

Chemical Analysis Report

SE-DIST-2016-04-15-01

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

Event Description: **Red_5C-kit**
Request ID: **RQ-2016-04-11-25**
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
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 10-MAY-2016 15:59



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: Snake Creek W @ US 27

Collection Date/Time: 04/14/2016 11:10

Field ID: G4SE0019

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789867	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P302379	
	EPA 300.0 Rev. 2.1	Chloride	86		mg Cl/L	P302774	
		Sulfate	4.4		mg SO4/L	P302777	
	SM 2120 B	Color (true)	56	A	PCU	P302346	
	SM 2320 B-97	Total Alkalinity	229		mg CaCO3/L	P302739	
	SM 2540 C-97	TDS	402		mg/L	P302954	
	SM 2540 D-97	TSS	2	U	mg/L	P302888	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P302744	
1789874	EPA 350.1 Rev. 2.0	Ammonia-N	0.25		mg N/L	P303083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P303389	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P302864	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P302929	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P302949	
1789881	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302359	
1789916	EPA 200.7 Rev. 4.4	Calcium	74.9		mg/L	P302528	
		Iron	310		ug/L	P302528	
		Magnesium	14.5		mg/L	P302528	
		Potassium	3.8		mg/L	P302528	
		Sodium	57.3		mg/L	P302528	
		Zinc	5.0	U	ug/L	P302528	
	EPA 200.8 Rev. 5.4	Arsenic	0.73		ug/L	P302528	
		Cadmium	0.020	U	ug/L	P302528	
		Chromium	0.74		ug/L	P302528	
		Copper	0.10	U	ug/L	P302528	
		Lead	0.050	U	ug/L	P302528	
		Nickel	0.078	I	ug/L	P303074	
		Silver	0.0050	U	ug/L	P302528	

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.

EPA 200.7 Rev. 4.4: The calcium matrix spike recoveries are unavailable due to high analyte concentration in the QC sample.

Sample Location: Tamiami & Krone Rd

Collection Date/Time: 04/14/2016 11:45

Field ID: G4SE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789868	EPA 180.1 Rev. 2.0	Turbidity	6.6	A	NTU	P302380	
	EPA 300.0 Rev. 2.1	Chloride	46		mg Cl/L	P302774	
		Sulfate	0.86		mg SO4/L	P302777	
	SM 2120 B	Color (true)	62		PCU	P302346	
	SM 2320 B-97	Total Alkalinity	225		mg CaCO3/L	P302739	
	SM 2540 C-97	TDS	335		mg/L	P302954	
	SM 2540 D-97	TSS	2	I	mg/L	P302888	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P302744	
1789875	EPA 350.1 Rev. 2.0	Ammonia-N	0.86		mg N/L	P303083	

Field ID: G4SE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789875	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P303389	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P302864	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P302929	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P302949	
1789882	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302360	
1789917	EPA 200.7 Rev. 4.4	Calcium	85.0		mg/L	P302528	
		Iron	1.10E+03		ug/L	P302528	
		Magnesium	7.33		mg/L	P302528	
		Potassium	1.5		mg/L	P302528	
		Sodium	30.3		mg/L	P302528	
		Zinc	5.0	U	ug/L	P302528	
	EPA 200.8 Rev. 5.4	Arsenic	0.70		ug/L	P302528	
		Cadmium	0.020	U	ug/L	P302528	
		Chromium	0.088	I	ug/L	P302528	
		Copper	0.10	U	ug/L	P302528	
		Lead	0.050	U	ug/L	P302528	
		Nickel	0.054	I	ug/L	P303074	
		Silver	0.0050	U	ug/L	P302528	

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.

EPA 200.7 Rev. 4.4: The calcium matrix spike recoveries are unavailable due to high analyte concentration in the QC sample.

Sample Location: Tamiami Canal L-67 @ SR 41

Collection Date/Time: 04/14/2016 12:15

Field ID: G4SE0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789869	EPA 180.1 Rev. 2.0	Turbidity	0.85		NTU	P302380	
	EPA 300.0 Rev. 2.1	Chloride	61		mg Cl/L	P302774	
		Sulfate	7.8		mg SO4/L	P302777	
	SM 2120 B	Color (true)	53		PCU	P302346	
	SM 2320 B-97	Total Alkalinity	172		mg CaCO3/L	P302739	
	SM 2540 C-97	TDS	319		mg/L	P302954	
	SM 2540 D-97	TSS	2	I	mg/L	P302888	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P302744	
1789876	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P303083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P303389	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P302864	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P302929	
	SM 5310 B-00	Organic Carbon	18		mg C/L	P302949	
1789883	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302360	
1789918	EPA 200.7 Rev. 4.4	Calcium	60.2		mg/L	P302528	
		Iron	150		ug/L	P302528	
		Magnesium	11.2		mg/L	P302528	
		Potassium	3.8		mg/L	P302528	
		Sodium	41.3		mg/L	P302528	

Field ID: G4SE0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789918	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P302528	
	EPA 200.8 Rev. 5.4	Arsenic	0.96		ug/L	P302528	
		Cadmium	0.020	U	ug/L	P302528	
		Chromium	0.14	I	ug/L	P302528	
		Copper	0.11	I	ug/L	P302528	
		Lead	0.13	I	ug/L	P302528	
		Nickel	0.098	I	ug/L	P303074	
		Silver	0.0050	U	ug/L	P302528	

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.

EPA 200.7 Rev. 4.4: The calcium matrix spike recoveries are unavailable due to high analyte concentration in the QC sample.

Sample Location: C-7 Little River

Collection Date/Time: 04/14/2016 14:10

Field ID: G4SELR10

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789870	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P302380	
	EPA 300.0 Rev. 2.1	Chloride	66		mg Cl/L	P302774	
		Sulfate	11		mg SO4/L	P302777	
	SM 2120 B	Color (true)	54		PCU	P302346	
	SM 2320 B-97	Total Alkalinity	204		mg CaCO3/L	P302739	
	SM 2540 C-97	TDS	359		mg/L	P302954	
	SM 2540 D-97	TSS	3	I	mg/L	P302888	
	SM 4500 F-C-97	Fluoride	0.30		mg F/L	P302744	
	EPA 350.1 Rev. 2.0	Ammonia-N	2.0		mg N/L	P303084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.1		mg N/L	P303389	
1789877	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P302864	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P302929	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P302949	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302360	
	EPA 200.7 Rev. 4.4	Calcium	68.6		mg/L	P302528	
1789919		Iron	74	I	ug/L	P302528	
		Magnesium	11.3		mg/L	P302528	
		Potassium	5.4		mg/L	P302528	
		Sodium	46.7		mg/L	P302528	
		Zinc	5.0	U	ug/L	P302528	
	EPA 200.8 Rev. 5.4	Arsenic	0.73		ug/L	P302528	
		Cadmium	0.020	U	ug/L	P302528	
		Chromium	0.23		ug/L	P302528	
		Copper	0.10	U	ug/L	P302528	
		Lead	0.050	U	ug/L	P302528	
		Nickel	0.39		ug/L	P303074	
		Silver	0.0050	U	ug/L	P302528	

Field ID: G4SELR10

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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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.

EPA 200.7 Rev. 4.4: The calcium matrix spike recoveries are unavailable due to high analyte concentration in the QC sample.

Sample Location: Snake Creek East

Collection Date/Time: 04/14/2016 15:30

Field ID: G4SE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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1789871	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P302380	
	EPA 300.0 Rev. 2.1	Chloride	79		mg Cl/L	P302774	
		Sulfate	4.0		mg SO4/L	P302777	
	SM 2120 B	Color (true)	48		PCU	P302346	
	SM 2320 B-97	Total Alkalinity	219		mg CaCO3/L	P302739	
	SM 2540 C-97	TDS	384		mg/L	P302954	
	SM 2540 D-97	TSS	2	U	mg/L	P302888	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P302744	
1789878	EPA 350.1 Rev. 2.0	Ammonia-N	0.19		mg N/L	P303084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P303389	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P302864	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P302929	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P302949	
1789885	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302360	
1789920	EPA 200.7 Rev. 4.4	Calcium	74.0		mg/L	P302528	
		Iron	300		ug/L	P302528	
		Magnesium	13.6		mg/L	P302528	
		Potassium	3.5		mg/L	P302528	
		Sodium	54.7		mg/L	P302528	
		Zinc	5.0	U	ug/L	P302528	
	EPA 200.8 Rev. 5.4	Arsenic	0.89		ug/L	P302528	
		Cadmium	0.020	U	ug/L	P302528	
		Chromium	0.10	I	ug/L	P302528	
		Copper	0.10	U	ug/L	P302528	
		Lead	0.064	I	ug/L	P302528	
		Nickel	0.15	I	ug/L	P303074	
		Silver	0.0050	U	ug/L	P302528	

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.

EPA 200.7 Rev. 4.4: The calcium matrix spike recoveries are unavailable due to high analyte concentration in the QC sample.

Sample Location: Snake Creek East @ NW 57th

Collection Date/Time: 04/14/2016 15:10

Field ID: G4SE0075

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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1789872	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P302380	
	EPA 300.0 Rev. 2.1	Chloride	78		mg Cl/L	P302774	
		Sulfate	4.2		mg SO4/L	P302777	

Field ID: G4SE0075

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789872	SM 2120 B	Color (true)	48		PCU	P302346	
	SM 2320 B-97	Total Alkalinity	219		mg CaCO3/L	P302739	
	SM 2540 C-97	TDS	366		mg/L	P302954	
	SM 2540 D-97	TSS	2	I	mg/L	P302888	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P302744	
1789879	EPA 350.1 Rev. 2.0	Ammonia-N	0.26		mg N/L	P303084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P303389	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P302864	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P302929	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P302949	
1789886	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302360	
1789921	EPA 200.7 Rev. 4.4	Calcium	71.5		mg/L	P302528	
		Iron	270		ug/L	P302528	
		Magnesium	13.0		mg/L	P302528	
		Potassium	3.5		mg/L	P302528	
		Sodium	52.9		mg/L	P302528	
		Zinc	5.0	U	ug/L	P302528	
	EPA 200.8 Rev. 5.4	Arsenic	0.87		ug/L	P302528	
		Cadmium	0.020	U	ug/L	P302528	
		Chromium	0.099	I	ug/L	P302528	
		Copper	0.11	I	ug/L	P302528	
		Lead	0.050	U	ug/L	P302528	
		Nickel	0.12	I	ug/L	P303074	
		Silver	0.0050	U	ug/L	P302528	

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.

EPA 200.7 Rev. 4.4: The calcium matrix spike recoveries are unavailable due to high analyte concentration in the QC sample.

Sample Location: C-7 Little River

Collection Date/Time: 04/14/2016 14:30

Field ID: G4SELR08

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789873	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P302380	
	EPA 300.0 Rev. 2.1	Chloride	75		mg Cl/L	P302774	
		Sulfate	18		mg SO4/L	P302777	
		Color (true)	65		PCU	P302346	
	SM 2320 B-97	Total Alkalinity	203		mg CaCO3/L	P302739	
	SM 2540 C-97	TDS	382	A	mg/L	P302954	
	SM 2540 D-97	TSS	3	I	mg/L	P302888	
1789880	SM 4500 F-C-97	Fluoride	0.34		mg F/L	P302744	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.33		mg N/L	P303084	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P303389	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P302864	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P302929	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P302949	

Field ID: G4SELR08

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1789887	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302360	
1789922	EPA 200.7 Rev. 4.4	Calcium	70.6		mg/L	P302528	
		Iron	80	I	ug/L	P302528	
		Magnesium	14.5		mg/L	P302528	
		Potassium	5.0		mg/L	P302528	
		Sodium	50.1		mg/L	P302528	
		Zinc	5.0	U	ug/L	P302528	
	EPA 200.8 Rev. 5.4	Arsenic	1.03		ug/L	P302528	
		Cadmium	0.020	U	ug/L	P302528	
		Chromium	0.17	I	ug/L	P302528	
		Copper	0.26	I	ug/L	P302528	
		Lead	0.10	I	ug/L	P302528	
		Nickel	0.26		ug/L	P303074	
		Silver	0.0050	U	ug/L	P302528	

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.

EPA 200.7 Rev. 4.4: The calcium matrix spike recoveries are unavailable due to high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P302379

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P302380

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P302528

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: P302528

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.050	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302528

Component	Result	Code	Units
Copper	0.10	U	ug/L
Lead	0.050	U	ug/L
Silver	0.0050	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P303074

Component	Result	Code	Units
Nickel	0.050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302774

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302777

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303083

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303084

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303389

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302864

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P302929

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 dissolved
Batch ID: P302359

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302360

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

Reference Method: SM 2120 B
Batch ID: P302346

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P302739

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

Reference Method: SM 2540 C-97
Batch ID: P302954

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P302888

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P302744

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P302949

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: P302528

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P302528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	107		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	106		P	85 - 115
Sodium	103		P	85 - 115
Zinc	99.6		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	96.1		P	85 - 115
Cadmium	95.1		P	85 - 115
Chromium	96.3		P	85 - 115
Copper	94.1		P	85 - 115
Lead	89.0		P	85 - 115
Silver	94.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P303074

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302774

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302777

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303083

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303084

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303389

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303389

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302864

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P302929

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302359

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302360

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

Reference Method: SM 2320 B-97
Batch ID: P302739

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

Reference Method: SM 4500 F-C-97
Batch ID: P302744

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P302949

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P302528

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P302528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789917	Iron	104	103	P/P	80 - 120
1789917	Magnesium	105		P	80 - 120
1789917	Potassium	103	102	P/P	80 - 120
1789917	Sodium	104		P	80 - 120
1789917	Zinc	101	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789917	Arsenic	99.8	101	P/P	80 - 120
1789917	Cadmium	96.7	98.5	P/P	80 - 120
1789917	Chromium	97.1	97.6	P/P	80 - 120
1789917	Copper	93.2	94.9	P/P	80 - 120
1789917	Lead	92.0	93.1	P/P	80 - 120
1789917	Silver	94.8	95.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P303074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789919	Nickel	98.7	99.7	P/P	80 - 120
1789921	Nickel	98.4		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789846	Chloride	99.7		P	90 - 110
1789938	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302777

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789846	Sulfate	99.7		P	90 - 110
1789938	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789850	Ammonia-N	98.7	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789939	Ammonia-N	99.5	99.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789851	Kjeldahl Nitrogen	98.8	90.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302864

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789874	NO2NO3-N	104	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P302929

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789874	Total-P	97.1	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789858	O-Phosphate-P	96.6	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789883	O-Phosphate-P	97.8	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P302744

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790152	Fluoride	98.1	98.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P302949

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789874	Organic Carbon	96.6	97.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789834	Turbidity	2.17	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789868	Turbidity	1.20	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P302528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789917	Calcium	0.614	Spike	P	0 - 20
1789917	Iron	0.986	Spike	P	0 - 20
1789917	Magnesium	1.05	Spike	P	0 - 20
1789917	Potassium	0.629	Spike	P	0 - 20
1789917	Sodium	2.44	Spike	P	0 - 20
1789917	Zinc	1.23	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P302528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789917	Arsenic	1.17	Spike	P	0 - 20
1789917	Cadmium	1.84	Spike	P	0 - 20
1789917	Chromium	0.552	Spike	P	0 - 20
1789917	Copper	1.79	Spike	P	0 - 20
1789917	Lead	1.16	Spike	P	0 - 20
1789917	Silver	1.16	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P303074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789919	Nickel	0.914	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789846	Chloride	0.626	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789850	Ammonia-N	0.287	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789939	Ammonia-N	0.402	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789851	Kjeldahl Nitrogen	5.39	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789874	NO2NO3-N	4.12	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P302929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789874	Total-P	2.23	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789858	O-Phosphate-P	1.74	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789883	O-Phosphate-P	1.42	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P302346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789867	Color (true)	0.249	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P302739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790152	Total Alkalinity	0.711	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P302954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789873	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P302744

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790152	Fluoride	0.516	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P302949

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789874	Organic Carbon	0.351	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A68902
Included Lab Sample IDs: 1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A68905
Included Lab Sample IDs: 1789881, 1789882, 1789883, 1789884, 1789885, 1789886, 1789887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.3	P/P	90 - 110
O-Phosphate-P	101	100	P/P	90 - 110
O-Phosphate-P	99.5	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68911
Included Lab Sample IDs: 1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A68939
Included Lab Sample IDs: 1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A68939

Included Lab Sample IDs: 1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110
Sulfate	99.6	99.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A69026

Included Lab Sample IDs: 1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A69026

Included Lab Sample IDs: 1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A69051

Included Lab Sample IDs: 1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	102	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	103	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A69052

Included Lab Sample IDs: 1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	99.9	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Cadmium	98.3	99.9	P/P	90 - 110
Cadmium	99.3	98.3	P/P	90 - 110
Chromium	99.3	100	P/P	90 - 110
Chromium	99.8	99.3	P/P	90 - 110
Copper	98.4	98.2	P/P	90 - 110
Copper	99.5	98.4	P/P	90 - 110
Lead	94.5	95.3	P/P	90 - 110
Lead	94.9	94.5	P/P	90 - 110
Silver	95.3	96.3	P/P	90 - 110
Silver	95.9	95.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69066

Included Lab Sample IDs: 1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69066

Included Lab Sample IDs: 1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A69081

Included Lab Sample IDs: 1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	102	102	P/P	90 - 110
Sodium	102	99.8	P/P	90 - 110
Zinc	100	100	P/P	90 - 110
Zinc	100	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A69096

Included Lab Sample IDs: 1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	94.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69134

Included Lab Sample IDs: 1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69175

Included Lab Sample IDs: 1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	97.8	P/P	90 - 110
Total-P	99.0	98.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A69194

Included Lab Sample IDs: 1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69302

Included Lab Sample IDs: 1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7	101	P/P	90 - 110
Kjeldahl Nitrogen	99.6	98.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

* 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					2.17	
	Turbidity					1.20	
EPA 200.7 Rev. 4.4	Calcium	104					0.614
	Iron	107	104	103			0.986
	Magnesium	104	105				1.05
	Potassium	106	103	102			0.629
	Sodium	103	104				2.44
	Zinc	99.6	101	100			1.23
EPA 200.8 Rev. 5.4	Arsenic	96.1	99.8	101			1.17
	Cadmium	95.1	96.7	98.5			1.84
	Chromium	96.3	97.1	97.6			0.552
	Copper	94.1	93.2	94.9			1.79
	Lead	89.0	92.0	93.1			1.16
	Nickel	102	98.7	99.7	98.4		0.914
	Silver	94.1	94.8	95.9			1.16
EPA 300.0 Rev. 2.1	Chloride	100	99.7	100		0.626	
	Sulfate	99.4	99.7	100			
EPA 350.1 Rev. 2.0	Ammonia-N	100	98.7	99.0			0.287
	Ammonia-N	103	99.5	99.9			0.402
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.0	98.8	90.4			5.39
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	109	104	108			4.12
EPA 365.1 Rev. 2.0	Total-P	96.0	97.1	99.3			2.23
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7	96.6	98.3			1.74
	O-Phosphate-P	102	97.8	99.2			1.42
SM 2120 B	Color (true)					0.249	
SM 2320 B-97	Total Alkalinity	102				0.711	
SM 2540 C-97	TDS					3.92	
SM 4500 F-C-97	Fluoride	95.5	98.1	98.8			0.516
SM 5310 B-00	Organic Carbon	95.4	96.6	97.2			0.351

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1789881, 1789882, 1789883, 1789884, 1789885, 1789886, 1789887
SM 2120 B / E31780	True Color measured at 450 nm	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880

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	04/15/2016			04/15/2016 14:58	Sima Feizi	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
EPA 200.7 Rev. 4.4	04/15/2016	04/19/2016	Elliott D. Healy	04/22/2016	Joshua Ayres	1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922
	04/15/2016	04/19/2016	Elliott D. Healy	04/25/2016	Joshua Ayres	1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922
EPA 200.8 Rev. 5.4	04/15/2016	04/19/2016	Elliott D. Healy	04/22/2016	Charles J. Peterson	1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922
	04/15/2016	04/27/2016	Elliott D. Healy	04/29/2016	Charles J. Peterson	1789916, 1789917, 1789918, 1789919, 1789920, 1789921, 1789922
EPA 300.0 Rev. 2.1	04/15/2016			04/21/2016	Julia Storbeck	1789867, 1789869, 1789870, 1789871, 1789872, 1789873
	04/15/2016			04/22/2016	Julia Storbeck	1789868
EPA 350.1 Rev. 2.0	04/15/2016			04/27/2016	Diana M. Turner	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880
EPA 351.2 Rev. 2.0	04/15/2016	05/03/2016	Sofia Elnemr	05/04/2016	Christopher Armour	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880
EPA 353.2 Rev. 2.0	04/15/2016			04/22/2016	Peter D. Kaus	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880
EPA 365.1 Rev. 2.0	04/15/2016	04/26/2016	Christopher Armour	04/27/2016	Lipi Saha	1789874, 1789875, 1789876, 1789877, 1789878, 1789879, 1789880
EPA 365.1 Rev. 2.0 dissolved	04/15/2016			04/15/2016 12:57	Julia Storbeck	1789883
	04/15/2016			04/15/2016 13:11	Julia Storbeck	1789881
	04/15/2016			04/15/2016 13:12	Julia Storbeck	1789882
	04/15/2016			04/15/2016 13:17	Julia Storbeck	1789884
	04/15/2016			04/15/2016 13:18	Julia Storbeck	1789885
	04/15/2016			04/15/2016 13:19	Julia Storbeck	1789886
	04/15/2016			04/15/2016 13:20	Julia Storbeck	1789887
SM 2120 B	04/15/2016			04/15/2016 11:40	Rochelle Y Jackson	1789867
	04/15/2016			04/15/2016 11:41	Rochelle Y Jackson	1789868
	04/15/2016			04/15/2016 11:42	Rochelle Y Jackson	1789869
	04/15/2016			04/15/2016 11:43	Rochelle Y Jackson	1789870, 1789871
	04/15/2016			04/15/2016 11:44	Rochelle Y Jackson	1789872
	04/15/2016			04/15/2016 11:45	Rochelle Y Jackson	1789873
SM 2320 B-97	04/15/2016			04/21/2016	Dale L. Simmons	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 2540 C-97	04/15/2016			04/20/2016	Yijie Li	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 2540 D-97	04/15/2016			04/20/2016	Yijie Li	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 4500 F-C-97	04/15/2016			04/21/2016	Dale L. Simmons	1789867, 1789868, 1789869, 1789870, 1789871, 1789872, 1789873
SM 5310 B-00	04/15/2016			04/25/2016	Sofia Elnemr	1789874

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	04/15/2016			04/26/2016	Sofia Elnemr	1789875, 1789876, 1789877, 1789878, 1789879, 1789880