

Chemical Analysis Report

SE-DIST-2016-03-03-02

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

Event Description: **SMP_2016 Red_1 blank**

Request ID: **RQ-2016-02-29-20**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

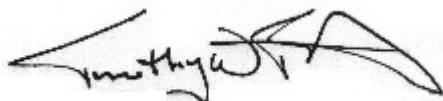
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Jordan Skaggs

For additional information please contact

Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
Colin Wright, Ph.D.
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 24-MAR-2016 11:41

A handwritten signature in black ink, appearing to read 'Timothy W. Fitzpatrick', with a stylized flourish at the end.

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 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: WCA 3 L67 @ S-151

Collection Date/Time: 03/02/2016 12:20

Field ID: G5SE0041_03022016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776847	EPA 180.1 Rev. 2.0	Turbidity	1.3	A	NTU	P299702	
	EPA 300.0 Rev. 2.1	Chloride	87		mg Cl/L	P299993	
		Sulfate	32		mg SO4/L	P299995	
	SM 2120 B	Color (true)	70	A	PCU	P299717	
	SM 2320 B-97	Total Alkalinity	167		mg CaCO3/L	P300269	
	SM 2540 C-97	TDS	400	A	mg/L	P300234	
	SM 2540 D-97	TSS	2	I	mg/L	P300199	
	SM 4500 F-C-97	Fluoride	0.37		mg F/L	P300256	
1776849	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P300434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P300098	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P300167	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P300208	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P300107	
1776851	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P299689	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: The precision data is unavailable due to low analyte concentration in the QC sample.

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

Sample Location: WCA 2B @ S-141

Collection Date/Time: 03/02/2016 13:25

Field ID: G5SE0040_03022016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776848	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P299702	
	EPA 300.0 Rev. 2.1	Chloride	76		mg Cl/L	P300100	
		Sulfate	35		mg SO4/L	P300103	
	SM 2120 B	Color (true)	76		PCU	P299717	
	SM 2320 B-97	Total Alkalinity	140		mg CaCO3/L	P300269	
	SM 2540 C-97	TDS	363		mg/L	P300234	
	SM 2540 D-97	TSS	2	U	mg/L	P300199	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P300256	
1776850	EPA 350.1 Rev. 2.0	Ammonia-N	0.086		mg N/L	P300434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P300098	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P300167	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P300208	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P300107	
1776852	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P299689	

Ref. Method and Comment:

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

Sample Location: SNAKE CREEK CANAL (WEST) SF CANAL STUDY C9-1

Collection Date/Time: 03/02/2016 14:05

Field ID: G4SE0019_03/02/2016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776838	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P299701	

Field ID: G4SE0019_03/02/2016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776838	EPA 300.0 Rev. 2.1	Chloride	72		mg Cl/L	P299993	
		Sulfate	1.8		mg SO4/L	P299995	
	SM 2120 B	Color (true)	45		PCU	P299716	
	SM 2320 B-97	Total Alkalinity	206		mg CaCO3/L	P300269	
	SM 2540 C-97	TDS	350	A	mg/L	P300233	
	SM 2540 D-97	TSS	2	U	mg/L	P300198	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P300256	
1776841	EPA 350.1 Rev. 2.0	Ammonia-N	0.099		mg N/L	P300433	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P300098	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P300166	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P300207	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P300107	
1776844	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P299688	
1776867	EPA 200.7 Rev. 4.4	Calcium	63.1		mg/L	P299963	
		Iron	140		ug/L	P299963	
		Magnesium	12.7		mg/L	P299963	
		Potassium	3.2		mg/L	P299963	
		Sodium	46.7		mg/L	P299963	
		Zinc	5.0	U	ug/L	P299963	
	EPA 200.8 Rev. 5.4	Arsenic	0.72		ug/L	P299963	
		Cadmium	0.020	U	ug/L	P299963	
		Chromium	0.062	I	ug/L	P299963	
		Copper	0.10	U	ug/L	P299963	
		Lead	0.067	I	ug/L	P299963	
		Nickel	0.075	I	ug/L	P299963	
		Silver	0.0050	U	ug/L	P299963	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: The precision data is unavailable due to low analyte concentration in the QC sample.

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

Sample Location: C-7 LITTLE RIVER (LR-10 MIAMI-DADE)

Collection Date/Time: 03/02/2016 15:00

Field ID: G4SELR10_03/02/2016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776839	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P299702	
	EPA 300.0 Rev. 2.1	Chloride	65		mg Cl/L	P299993	
		Sulfate	11		mg SO4/L	P299995	
	SM 2120 B	Color (true)	47		PCU	P299716	
	SM 2320 B-97	Total Alkalinity	194		mg CaCO3/L	P300269	
	SM 2540 C-97	TDS	338		mg/L	P300233	
	SM 2540 D-97	TSS	2	U	mg/L	P300198	
1776842	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P300256	
	EPA 350.1 Rev. 2.0	Ammonia-N	1.5		mg N/L	P300434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P300098	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P300166	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P300207	

Field ID: G4SELR10_03/02/2016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776842	SM 5310 B-00	Organic Carbon	15		mg C/L	P300107	
1776845	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P299688	
1776868	EPA 200.7 Rev. 4.4	Calcium	62.8		mg/L	P299963	
		Iron	43	I	ug/L	P299963	
		Magnesium	10.7		mg/L	P299963	
		Potassium	4.6		mg/L	P299963	
		Sodium	45.1		mg/L	P299963	
		Zinc	5.0	U	ug/L	P299963	
	EPA 200.8 Rev. 5.4	Arsenic	1.06		ug/L	P299963	
		Cadmium	0.020	U	ug/L	P299963	
		Chromium	0.21		ug/L	P299963	
		Copper	0.23	I	ug/L	P299963	
		Lead	0.061	I	ug/L	P299963	
		Nickel	0.35		ug/L	P299963	
		Silver	0.0050	U	ug/L	P299963	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: The precision data is unavailable due to low analyte concentration in the QC sample.

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

Sample Location: C-9 @ NW 57TH AVE

Collection Date/Time: 03/02/2016 16:00

Field ID: G4SE0075_03/02/2016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776840	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P299702	
	EPA 300.0 Rev. 2.1	Chloride	64		mg Cl/L	P299993	
		Sulfate	5.0		mg SO4/L	P299995	
	SM 2120 B	Color (true)	40		PCU	P299716	
	SM 2320 B-97	Total Alkalinity	209		mg CaCO3/L	P300269	
	SM 2540 C-97	TDS	347		mg/L	P300233	
	SM 2540 D-97	TSS	2	U	mg/L	P300198	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P300256	
1776843	EPA 350.1 Rev. 2.0	Ammonia-N	0.45		mg N/L	P300434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P300098	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P300166	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P300207	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P300107	
1776846	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P299689	
1776869	EPA 200.7 Rev. 4.4	Calcium	67.6		mg/L	P299963	
		Iron	290		ug/L	P299963	
		Magnesium	10.0		mg/L	P299963	
		Potassium	2.7		mg/L	P299963	
		Sodium	42.1		mg/L	P299963	
		Zinc	5.0	U	ug/L	P299963	
	EPA 200.8 Rev. 5.4	Arsenic	1.10		ug/L	P299963	
		Cadmium	0.020	U	ug/L	P299963	

Field ID: G4SE0075_03/02/2016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776869	EPA 200.8 Rev. 5.4	Chromium	0.13	I	ug/L	P299963	
		Copper	0.57		ug/L	P299963	
		Lead	0.11	I	ug/L	P299963	
		Nickel	0.22		ug/L	P299963	
		Silver	0.0050	U	ug/L	P299963	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: The precision data is unavailable due to low analyte concentration in the QC sample.

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

Sample Location: FIELD BLANK

Collection Date/Time: 03/02/2016 16:20

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1776853	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P299702	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P300100	
		Sulfate	0.20	U	mg SO4/L	P300103	
		Color (true)	2.5	U	PCU	P299717	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P300269	
	SM 2540 C-97	TDS	15	U	mg/L	P300233	
	SM 2540 D-97	TSS	2	U	mg/L	P300198	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P300256	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P300434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P300098	
1776854	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P300167	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P300208	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P300107	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P299689	
	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P299963	
1776870		Iron	30	U	ug/L	P299963	
		Magnesium	0.040	U	mg/L	P299963	
		Potassium	0.30	U	mg/L	P299963	
		Sodium	0.50	U	mg/L	P299963	
		Zinc	5.0	U	ug/L	P299963	
		Arsenic	0.050	U	ug/L	P299963	
		Cadmium	0.020	U	ug/L	P299963	
		Chromium	0.050	U	ug/L	P299963	
		Copper	0.10	U	ug/L	P299963	
		Lead	0.050	U	ug/L	P299963	
	EPA 200.8 Rev. 5.4	Nickel	0.050	U	ug/L	P299963	
		Silver	0.0050	U	ug/L	P299963	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 03/18/2016.

Quality Assurance Report

Method Blank Results

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P299701

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P299702

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P299963

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/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: P299963

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.050	U	ug/L
Copper	0.10	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.050	U	ug/L
Silver	0.0050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299993

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299995

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300100

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300103

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300433

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300434

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300098

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300166

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300167

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300207

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300208

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P299688

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: P299689

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

Reference Method: SM 2120 B
Batch ID: P299716

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P299717

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P300269

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

Reference Method: SM 2540 C-97
Batch ID: P300233

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P300234

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P300198

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P300199

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P300256

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P300107

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: P299963

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299963

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.2		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	95.6		P	85 - 115
Copper	94.8		P	85 - 115
Lead	91.3		P	85 - 115
Nickel	96.5		P	85 - 115
Silver	99.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299993

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299995

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300100

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300103

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300434

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300098

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300166

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300167

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300207

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300208

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P299688

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: P299689

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 2320 B-97
Batch ID: P300269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P300256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	94 - 108

Reference Method: SM 5310 B-00
Batch ID: P300107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P299963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776868	Calcium	96.4		P	80 - 120
1776868	Iron	102	102	P/P	80 - 120
1776868	Magnesium	99.5		P	80 - 120
1776868	Potassium	105		P	80 - 120
1776868	Sodium	97.3		P	80 - 120
1776868	Zinc	103	103	P/P	80 - 120
1776988	Calcium	101		P	80 - 120
1776988	Iron	105		P	80 - 120
1776988	Magnesium	103		P	80 - 120
1776988	Potassium	105		P	80 - 120
1776988	Sodium	101		P	80 - 120
1776988	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776868	Arsenic	102	102	P/P	80 - 120
1776868	Cadmium	105	104	P/P	80 - 120
1776868	Chromium	96.8	96.9	P/P	80 - 120
1776868	Copper	93.4	92.4	P/P	80 - 120
1776868	Lead	93.8	94.6	P/P	80 - 120
1776868	Nickel	93.7	93.5	P/P	80 - 120
1776868	Silver	100	99.9	P/P	80 - 120
1776988	Arsenic	101		P	80 - 120
1776988	Cadmium	105		P	80 - 120
1776988	Chromium	97.0		P	80 - 120
1776988	Copper	92.4		P	80 - 120
1776988	Lead	93.6		P	80 - 120
1776988	Nickel	93.1		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776988	Silver	99.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776726	Chloride	103		P	90 - 110
1776795	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776726	Sulfate	100		P	90 - 110
1776795	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1777174	Chloride	102		P	90 - 110
1777177	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1777174	Sulfate	99.7		P	90 - 110
1777177	Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776812	Ammonia-N	98.3	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776849	Ammonia-N	95.6	94.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776811	Kjeldahl Nitrogen	103	91.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300166

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300166

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776796	NO2NO3-N	98.0	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776849	NO2NO3-N	99.2	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776796	Total-P	99.2	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300208

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776849	Total-P	96.9	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P299688

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776814	O-Phosphate-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P299689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776846	O-Phosphate-P	99.0	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P300256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1777102	Fluoride	98.0	98.6	P/P	94 - 107

Reference Method: SM 5310 B-00
Batch ID: P300107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1776778	Organic Carbon	93.6	93.4	P/P	85 - 115

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P299701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776775	Turbidity	10.0	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P299702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776847	Turbidity	15.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P299963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776868	Calcium	1.98	Spike	P	0 - 20
1776868	Iron	0.352	Spike	P	0 - 20
1776868	Magnesium	0.873	Spike	P	0 - 20
1776868	Potassium	0.951	Spike	P	0 - 20
1776868	Sodium	2.04	Spike	P	0 - 20
1776868	Zinc	0.261	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776868	Arsenic	0.566	Spike	P	0 - 20
1776868	Cadmium	0.497	Spike	P	0 - 20
1776868	Chromium	0.0459	Spike	P	0 - 20
1776868	Copper	1.07	Spike	P	0 - 20
1776868	Lead	0.855	Spike	P	0 - 20
1776868	Nickel	0.186	Spike	P	0 - 20
1776868	Silver	0.382	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776726	Chloride	0.0255	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1777174	Chloride	0.00245	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1777174	Sulfate	0.908	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776812	Ammonia-N	0.175	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776849	Ammonia-N	0.465	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776811	Kjeldahl Nitrogen	9.43	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776796	NO2NO3-N	0.426	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776849	NO2NO3-N	1.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776796	Total-P	0.339	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300208

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776849	Total-P	0.0759	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P299688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776814	O-Phosphate-P	1.07	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P299689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776846	O-Phosphate-P	1.30	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P299716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776802	Color (true)	3.65	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P299717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776847	Color (true)	0.426	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P300269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1777102	Total Alkalinity	0.347	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P300233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776838	TDS	1.43	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P300234

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776847	TDS	0.250	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P300256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1777102	Fluoride	0.467	Spike	P	0 - 3.7

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P300107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1776778	Organic Carbon	0.0605	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A67978
Included Lab Sample IDs: 1776844, 1776845, 1776846, 1776851, 1776852, 1776855

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	99.6	P/P	90 - 110
O-Phosphate-P	98.9	98.2	P/P	90 - 110
O-Phosphate-P	99.0	98.8	P/P	90 - 110
O-Phosphate-P	99.6	98.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A67983
Included Lab Sample IDs: 1776838, 1776839, 1776840, 1776847, 1776848, 1776853

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A67985
Included Lab Sample IDs: 1776838, 1776839, 1776840, 1776847, 1776848, 1776853

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	93.3	96.9	P/P	85 - 115
Color (true)	95.5	93.3	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A68089
Included Lab Sample IDs: 1776838, 1776839, 1776840, 1776847, 1776848, 1776853

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	99.7	P/P	90 - 110
Chloride	98.9	100	P/P	90 - 110
Sulfate	97.7	99.1	P/P	90 - 110
Sulfate	98.8	98.7	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A68126
Included Lab Sample IDs: 1776841, 1776842, 1776843, 1776849, 1776850, 1776854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	95.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A68145

Included Lab Sample IDs: 1776841, 1776842, 1776843, 1776849, 1776850, 1776854

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A68159

Included Lab Sample IDs: 1776867, 1776868, 1776869, 1776870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.5	97.1	P/P	90 - 110
Calcium	97.1	95.8	P/P	90 - 110
Iron	98.2	99.3	P/P	90 - 110
Iron	99.3	97.4	P/P	90 - 110
Magnesium	97.4	99.0	P/P	90 - 110
Magnesium	99.0	96.9	P/P	90 - 110
Potassium	100	99.7	P/P	90 - 110
Potassium	101	100	P/P	90 - 110
Sodium	101	99.5	P/P	90 - 110
Sodium	99.5	97.6	P/P	90 - 110
Zinc	100	101	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A68180

Included Lab Sample IDs: 1776838, 1776839, 1776840, 1776847, 1776848, 1776853

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

Reference Method: SM 2320 B-97

Run ID: A68185

Included Lab Sample IDs: 1776838, 1776839, 1776840, 1776847, 1776848, 1776853

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	98.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A68189

Included Lab Sample IDs: 1776867, 1776868, 1776869, 1776870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	101	P/P	90 - 110
Arsenic	101	98.7	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Cadmium	99.2	103	P/P	90 - 110
Chromium	97.4	99.5	P/P	90 - 110
Chromium	99.5	101	P/P	90 - 110
Copper	98.0	96.0	P/P	90 - 110
Copper	99.6	98.0	P/P	90 - 110
Lead	97.7	97.5	P/P	90 - 110
Lead	98.0	97.7	P/P	90 - 110
Nickel	97.4	95.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A68189

Included Lab Sample IDs: 1776867, 1776868, 1776869, 1776870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	98.7	97.4	P/P	90 - 110
Silver	95.5	99.3	P/P	90 - 110
Silver	99.3	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A68203

Included Lab Sample IDs: 1776841, 1776842, 1776843, 1776849, 1776850, 1776854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.2	P/P	90 - 110
Total-P	99.2	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A68211

Included Lab Sample IDs: 1776841, 1776842, 1776843, 1776849, 1776850, 1776854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.2	93.7	P/P	90 - 110
Kjeldahl Nitrogen	94.7	94.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A68230

Included Lab Sample IDs: 1776841, 1776842, 1776843, 1776849, 1776850, 1776854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.5	P/P	90 - 110
Ammonia-N	96.1	94.8	P/P	90 - 110
Ammonia-N	99.5	100	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				10.0	
	Turbidity				15.0	
EPA 200.7 Rev. 4.4	Calcium	102	96.4	101		1.98
	Iron	104	102	105		0.352
	Magnesium	102	99.5	103		0.873
	Potassium	104	105	105		0.951
	Sodium	104	97.3	101		2.04
	Zinc	100	103	103	105	0.261
EPA 200.8 Rev. 5.4	Arsenic	98.2	102	102	101	0.566
	Cadmium	100	105	104	105	0.497
	Chromium	95.6	96.8	96.9	97.0	0.0459
	Copper	94.8	93.4	92.4	92.4	1.07

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision	MS
			LCS	SMP	MS		
EPA 200.8 Rev. 5.4	Lead	91.3	93.8	94.6	93.6		0.855
	Nickel	96.5	93.7	93.5	93.1		0.186
	Silver	99.0	100	99.9	99.6		0.382
EPA 300.0 Rev. 2.1	Chloride	104	103	102		0.0255	
	Chloride	103	102	103		0.0024	
	Sulfate	100	100	100			
	Sulfate	101	99.7	98.4		0.908	
EPA 350.1 Rev. 2.0	Ammonia-N	97.5	98.3	98.5			0.175
	Ammonia-N	97.2	95.6	94.8			0.465
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.4	103	91.4			9.43
EPA 353.2 Rev. 2.0	NO2NO3-N	102	98.0	97.6			0.426
	NO2NO3-N	102	99.2	101			1.61
EPA 365.1 Rev. 2.0	Total-P	103	99.2	98.8			0.339
	Total-P	101	96.9	96.8			0.0759
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	102	103			1.07
	O-Phosphate-P	101	99.0	100			1.30
SM 2120 B	Color (true)					3.65	
	Color (true)					0.426	
SM 2320 B-97	Total Alkalinity	102				0.347	
SM 2540 C-97	TDS					1.43	
	TDS					0.250	
SM 4500 F-C-97	Fluoride	101	98.0	98.6			0.467
SM 5310 B-00	Organic Carbon	94.7	93.6	93.4			0.0605

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1776867, 1776868, 1776869, 1776870
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1776867, 1776868, 1776869, 1776870
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1776844, 1776845, 1776846, 1776851, 1776852, 1776855
SM 2120 B / E31780	True Color measured at 450 nm	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1776838, 1776839, 1776840, 1776847, 1776848, 1776853

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1776841, 1776842, 1776843, 1776849, 1776850, 1776854

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	03/03/2016			03/03/2016 14:38	Sima Feizi	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
EPA 200.7 Rev. 4.4	03/03/2016	03/08/2016	Elliott D. Healy	03/10/2016	Joshua Ayres	1776867, 1776868, 1776869, 1776870
EPA 200.8 Rev. 5.4	03/03/2016	03/08/2016	Elliott D. Healy	03/11/2016	Charles J. Peterson	1776867, 1776868, 1776869, 1776870
EPA 300.0 Rev. 2.1	03/03/2016			03/09/2016	Julia Storbeck	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
EPA 350.1 Rev. 2.0	03/03/2016			03/15/2016	Diana M. Turner	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 351.2 Rev. 2.0	03/03/2016	03/10/2016	Christopher Armour	03/14/2016	Rochelle Y Jackson	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 353.2 Rev. 2.0	03/03/2016			03/10/2016	Peter D. Kaus	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 365.1 Rev. 2.0	03/03/2016	03/11/2016	Christopher Armour	03/14/2016	Lipi Saha	1776841, 1776842, 1776843, 1776849, 1776850, 1776854
EPA 365.1 Rev. 2.0 dissolved	03/03/2016			03/03/2016 13:47	Julia Storbeck	1776846
	03/03/2016			03/03/2016 13:58	Julia Storbeck	1776855
	03/03/2016			03/03/2016 14:06	Julia Storbeck	1776851
	03/03/2016			03/03/2016 14:11	Julia Storbeck	1776852
	03/03/2016			03/03/2016 14:38	Julia Storbeck	1776844
	03/03/2016			03/03/2016 14:39	Julia Storbeck	1776845
	03/03/2016			03/03/2016 15:37	Blanca Fach	1776838
SM 2120 B	03/03/2016			03/03/2016 15:38	Blanca Fach	1776839, 1776840
	03/03/2016			03/03/2016 15:42	Blanca Fach	1776847
	03/03/2016			03/03/2016 15:43	Blanca Fach	1776848
	03/03/2016			03/03/2016 15:44	Blanca Fach	1776853
	03/03/2016			03/13/2016	Dale L. Simmons	1776838, 1776839, 1776840, 1776847, 1776848
	03/03/2016			03/14/2016	Dale L. Simmons	1776853
SM 2540 C-97	03/03/2016			03/07/2016	Sima Feizi	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
SM 2540 D-97	03/03/2016			03/07/2016	Sima Feizi	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
SM 4500 F-C-97	03/03/2016			03/10/2016	Dale L. Simmons	1776838, 1776839, 1776840, 1776847, 1776848, 1776853
SM 5310 B-00	03/03/2016			03/09/2016	Sofia Elnemr	1776841, 1776842, 1776843, 1776849, 1776850, 1776854