

Chemical Analysis Report

SE-DIST-2016-02-19-01

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

Event Description: **SMP_Orange-2/17**

Request ID: **RQ-2016-02-15-48**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

FL Dept. of Environmental Protection
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2199 South Rock Road
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 15-MAR-2016 14:34



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: Florida City Canal (FC-09)

Collection Date/Time: 02/18/2016 12:15

Field ID: G4SEFC09_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773215	EPA 180.1 Rev. 2.0	Turbidity	0.30		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P299228	
		Sulfate	21		mg SO4/L	P299230	
	SM 2120 B	Color (true)	2.5	U	PCU	P298925	
	SM 2320 B-97	Total Alkalinity	211		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	284		mg/L	P299490	
	SM 2540 D-97	TSS	2	I	mg/L	P299427	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P299323	
1773226	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P299630	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P299900	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.66		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P299418	
	SM 5310 B-00	Organic Carbon	1.8		mg C/L	P299308	
1773237	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298929	
1773270	EPA 200.7 Rev. 4.4	Calcium	80.2		mg/L	P299125	
		Iron	30	U	ug/L	P299125	
		Magnesium	4.87		mg/L	P299125	
		Potassium	7.0		mg/L	P299125	
		Sodium	27.0		mg/L	P299125	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P299125	
		Arsenic	0.67		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.050	U	ug/L	P299125	
		Copper	0.70		ug/L	P299125	
		Lead	0.050	U	ug/L	P299125	
		Nickel	0.71		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: Florida City Canal -DUPE

Collection Date/Time: 02/18/2016 12:20

Field ID: G4SEFC09_DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773216	EPA 180.1 Rev. 2.0	Turbidity	0.20		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P299229	
		Sulfate	21		mg SO4/L	P299231	
	SM 2120 B	Color (true)	2.5	U	PCU	P298925	
	SM 2320 B-97	Total Alkalinity	208		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	294		mg/L	P299491	
	SM 2540 D-97	TSS	2	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P299323	
1773227	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P299630	

Field ID: G4SEFC09_DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773227	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P299900	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.66		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	1.8		mg C/L	P299308	
1773238	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298929	
1773271	EPA 200.7 Rev. 4.4	Calcium	80.4		mg/L	P299125	
		Iron	30	U	ug/L	P299125	
		Magnesium	4.74		mg/L	P299125	
		Potassium	6.9		mg/L	P299125	
		Sodium	26.2		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.68		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.050	U	ug/L	P299125	
		Copper	0.70		ug/L	P299125	
		Lead	0.050	U	ug/L	P299125	
		Nickel	0.68		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: Florida City Canal (FC-15)

Collection Date/Time: 02/18/2016 12:45

Field ID: G4SEFC15_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773217	EPA 180.1 Rev. 2.0	Turbidity	1.5	A	NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P299229	
		Sulfate	18		mg SO4/L	P299231	
	SM 2120 B	Color (true)	4.4	I	PCU	P298925	
	SM 2320 B-97	Total Alkalinity	200		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	277	A	mg/L	P299491	
	SM 2540 D-97	TSS	4	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P299323	
1773228	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P299630	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P299400	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.57		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	3.0		mg C/L	P299308	
1773239	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298929	
1773272	EPA 200.7 Rev. 4.4	Calcium	77.8		mg/L	P299125	
		Iron	30	U	ug/L	P299125	
		Magnesium	4.87		mg/L	P299125	
		Potassium	6.6		mg/L	P299125	
		Sodium	23.2		mg/L	P299125	

Field ID: G4SEFC15_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773272	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.79		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.050	U	ug/L	P299125	
		Copper	0.44		ug/L	P299125	
		Lead	0.083	I	ug/L	P299125	
		Nickel	0.74		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

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: Mowry Canal (c-103) @ 152nd Ave

Collection Date/Time: 02/18/2016 13:45

Field ID: G4SE0066_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773218	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P299229	
		Sulfate	18		mg SO4/L	P299231	
	SM 2120 B	Color (true)	19		PCU	P298925	
	SM 2320 B-97	Total Alkalinity	209		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	310		mg/L	P299491	
	SM 2540 D-97	TSS	3	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P299323	
1773229	EPA 350.1 Rev. 2.0	Ammonia-N	0.048		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P299400	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	7.0		mg C/L	P299308	
1773240	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298929	
1773273	EPA 200.7 Rev. 4.4	Calcium	78.9		mg/L	P299125	
		Iron	89	I	ug/L	P299125	
		Magnesium	6.82		mg/L	P299125	
		Potassium	5.8		mg/L	P299125	
		Sodium	27.2		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.99		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.050	U	ug/L	P299125	
		Copper	0.54		ug/L	P299125	
		Lead	0.050	U	ug/L	P299125	
		Nickel	0.52		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

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: C102 @ SW 248th St

Collection Date/Time: 02/18/2016 14:30

Field ID: G4SE0064_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773219	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	48		mg Cl/L	P299229	
		Sulfate	11		mg SO4/L	P299231	
	SM 2120 B	Color (true)	34		PCU	P298926	
	SM 2320 B-97	Total Alkalinity	189		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	299		mg/L	P299491	
	SM 2540 D-97	TSS	7	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P299323	
1773230	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P299400	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.1		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P299308	
1773241	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298929	
1773274	EPA 200.7 Rev. 4.4	Calcium	69.7		mg/L	P299125	
		Iron	180		ug/L	P299125	
		Magnesium	7.96		mg/L	P299125	
		Potassium	4.6		mg/L	P299125	
		Sodium	30.7		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.69		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.13	I	ug/L	P299528	
		Copper	0.27	I	ug/L	P299125	
		Lead	0.13	I	ug/L	P299125	
		Nickel	0.30		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The chromium matrix spike recovery data for one of two spiked samples is unavailable due to high analyte concentration in the QC sample.

Sample Location: C-102N @ SW 248th st

Collection Date/Time: 02/18/2016 14:55

Field ID: G4SE0077_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773220	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P299229	
		Sulfate	39		mg SO4/L	P299231	
	SM 2120 B	Color (true)	2.5	U	PCU	P298926	
	SM 2320 B-97	Total Alkalinity	233	A	mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	345		mg/L	P299491	
	SM 2540 D-97	TSS	2	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P299323	
1773231	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P299400	

Field ID: G4SE0077_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773231	EPA 353.2 Rev. 2.0	NO2NO3-N	3.7		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	1.6		mg C/L	P299308	
1773242	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298930	
1773275	EPA 200.7 Rev. 4.4	Calcium	96.9		mg/L	P299125	
		Iron	30	U	ug/L	P299125	
		Magnesium	5.30		mg/L	P299125	
		Potassium	11.5		mg/L	P299125	
		Sodium	18.3		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.61		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.050	U	ug/L	P299125	
		Copper	0.92		ug/L	P299125	
		Lead	0.050	U	ug/L	P299125	
		Nickel	1.16		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

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: C-102N @ SW 248th st

Collection Date/Time: 02/18/2016 15:00

Field ID: G4SE0077_02182016 DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773221	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P299229	
		Sulfate	38		mg SO4/L	P299231	
		Color (true)	2.5	U	PCU	P298926	
	SM 2320 B-97	Total Alkalinity	231		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	338		mg/L	P299491	
	SM 2540 D-97	TSS	3	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P299323	
1773232	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P299400	
	EPA 353.2 Rev. 2.0	NO2NO3-N	3.7		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P299522	
	SM 5310 B-00	Organic Carbon	1.9		mg C/L	P299308	
1773243	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298930	
1773276	EPA 200.7 Rev. 4.4	Calcium	97.7		mg/L	P299125	
		Iron	30	U	ug/L	P299125	
		Magnesium	5.36		mg/L	P299125	
		Potassium	11.6		mg/L	P299125	
		Sodium	18.5		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.63		ug/L	P299125	

Field ID: G4SE0077_02182016 DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773276	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.050	U	ug/L	P299125	
		Copper	0.93		ug/L	P299125	
		Lead	0.050	U	ug/L	P299125	
		Nickel	1.15		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

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: C-100 CD-06

Collection Date/Time: 02/18/2016 15:50

Field ID: G4SECD06_021816

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773222	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P299229	
		Sulfate	22		mg SO4/L	P299231	
		Color (true)	4.5	I	PCU	P298926	
	SM 2320 B-97	Total Alkalinity	202		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	279		mg/L	P299491	
	SM 2540 D-97	TSS	2	U	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P299323	
1773233	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P299401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	2.1		mg C/L	P299308	
1773244	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298930	
1773277	EPA 200.7 Rev. 4.4	Calcium	82.9		mg/L	P299125	
		Iron	41	I	ug/L	P299125	
		Magnesium	2.61		mg/L	P299125	
		Potassium	2.5		mg/L	P299125	
		Sodium	26.8		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.99		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.050	U	ug/L	P299125	
		Copper	0.88		ug/L	P299125	
		Lead	0.050	U	ug/L	P299125	
		Nickel	0.53		ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

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: C-2 Canal off Red Road

Collection Date/Time: 02/18/2016 16:20

Field ID: 28040399_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773223	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P298939	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P299229	
		Sulfate	2.8		mg SO4/L	P299231	
	SM 2120 B	Color (true)	41	A	PCU	P298926	
	SM 2320 B-97	Total Alkalinity	211		mg CaCO3/L	P299659	
	SM 2540 C-97	TDS	291		mg/L	P299491	
	SM 2540 D-97	TSS	3	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P299323	
1773234	EPA 350.1 Rev. 2.0	Ammonia-N	0.25		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P299401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.079		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P299308	
1773245	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298930	
1773278	EPA 200.7 Rev. 4.4	Calcium	73.4		mg/L	P299125	
		Iron	300		ug/L	P299125	
		Magnesium	7.14		mg/L	P299125	
		Potassium	2.3		mg/L	P299125	
		Sodium	30.7		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	0.96		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.097	I	ug/L	P299528	
		Copper	0.18	I	ug/L	P299125	
		Lead	0.087	I	ug/L	P299125	
		Nickel	0.16	I	ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The chromium matrix spike recovery data for one of two spiked samples is unavailable due to high analyte concentration in the QC sample.

Sample Location: C-2 Canal Red Road @ 88th

Collection Date/Time: 02/18/2016 16:35

Field ID: G4SE0048_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773224	EPA 180.1 Rev. 2.0	Turbidity	1.7	A	NTU	P298940	
	EPA 300.0 Rev. 2.1	Chloride	50		mg Cl/L	P299229	
		Sulfate	3.0		mg SO4/L	P299231	
	SM 2120 B	Color (true)	42		PCU	P298926	
	SM 2320 B-97	Total Alkalinity	228		mg CaCO3/L	P299660	
	SM 2540 C-97	TDS	299		mg/L	P299491	
	SM 2540 D-97	TSS	3	I	mg/L	P299428	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P299323	
1773235	EPA 350.1 Rev. 2.0	Ammonia-N	0.27		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P299401	

Field ID: G4SE0048_02182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773235	EPA 353.2 Rev. 2.0	NO2NO3-N	0.066		mg N/L	P299466	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P299419	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P299308	
1773246	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298930	
1773279	EPA 200.7 Rev. 4.4	Calcium	73.0		mg/L	P299125	
		Iron	310		ug/L	P299125	
		Magnesium	7.23		mg/L	P299125	
		Potassium	2.4		mg/L	P299125	
		Sodium	31.5		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	
	EPA 200.8 Rev. 5.4	Arsenic	1.02		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.10	I	ug/L	P299528	
		Copper	0.16	I	ug/L	P299125	
		Lead	0.080	I	ug/L	P299125	
		Nickel	0.15	I	ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The chromium matrix spike recovery data for one of two spiked samples is unavailable due to high analyte concentration in the QC sample.

Sample Location: C2 Canal Red Road @ 88m

Collection Date/Time: 02/18/2016 16:40

Field ID: G4SE0048_DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773225	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P298940	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P299229	
		Sulfate	3.0		mg SO4/L	P299231	
		Color (true)	41		PCU	P298926	
	SM 2320 B-97	Total Alkalinity	211		mg CaCO3/L	P299660	
	SM 2540 C-97	TDS	300		mg/L	P299491	
	SM 2540 D-97	TSS	2	I	mg/L	P299428	
1773236	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P299323	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.27		mg N/L	P299631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P299401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.064		mg N/L	P299467	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P299419	
1773247	SM 5310 B-00	Organic Carbon	12		mg C/L	P299308	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P298930	
	EPA 200.7 Rev. 4.4	Calcium	73.4		mg/L	P299125	
1773280		Iron	310		ug/L	P299125	
		Magnesium	7.25		mg/L	P299125	
		Potassium	2.4		mg/L	P299125	
		Sodium	31.5		mg/L	P299125	
		Zinc	5.0	U	ug/L	P299125	

Field ID: G4SE0048_DUPE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1773280	EPA 200.8 Rev. 5.4	Arsenic	1.01		ug/L	P299125	
		Cadmium	0.020	U	ug/L	P299125	
		Chromium	0.090	I	ug/L	P299528	
		Copper	0.17	I	ug/L	P299125	
		Lead	0.078	I	ug/L	P299125	
		Nickel	0.15	I	ug/L	P299125	
		Silver	0.0050	U	ug/L	P299125	

Ref. Method and Comment:
 SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.
 EPA 200.8 Rev. 5.4: The chromium matrix spike recovery data for one of two spiked samples is 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: P298939

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P298940

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P299125

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: P299125

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 200.8 Rev. 5.4
 Batch ID: P299528

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299528

Component	Result	Code	Units
Chromium	0.050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299228

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299229

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299230

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299231

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P299630

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P299631

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299400

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299401

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299900

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299466

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299467

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299418

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299419

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299522

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298929

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298930

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

Reference Method: SM 2120 B
Batch ID: P298925

Component	Result	Code	Units
Color (true)	2.5		PCU
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P298926

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P299659

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

Reference Method: SM 2320 B-97
Batch ID: P299660

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

Reference Method: SM 2540 C-97
Batch ID: P299490

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P299491

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P299427

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P299428

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P299323

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P299308

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: P299125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	109		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	103		P	85 - 115
Sodium	102		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	97.7		P	85 - 115
Cadmium	96.6		P	85 - 115
Chromium	98.7		P	85 - 115
Copper	98.1		P	85 - 115
Lead	92.3		P	85 - 115
Nickel	101		P	85 - 115
Silver	97.6		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299528

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299228

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299229

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299230

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299231

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: P299630

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: P299631

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299401

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299900

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	90.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299466

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299467

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299418

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299419

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299522

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298929

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298930

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

Reference Method: SM 2320 B-97
Batch ID: P299659

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

Reference Method: SM 2320 B-97
Batch ID: P299660

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

Reference Method: SM 4500 F-C-97
Batch ID: P299323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	94 - 108

Reference Method: SM 5310 B-00
Batch ID: P299308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P299125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773172	Calcium	105		P	80 - 120
1773172	Iron	109		P	80 - 120
1773172	Magnesium	107		P	80 - 120
1773172	Potassium	107		P	80 - 120
1773172	Sodium	107		P	80 - 120
1773172	Zinc	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P299125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773274	Calcium	106		P	80 - 120
1773274	Iron	108	105	P/P	80 - 120
1773274	Magnesium	108		P	80 - 120
1773274	Potassium	111		P	80 - 120
1773274	Sodium	108		P	80 - 120
1773274	Zinc	99.9	99.2	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773172	Arsenic	100		P	80 - 120
1773172	Cadmium	98.7		P	80 - 120
1773172	Chromium	99.7		P	80 - 120
1773172	Copper	96.3		P	80 - 120
1773172	Lead	94.1		P	80 - 120
1773172	Nickel	98.6		P	80 - 120
1773172	Silver	99.8		P	80 - 120
1773274	Arsenic	99.7	102	P/P	80 - 120
1773274	Cadmium	100	101	P/P	80 - 120
1773274	Chromium	97.9	98.1	P/P	80 - 120
1773274	Copper	93.5	94.0	P/P	80 - 120
1773274	Lead	95.1	95.7	P/P	80 - 120
1773274	Nickel	96.1	96.0	P/P	80 - 120
1773274	Silver	97.1	98.1	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773279	Chromium	98.7		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299228

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773152	Chloride	101		P	90 - 110
1773153	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299229

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773192	Chloride	104		P	90 - 110
1773193	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773152	Sulfate	97.5		P	90 - 110
1773153	Sulfate	97.1		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773192	Sulfate	103		P	90 - 110
1773193	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P299630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773160	Ammonia-N	98.9	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P299631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773233	Ammonia-N	99.6	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773197	Kjeldahl Nitrogen	102	97.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773233	Kjeldahl Nitrogen	93.0	94.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299466

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773233	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299467

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773349	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299418

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773157	Total-P	99.7	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773227	Total-P	95.4	94.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773697	Total-P	98.7	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298929

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773239	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773299	O-Phosphate-P	101	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P299323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773220	Fluoride	98.7	98.7	P/P	94 - 107

Reference Method: SM 5310 B-00
Batch ID: P299308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1773197	Organic Carbon	99.0		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P298939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773217	Turbidity	11.9	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P298940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773224	Turbidity	5.37	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P299125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773274	Calcium	0.917	Spike	P	0 - 20
1773274	Iron	2.26	Spike	P	0 - 20
1773274	Magnesium	1.40	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P299125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773274	Potassium	0.760	Spike	P	0 - 20
1773274	Sodium	0.0124	Spike	P	0 - 20
1773274	Zinc	0.672	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773274	Arsenic	1.76	Spike	P	0 - 20
1773274	Cadmium	0.652	Spike	P	0 - 20
1773274	Chromium	0.237	Spike	P	0 - 20
1773274	Copper	0.559	Spike	P	0 - 20
1773274	Lead	0.707	Spike	P	0 - 20
1773274	Nickel	0.0317	Spike	P	0 - 20
1773274	Silver	1.02	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P299528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1775201	Chromium	0.459	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299228

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773152	Chloride	0.0751	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299229

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773192	Chloride	0.0195	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773152	Sulfate	0.578	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P299231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773192	Sulfate	2.85	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P299630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773160	Ammonia-N	1.62	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P299631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773233	Ammonia-N	0.772	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773197	Kjeldahl Nitrogen	2.86	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773233	Kjeldahl Nitrogen	1.57	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P299900

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1775938	Kjeldahl Nitrogen	3.07	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773233	NO2NO3-N	0.757	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P299467

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773349	NO2NO3-N	0.411	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299418

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773157	Total-P	0.176	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773227	Total-P	1.40	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P299522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773697	Total-P	4.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773239	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P298930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773299	O-Phosphate-P	0.595	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P298925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773154	Color (true)	0.0903	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P298926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773223	Color (true)	1.33	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P299659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773220	Total Alkalinity	0.775	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P299660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773459	Total Alkalinity	0.851	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P299490

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773132	TDS	2.34	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P299491

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773217	TDS	4.33	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P299323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773220	Fluoride	0.0	Spike	P	0 - 3.7

Reference Method: SM 5310 B-00
Batch ID: P299308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1773197	Organic Carbon	1.67	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: A67701

Included Lab Sample IDs: 1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	97.6	P/P	90 - 115
Color (true)	97.6	99.3	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A67702

Included Lab Sample IDs: 1773237, 1773238, 1773239, 1773240, 1773241, 1773242, 1773243, 1773244, 1773245, 1773246, 1773247

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	98.7	P/P	90 - 110
O-Phosphate-P	98.4	99.0	P/P	90 - 110
O-Phosphate-P	98.7	98.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A67706

Included Lab Sample IDs: 1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A67740

Included Lab Sample IDs: 1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	103	P/P	90 - 110
Chloride	103	103	P/P	90 - 110
Sulfate	95.3	99.9	P/P	90 - 110
Sulfate	97.4	101	P/P	90 - 110
Sulfate	99.9	97.4	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A67849

Included Lab Sample IDs: 1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	96.4	P/P	90 - 110
Organic Carbon	96.4	95.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A67854

Included Lab Sample IDs: 1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A67887

Included Lab Sample IDs: 1773270, 1773271, 1773272, 1773273, 1773274, 1773275, 1773276, 1773277, 1773278, 1773279, 1773280

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.3	99.7	P/P	90 - 110
Arsenic	99.7	99.3	P/P	90 - 110
Cadmium	99.0	99.2	P/P	90 - 110
Cadmium	99.2	99.7	P/P	90 - 110
Chromium	100	99.9	P/P	90 - 110
Chromium	99.9	100	P/P	90 - 110
Copper	98.8	97.1	P/P	90 - 110
Copper	99.7	98.8	P/P	90 - 110
Lead	95.4	97.0	P/P	90 - 110
Lead	97.0	95.7	P/P	90 - 110
Nickel	99.0	99.5	P/P	90 - 110
Nickel	99.5	98.4	P/P	90 - 110
Silver	96.7	96.6	P/P	90 - 110
Silver	97.6	96.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A67899

Included Lab Sample IDs: 1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	103	P/P	90 - 110
NO2NO3-N	103	103	P/P	90 - 110
NO2NO3-N	103	104	P/P	90 - 110
NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A67902

Included Lab Sample IDs: 1773270, 1773271, 1773272, 1773273, 1773274, 1773275, 1773276, 1773277, 1773278, 1773279, 1773280

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.7	97.3	P/P	90 - 110
Calcium	98.8	98.7	P/P	90 - 110
Calcium	99.8	98.8	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Iron	102	99.3	P/P	90 - 110
Iron	99.3	101	P/P	90 - 110
Magnesium	100	99.2	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Magnesium	99.2	101	P/P	90 - 110
Potassium	100	100	P/P	90 - 110
Potassium	103	103	P/P	90 - 110
Potassium	100	103	P/P	90 - 110
Sodium	100	100	P/P	90 - 110
Sodium	98.1	100	P/P	90 - 110
Sodium	98.1	98.1	P/P	90 - 110
Zinc	100	96.6	P/P	90 - 110
Zinc	101	99.4	P/P	90 - 110
Zinc	99.4	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67920

Included Lab Sample IDs: 1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773233, 1773234, 1773235, 1773236

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67947

Included Lab Sample IDs: 1773232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A67955

Included Lab Sample IDs: 1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A67955

Included Lab Sample IDs: 1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	99.7	P/P	90 - 110
Ammonia-N	99.7	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A67972

Included Lab Sample IDs: 1773274, 1773278, 1773279, 1773280

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	104	105	P/P	90 - 110
Chromium	105	107	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A67973

Included Lab Sample IDs: 1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.5	P/P	90 - 110
Total Alkalinity	99.5	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A68015

Included Lab Sample IDs: 1773228, 1773229, 1773230, 1773231, 1773232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.2	97.5	P/P	90 - 110
Kjeldahl Nitrogen	95.3	93.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A68018

Included Lab Sample IDs: 1773233, 1773234, 1773235, 1773236

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.6	P/P	90 - 110
Kjeldahl Nitrogen	99.9	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A68119

Included Lab Sample IDs: 1773226, 1773227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.1	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					11.9	
	Turbidity					5.37	
EPA 200.7 Rev. 4.4	Calcium	106	105	106			0.917
	Iron	109	109	108	105		2.26
	Magnesium	106	107	108			1.40
	Potassium	103	107	111			0.760
	Sodium	102	107	108			0.0124
	Zinc	104	99.9	99.2	101		0.672
EPA 200.8 Rev. 5.4	Arsenic	97.7	100	99.7	102		1.76
	Cadmium	96.6	98.7	100	101		0.652
	Chromium	98.7	99.7	97.9	98.1		0.237
	Chromium	102	98.7				0.459
	Copper	98.1	96.3	93.5	94.0		0.559
	Lead	92.3	94.1	95.1	95.7		0.707
	Nickel	101	98.6	96.1	96.0		0.0317
	Silver	97.6	99.8	97.1	98.1		1.02
EPA 300.0 Rev. 2.1	Chloride	102	101	101		0.0751	
	Chloride	104	104	103		0.0195	
	Sulfate	98.9	97.5	97.1		0.578	
	Sulfate	101	103	101		2.85	
EPA 350.1 Rev. 2.0	Ammonia-N	100	98.9	101			1.62
	Ammonia-N	100	99.6	98.5			0.772
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.0	102	97.5			2.86
	Kjeldahl Nitrogen	96.8	93.0	94.9			1.57
	Kjeldahl Nitrogen	90.9					3.07
EPA 353.2 Rev. 2.0	NO2NO3-N	106	100	102			0.757
	NO2NO3-N	106	102				0.411
EPA 365.1 Rev. 2.0	Total-P	95.8	99.7	99.9			0.176
	Total-P	104	95.4	94.0			1.40
	Total-P	102	98.7	103			4.16
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104	100	100			0.0
	O-Phosphate-P	101	101	101			0.595
SM 2120 B	Color (true)					0.0903	
	Color (true)					1.33	
SM 2320 B-97	Total Alkalinity	105				0.775	
	Total Alkalinity	102				0.851	
SM 2540 C-97	TDS					2.34	
	TDS					4.33	
SM 4500 F-C-97	Fluoride	97.1	98.7	98.7			0.0
SM 5310 B-00	Organic Carbon	97.0	99.0				1.67

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1773270, 1773271, 1773272, 1773273, 1773274, 1773275, 1773276, 1773277, 1773278, 1773279, 1773280
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1773270, 1773271, 1773272, 1773273, 1773274, 1773275, 1773276, 1773277, 1773278, 1773279, 1773280

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1773237, 1773238, 1773239, 1773240, 1773241, 1773242, 1773243, 1773244, 1773245, 1773246, 1773247
SM 2120 B / E31780	True Color measured at 450 nm	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236

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	02/19/2016			02/19/2016 15:35	Sima Feizi	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
EPA 200.7 Rev. 4.4	02/19/2016	02/23/2016	Elliott D. Healy	02/29/2016	Joshua Ayres	1773270, 1773271, 1773272, 1773273, 1773274, 1773275, 1773276, 1773277, 1773278, 1773279, 1773280
EPA 200.8 Rev. 5.4	02/19/2016	02/23/2016	Elliott D. Healy	02/26/2016	Charles J. Peterson	1773270, 1773271, 1773272, 1773273, 1773274, 1773275, 1773276, 1773277, 1773278, 1773279, 1773280
EPA 300.0 Rev. 2.1	02/19/2016	03/01/2016	Elliott D. Healy	03/02/2016	Charles J. Peterson	1773274, 1773278, 1773279, 1773280
	02/19/2016			02/24/2016	Julia Storbeck	1773215
	02/19/2016			02/25/2016	Julia Storbeck	1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
EPA 350.1 Rev. 2.0	02/19/2016			03/02/2016	Diana M. Turner	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236
EPA 351.2 Rev. 2.0	02/19/2016	02/29/2016	Christopher Armour	03/02/2016	Rochelle Y Jackson	1773228, 1773229, 1773230, 1773231, 1773232
	02/19/2016	02/29/2016	Christopher Armour	03/03/2016	Rochelle Y Jackson	1773233, 1773234, 1773235, 1773236
	02/19/2016	03/08/2016	Sofia Elnemr	03/09/2016	Rochelle Y Jackson	1773226, 1773227
EPA 353.2 Rev. 2.0	02/19/2016			02/29/2016	Diana M. Turner	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236
EPA 365.1 Rev. 2.0	02/19/2016	02/29/2016	Christopher Armour	03/01/2016	Lipi Saha	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773233, 1773234, 1773235, 1773236
EPA 365.1 Rev. 2.0 dissolved	02/19/2016	03/01/2016	Lipi Saha	03/02/2016	Lipi Saha	1773232
	02/19/2016			02/19/2016 14:19	Bryan A. Werth	1773239
	02/19/2016			02/19/2016 14:54	Bryan A. Werth	1773237
	02/19/2016			02/19/2016 14:55	Bryan A. Werth	1773238
	02/19/2016			02/19/2016 14:56	Bryan A. Werth	1773240
	02/19/2016			02/19/2016 14:57	Bryan A. Werth	1773241
	02/19/2016			02/19/2016 14:58	Bryan A. Werth	1773242
	02/19/2016			02/19/2016 14:59	Bryan A. Werth	1773243
	02/19/2016			02/19/2016 15:04	Bryan A. Werth	1773244
	02/19/2016			02/19/2016 15:05	Bryan A. Werth	1773245, 1773246
	02/19/2016			02/19/2016 15:06	Bryan A. Werth	1773247
	02/19/2016			02/19/2016 14:50	Rochelle Y Jackson	1773215, 1773216
	02/19/2016			02/19/2016 14:51	Rochelle Y Jackson	1773217
SM 2120 B	02/19/2016			02/19/2016 14:52	Rochelle Y Jackson	1773218
	02/19/2016			02/19/2016 14:55	Rochelle Y Jackson	1773219
	02/19/2016			02/19/2016 14:56	Rochelle Y Jackson	1773220, 1773221

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B	02/19/2016			02/19/2016 14:57	Rochelle Y Jackson	1773222
	02/19/2016			02/19/2016 14:59	Rochelle Y Jackson	1773223, 1773224
	02/19/2016			02/19/2016 15:00	Rochelle Y Jackson	1773225
SM 2320 B-97	02/19/2016			03/02/2016	Dale L. Simmons	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 2540 C-97	02/19/2016			02/24/2016	Yijie Li	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 2540 D-97	02/19/2016			02/24/2016	Yijie Li	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 4500 F-C-97	02/19/2016			02/23/2016	Dale L. Simmons	1773215, 1773216, 1773217, 1773218, 1773219, 1773220, 1773221, 1773222, 1773223, 1773224, 1773225
SM 5310 B-00	02/19/2016			02/25/2016	Sofia Elnemr	1773226, 1773227, 1773228, 1773229, 1773230, 1773231, 1773232, 1773233, 1773234, 1773235, 1773236