjeldahl Nitrogen	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094728	Kjeldahl Nitrogen	103	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365758

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094771	NO2NO3-N	97.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365943

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094727	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365750

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094771	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094727	Total-P	96.2	92.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365514

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094812	O-Phosphate-P	97.7	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094772	O-Phosphate-P	96.5	97.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P365675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2093104	Fluoride	96.9	97.6	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P366011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094779	Fluoride	105	106	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P366012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095059	Fluoride	97.6	97.6	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P365742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2093105	Organic Carbon	102	102	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P365744

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2094631	Organic Carbon	95.1	96.1	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P365745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2095062	Organic Carbon	96.2	96.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365511

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094741	Turbidity	0.957	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P365512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094807	Turbidity	3.60	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2093165	Barium	1.85	Spike	P	0 - 20
2093165	Calcium	0.428	Spike	P	0 - 20
2093165	Iron	2.38	Spike	P	0 - 20
2093165	Magnesium	1.91	Spike	P	0 - 20
2093165	Manganese	1.50	Spike	P	0 - 20
2093165	Potassium	0.603	Spike	P	0 - 20
2093165	Sodium	0.651	Spike	P	0 - 20
2093165	Zinc	1.42	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P365602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094637	Barium	0.634	Spike	P	0 - 20
2094637	Calcium	0.940	Spike	P	0 - 20
2094637	Iron	1.20	Spike	P	0 - 20
2094637	Magnesium	1.10	Spike	P	0 - 20
2094637	Manganese	1.03	Spike	P	0 - 20
2094637	Potassium	1.18	Spike	P	0 - 20
2094637	Sodium	0.602	Spike	P	0 - 20
2094637	Zinc	2.06	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2093165	Aluminum	0.462	Spike	P	0 - 20
2093165	Antimony	0.531	Spike	P	0 - 20
2093165	Arsenic	0.0880	Spike	P	0 - 20
2093165	Boron	1.20	Spike	P	0 - 20
2093165	Cadmium	1.95	Spike	P	0 - 20
2093165	Chromium	0.516	Spike	P	0 - 20
2093165	Lead	2.72	Spike	P	0 - 20
2093165	Nickel	0.0785	Spike	P	0 - 20
2093165	Selenium	1.31	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2093165	Silver	0.830	Spike	P	0 - 20
2093165	Thallium	1.12	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P365602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094637	Aluminum	2.78	Spike	P	0 - 20
2094637	Antimony	2.46	Spike	P	0 - 20
2094637	Arsenic	2.42	Spike	P	0 - 20
2094637	Boron	2.44	Spike	P	0 - 20
2094637	Cadmium	2.62	Spike	P	0 - 20
2094637	Chromium	2.90	Spike	P	0 - 20
2094637	Copper	2.86	Spike	P	0 - 20
2094637	Lead	2.55	Spike	P	0 - 20
2094637	Nickel	2.54	Spike	P	0 - 20
2094637	Selenium	1.30	Spike	P	0 - 20
2094637	Silver	0.684	Spike	P	0 - 20
2094637	Thallium	1.96	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P366019

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2092244	Copper	16.3	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P365717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094494	Bromide	0.424	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094653	Chloride	0.151	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095133	Chloride	0.958	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094653	Sulfate	0.391	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P365814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095133	Sulfate	1.29	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094808	Ammonia-N	0.0777	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094736	Ammonia-N	1.94	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P365957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094831	Ammonia-N	1.34	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P366166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094681	Ammonia-N	0.00443	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P365748

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094771	Kjeldahl Nitrogen	0.0552	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P366187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094728	Kjeldahl Nitrogen	0.194	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094771	NO2NO3-N	0.424	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P365943

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094727	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365750

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094771	Total-P	0.681	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P365751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094727	Total-P	3.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365514

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094812	O-Phosphate-P	0.380	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P365518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094772	O-Phosphate-P	0.952	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P365546

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094733	Color (true)	5.12	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P365547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094781	Color (true)	1.24	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P365667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2093104	Total Alkalinity	0.460	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P366009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095059	Total Alkalinity	1.15	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P366105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094779	Total Alkalinity	0.824	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P365850

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094167	TDS	4.51	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P365855

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094687	TDS	7.78	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P365856

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094781	TDS	5.54	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P366182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094823	TDS	1.99	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P365675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2093104	Fluoride	0.473	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P366011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094779	Fluoride	0.479	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P366012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095059	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P365742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2093105	Organic Carbon	0.163	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P365744

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2094631	Organic Carbon	0.823	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P365745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2095062	Organic Carbon	0.0520	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: A92052

Included Lab Sample IDs: 2094770, 2094773, 2094774, 2094779, 2094780, 2094781, 2094788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.5	P/P	95 - 105
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A92053

Included Lab Sample IDs: 2094772, 2094777, 2094778, 2094785, 2094786, 2094787, 2094790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.8	P/P	90 - 110
O-Phosphate-P	96.7	95.8	P/P	90 - 110
O-Phosphate-P	97.5	96.7	P/P	90 - 110
O-Phosphate-P	99.5	93.5	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A92065

Included Lab Sample IDs: 2094773, 2094774, 2094779, 2094780, 2094781, 2094788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	90 - 115
Color (true)	99.6	99.3	P/P	90 - 115

Reference Method: EPA 300.0

Run ID: A92088

Included Lab Sample IDs: 2094770

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

Reference Method: SM 2320 B-97

Run ID: A92113

Included Lab Sample IDs: 2094773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	105	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A92113

Included Lab Sample IDs: 2094773

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92126

Included Lab Sample IDs: 2094798, 2094799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	100	P/P	90 - 110
Barium	98.2	100	P/P	90 - 110
Calcium	102	105	P/P	90 - 110
Calcium	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92126

Included Lab Sample IDs: 2094798, 2094799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	102	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Magnesium	100	101	P/P	90 - 110
Manganese	97.4	97.8	P/P	90 - 110
Manganese	97.8	98.5	P/P	90 - 110
Potassium	103	104	P/P	90 - 110
Potassium	104	105	P/P	90 - 110
Sodium	105	106	P/P	90 - 110
Sodium	105	108	P/P	90 - 110
Zinc	95.4	97.6	P/P	90 - 110
Zinc	97.6	97.4	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92128

Included Lab Sample IDs: 2094797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	101	P/P	90 - 110
Calcium	104	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Manganese	99.2	99.7	P/P	90 - 110
Potassium	104	105	P/P	90 - 110
Zinc	99.2	99.7	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A92136

Included Lab Sample IDs: 2094775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A92138

Included Lab Sample IDs: 2094771, 2094776, 2094782, 2094783, 2094784, 2094789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.0	95.5	P/P	90 - 110
Organic Carbon	95.4	95.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92141

Included Lab Sample IDs: 2094771, 2094776, 2094782, 2094783, 2094784, 2094789

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92142

Included Lab Sample IDs: 2094775

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92148

Included Lab Sample IDs: 2094797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	101	99.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92153

Included Lab Sample IDs: 2094798, 2094799

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.6	99.6	P/P	90 - 110
Antimony	96.3	96.3	P/P	90 - 110
Antimony	97.3	96.9	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Arsenic	101	99.5	P/P	90 - 110
Boron	101	99.8	P/P	90 - 110
Boron	99.2	99.2	P/P	90 - 110
Cadmium	98.6	99.0	P/P	90 - 110
Cadmium	99.5	99.7	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Chromium	98.7	97.8	P/P	90 - 110
Copper	100	100	P/P	90 - 110
Lead	94.4	93.7	P/P	90 - 110
Lead	95.3	94.1	P/P	90 - 110
Nickel	100	101	P/P	90 - 110
Selenium	100	97.5	P/P	90 - 110
Selenium	98.7	99.1	P/P	90 - 110
Silver	96.8	97.3	P/P	90 - 110
Silver	97.4	96.9	P/P	90 - 110
Thallium	95.6	95.4	P/P	90 - 110
Thallium	96.9	94.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92169

Included Lab Sample IDs: 2094797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	98.3	P/P	90 - 110
Antimony	99.5	99.5	P/P	90 - 110
Arsenic	98.6	99.4	P/P	90 - 110
Boron	105	108	P/P	90 - 110
Cadmium	97.9	97.5	P/P	90 - 110
Chromium	94.6	94.9	P/P	90 - 110
Lead	98.9	99.6	P/P	90 - 110
Nickel	97.4	96.5	P/P	90 - 110
Selenium	97.6	98.5	P/P	90 - 110
Silver	96.3	96.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92169

Included Lab Sample IDs: 2094797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	94.7	94.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A92171

Included Lab Sample IDs: 2094773, 2094774, 2094779, 2094780, 2094781, 2094788

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92174

Included Lab Sample IDs: 2094771, 2094776, 2094782, 2094783, 2094784, 2094789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92182

Included Lab Sample IDs: 2094771, 2094775, 2094776, 2094784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	104	P/P	90 - 110
Total-P	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92185

Included Lab Sample IDs: 2094782, 2094783, 2094789

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92190

Included Lab Sample IDs: 2094798

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.2	98.3	P/P	90 - 110
Nickel	98.9	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92205

Included Lab Sample IDs: 2094775

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92212

Included Lab Sample IDs: 2094782, 2094783, 2094784, 2094789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	107	108	P/P	90 - 110
Ammonia-N	109	109	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A92228

Included Lab Sample IDs: 2094788

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

Reference Method: SM 4500 F-C-97

Run ID: A92228

Included Lab Sample IDs: 2094770, 2094774, 2094779, 2094780, 2094781, 2094788

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92264

Included Lab Sample IDs: 2094798

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

Reference Method: SM 2320 B-97

Run ID: A92273

Included Lab Sample IDs: 2094770, 2094774, 2094779, 2094780, 2094781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92282

Included Lab Sample IDs: 2094797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	100	98.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92295

Included Lab Sample IDs: 2094771, 2094776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	104	P/P	90 - 110
Ammonia-N	104	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92376

Included Lab Sample IDs: 2094775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	110	107	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						0.957	
	Turbidity						3.60	
EPA 200.7 Rev. 4.4	Barium	99.1	96.5	94.2	92.3			1.85
	Barium	100	100	99.8	99.2			0.634
	Calcium	103						0.428
	Calcium	102	106	103				0.940
	Iron	103	101	101	98.4			2.38
	Iron	104	103	105	104			1.20
	Magnesium	104						1.91
	Magnesium	106	105	103	100			1.10
	Manganese	97.6	92.6	91.1				1.50
	Manganese	98.2	98.2	98.9	97.9			1.03
	Potassium	104						0.603
	Potassium	104	105	104				1.18
	Sodium	107						0.651
	Sodium	106	108	107				0.602
	Zinc	97.5	101	97.8	96.4			1.42
	Zinc	94.3	95.5	96.9	94.9			2.06
EPA 200.8 Rev. 5.4	Aluminum	97.4	98.7	114	113			0.462
	Aluminum	98.0	98.6	99.2	96.4			2.78
	Antimony	96.9	102	117	118			0.531
	Antimony	98.2	98.7	101	99.0			2.46
	Arsenic	100	101	109	109			0.0880
	Arsenic	101	102	102	100			2.42
	Boron	105						1.20
	Boron	98.7	99.8	100	97.1			2.44
	Cadmium	98.2	100	114	112			1.95
	Cadmium	99.5	99.5	102	99.8			2.62
	Chromium	98.0	93.8	98.8	99.3			0.516
	Chromium	97.5	101	101	98.3			2.90
	Copper	98.1	101	101	98.3			2.86
	Copper	99.2	102	84.3	103			16.3
	Lead	99.1	99.2	120	117			2.72
	Lead	93.2	94.4	96.5	94.1			2.55
	Nickel	100	100	115	115			0.0785
	Nickel	99.7	101	101	98.6			2.54
	Selenium	97.9	99.7	116	117			1.31
	Selenium	99.2	100	98.7	97.5			1.30
	Silver	98.4	97.2	108	109			0.830
	Silver	98.4	98.9	101	99.9			0.684
	Thallium	101	99.9	116	117			1.12
	Thallium	100	102	105	103			1.96
EPA 300.0	Bromide	100	95.0	96.3	94.5			0.424
EPA 300.0 Rev. 2.1	Chloride	98.3	97.5	98.1			0.151	
	Chloride	100	100	99.7			0.958	
	Sulfate	98.8	97.8	98.9			0.391	
	Sulfate	100	101	101			1.29	
EPA 350.1 Rev. 2.0	Ammonia-N	104	105	105				0.0777
	Ammonia-N	106	107	105				1.94
	Ammonia-N	107	107	108				1.34
	Ammonia-N	104	103	103				0.0044
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	102	102				0.0552
	Kjeldahl Nitrogen	110	103	103				0.194
EPA 353.2 Rev. 2.0	NO2NO3-N	101	97.8					0.424

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 353.2 Rev. 2.0	NO2NO3-N	101	104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	104	103	104			0.681
	Total-P	106	96.2	92.9			3.46
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	97.7	98.1			0.380
	O-Phosphate-P	99.7	96.5	97.7			0.952
SM 2120 B	Color (true)	99.1				5.12	
	Color (true)	101				1.24	
SM 2320 B-97	Total Alkalinity	104				0.460	
	Total Alkalinity	102				1.15	
	Total Alkalinity	103				0.824	
SM 2540 C-97	TDS					4.51	
	TDS					7.78	
	TDS					5.54	
	TDS					1.99	
SM 4500 F-C-97	Fluoride	97.9	96.9	97.6			0.473
	Fluoride	98.9	105	106			0.479
	Fluoride	98.5	97.6	97.6			0.0
SM 5310 B-00	Organic Carbon	102	102	102			0.163
	Organic Carbon	97.6	96.1	95.1			0.823
	Organic Carbon	95.7	96.2	96.2			0.0520

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2094770, 2094773, 2094774, 2094779, 2094780, 2094781, 2094788
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2094797, 2094798, 2094799
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2094797, 2094798, 2094799
EPA 300.0 / E31780	Bromide in aqueous matrices	2094770
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2094773, 2094774, 2094779, 2094780, 2094781, 2094788
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2094773, 2094774, 2094779, 2094780, 2094781, 2094788
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2094771, 2094775, 2094776, 2094782, 2094783, 2094784, 2094789
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2094771, 2094775, 2094776, 2094782, 2094783, 2094784, 2094789
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2094771, 2094775, 2094776, 2094782, 2094783, 2094784, 2094789
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2094771, 2094775, 2094776, 2094782, 2094783, 2094784, 2094789
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2094772, 2094777, 2094778, 2094785, 2094786, 2094787, 2094790
SM 2120 B / E31780	True Color measured at 450 nm	2094773, 2094774, 2094779, 2094780, 2094781, 2094788
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2094770, 2094773, 2094774, 2094779, 2094780, 2094781, 2094788
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2094773, 2094774, 2094779, 2094780, 2094781, 2094788
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2094770, 2094773, 2094774, 2094779, 2094780, 2094781, 2094788
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2094770, 2094773, 2094774, 2094779, 2094780, 2094781, 2094788

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2094771, 2094775, 2094776, 2094782, 2094783, 2094784, 2094789

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	06/12/2019			06/12/2019 17:23	Julia Storbeck	2094770, 2094773, 2094774, 2094779, 2094780, 2094781, 2094788
EPA 200.7 Rev. 4.4	06/12/2019	06/12/2019 15:30	Elliott D. Healy	06/14/2019 20:37	Betina Topolski	2094797
	06/12/2019	06/12/2019 15:30	Elliott D. Healy	06/14/2019 20:44	Betina Topolski	2094797
	06/12/2019	06/12/2019 15:30	Elliott D. Healy	06/17/2019 13:37	Betina Topolski	2094797
	06/12/2019	06/13/2019 16:20	Elliott D. Healy	06/14/2019 17:19	Betina Topolski	2094799
	06/12/2019	06/13/2019 16:20	Elliott D. Healy	06/14/2019 20:21	Betina Topolski	2094798
EPA 200.8 Rev. 5.4	06/12/2019	06/12/2019 15:30	Elliott D. Healy	06/17/2019 19:25	Martin Acosta	2094797
	06/12/2019	06/12/2019 15:30	Elliott D. Healy	06/17/2019 22:54	Martin Acosta	2094797
	06/12/2019	06/13/2019 16:20	Elliott D. Healy	06/17/2019 17:04	Robert K Palmer	2094799
	06/12/2019	06/13/2019 16:20	Elliott D. Healy	06/17/2019 21:38	Robert K Palmer	2094798
	06/12/2019	06/13/2019 16:20	Elliott D. Healy	06/19/2019 00:45	Robert K Palmer	2094798
	06/12/2019	06/13/2019 16:20	Elliott D. Healy	06/21/2019 08:50	Robert K Palmer	2094798
	06/12/2019	06/20/2019 13:45	Elliott D. Healy	06/21/2019 19:00	Robert K Palmer	2094797
EPA 300.0	06/12/2019			06/14/2019 12:15	Lipi Saha	2094770
EPA 300.0 Rev. 2.1	06/12/2019			06/17/2019 20:12	Lipi Saha	2094773
	06/12/2019			06/17/2019 20:48	Lipi Saha	2094774
	06/12/2019			06/17/2019 21:00	Lipi Saha	2094779
	06/12/2019			06/17/2019 21:13	Lipi Saha	2094780
	06/12/2019			06/17/2019 21:25	Lipi Saha	2094781
	06/12/2019			06/17/2019 23:26	Lipi Saha	2094788
EPA 350.1 Rev. 2.0	06/12/2019			06/14/2019 18:05	Ping Hua	2094775
	06/12/2019			06/19/2019 12:58	Ping Hua	2094782
	06/12/2019			06/19/2019 13:00	Ping Hua	2094783
	06/12/2019			06/19/2019 13:49	Ping Hua	2094784
	06/12/2019			06/19/2019 13:58	Ping Hua	2094789
	06/12/2019			06/21/2019 13:27	Ping Hua	2094771
	06/12/2019			06/21/2019 13:34	Ping Hua	2094776
EPA 351.2 Rev. 2.0	06/12/2019	06/17/2019 10:35	Sima Feizi	06/18/2019 12:33	Joseph Suarez	2094771
	06/12/2019	06/17/2019 10:35	Sima Feizi	06/18/2019 12:37	Joseph Suarez	2094776
	06/12/2019	06/17/2019 10:35	Sima Feizi	06/18/2019 12:39	Joseph Suarez	2094782
	06/12/2019	06/17/2019 10:35	Sima Feizi	06/18/2019 12:40	Joseph Suarez	2094783
	06/12/2019	06/17/2019 10:35	Sima Feizi	06/18/2019 12:42	Joseph Suarez	2094784
	06/12/2019	06/17/2019 10:35	Sima Feizi	06/18/2019 12:44	Joseph Suarez	2094789
	06/12/2019	06/24/2019 10:45	Adrian Shelby	06/25/2019 15:35	Joseph Suarez	2094775
EPA 353.2 Rev. 2.0	06/12/2019			06/17/2019 12:03	Beverly Y. Sanders	2094771
	06/12/2019			06/17/2019 12:09	Beverly Y. Sanders	2094776
	06/12/2019			06/17/2019 12:11	Beverly Y. Sanders	2094782
	06/12/2019			06/17/2019 12:12	Beverly Y. Sanders	2094783
	06/12/2019			06/17/2019 12:13	Beverly Y. Sanders	2094784

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 353.2 Rev. 2.0	06/12/2019			06/17/2019 12:14	Beverly Y. Sanders	2094789
	06/12/2019			06/19/2019 10:20	Beverly Y. Sanders	2094775
EPA 365.1 Rev. 2.0	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 14:10	Rosalyn Ballman	2094771
	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 14:14	Rosalyn Ballman	2094776
	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 14:17	Rosalyn Ballman	2094784
	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 14:40	Rosalyn Ballman	2094775
	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 16:25	Rosalyn Ballman	2094782
	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 16:26	Rosalyn Ballman	2094783
	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 16:27	Rosalyn Ballman	2094789
	06/12/2019	06/17/2019 12:20	Sima Feizi	06/18/2019 16:37	Rosalyn Ballman	2094772
EPA 365.1 Rev. 2.0 dissolved	06/12/2019			06/12/2019 16:37	Jhamieka S. Greenwood	2094772
	06/12/2019			06/12/2019 17:00	Jhamieka S. Greenwood	2094777
	06/12/2019			06/12/2019 17:39	Jhamieka S. Greenwood	2094785, 2094786
	06/12/2019			06/12/2019 17:40	Jhamieka S. Greenwood	2094778
	06/12/2019			06/12/2019 17:43	Jhamieka S. Greenwood	2094787
	06/12/2019			06/12/2019 17:49	Jhamieka S. Greenwood	2094790
SM 2120 B	06/12/2019			06/12/2019 16:30	Mariam Hanna	2094773, 2094774
	06/12/2019			06/12/2019 16:31	Mariam Hanna	2094779
	06/12/2019			06/12/2019 16:32	Mariam Hanna	2094780
	06/12/2019			06/12/2019 16:36	Mariam Hanna	2094781
	06/12/2019			06/12/2019 16:37	Mariam Hanna	2094788
	06/12/2019			06/12/2019 16:37	Mariam Hanna	2094788
SM 2320 B-97	06/12/2019			06/14/2019 11:21	Dale L. Simmons	2094773
	06/12/2019			06/19/2019 10:03	Dale L. Simmons	2094788
	06/12/2019			06/21/2019 04:13	Dale L. Simmons	2094779
	06/12/2019			06/21/2019 07:04	Dale L. Simmons	2094770
	06/12/2019			06/21/2019 07:15	Dale L. Simmons	2094774
	06/12/2019			06/21/2019 07:24	Dale L. Simmons	2094780
	06/12/2019			06/21/2019 07:35	Dale L. Simmons	2094781
	06/12/2019			06/13/2019 15:55	Yijie Li	2094774, 2094779, 2094780, 2094781, 2094788
SM 2540 C-97	06/12/2019			06/17/2019 13:02	Yijie Li	2094773
	06/12/2019			06/13/2019 15:55	Yijie Li	2094770, 2094774, 2094779, 2094780, 2094781, 2094788
SM 4500 F-C-97	06/12/2019			06/17/2019 13:02	Yijie Li	2094773
	06/12/2019			06/14/2019 08:15	Dale L. Simmons	2094773
	06/12/2019			06/19/2019 02:58	Dale L. Simmons	2094779
	06/12/2019			06/19/2019 06:50	Dale L. Simmons	2094770
	06/12/2019			06/19/2019 07:03	Dale L. Simmons	2094774
	06/12/2019			06/19/2019 07:15	Dale L. Simmons	2094780
	06/12/2019			06/19/2019 07:28	Dale L. Simmons	2094781
	06/12/2019			06/19/2019 10:03	Dale L. Simmons	2094788

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	06/12/2019			06/14/2019 06:41	Julia Storbeck	2094771
	06/12/2019			06/14/2019 06:54	Julia Storbeck	2094776
	06/12/2019			06/14/2019 07:07	Julia Storbeck	2094782
	06/12/2019			06/14/2019 09:10	Julia Storbeck	2094783
	06/12/2019			06/14/2019 09:20	Madeline Funaro	2094775
	06/12/2019			06/14/2019 09:23	Julia Storbeck	2094784
	06/12/2019			06/14/2019 09:37	Julia Storbeck	2094789