

Chemical Analysis Report

NE-DIST-2016-03-10-01

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

Event Description: **Gainesville 1**
Request ID: **RQ-2016-03-07-18**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 04-APR-2016 16:08

A handwritten signature in black ink, appearing to read "Liang Lin", is written on a light-colored, textured background.

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: 20020122 Hatchett at 26

Collection Date/Time: 03/09/2016 09:10

Field ID: 20020122 Hatchett at 26

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778845	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P300665	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P300295	
		Sulfate	1.4	A	mg SO4/L	P300485	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P300460	
	SM 2540 C-97	TDS	105		mg/L	P300637	
	SM 2540 D-97	TSS	2	U	mg/L	P300406	
	SM 4500 F-C-97	Fluoride	0.095	I	mg F/L	P300462	
1778846	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P300847	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P300726	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P300384	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P300615	
	SM 5310 B-00	Organic Carbon	29		mg C/L	P300359	
1778847	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.073		mg P/L	P300171	
1778902	EPA 200.7 Rev. 4.4	Calcium	9.67		mg/L	P300378	
		Iron	640		ug/L	P300378	
		Magnesium	4.20		mg/L	P300378	
		Potassium	0.37	I	mg/L	P300378	
		Sodium	6.9		mg/L	P300378	
		Zinc	5.0	U	ug/L	P300378	
	EPA 200.8 Rev. 5.4	Arsenic	0.57		ug/L	P300378	
		Cadmium	0.020	U	ug/L	P300378	
		Chromium	0.71		ug/L	P300378	
		Copper	0.19	I	ug/L	P300378	
		Lead	0.26		ug/L	P300822	
		Nickel	0.60		ug/L	P300378	
		Silver	0.0050	U	ug/L	P300378	

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: 20020124 Lake forest Cr. Univ.

Collection Date/Time: 03/09/2016 09:30

Field ID: 20020124 Lake forest Cr. Univ.

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778830	EPA 180.1 Rev. 2.0	Turbidity	3.0	A	NTU	P300665	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P300294	
		Sulfate	15		mg SO4/L	P300296	
	SM 2120 B	Color (true)	94		PCU	P300175	
	SM 2320 B-97	Total Alkalinity	54		mg CaCO3/L	P300460	
	SM 2540 C-97	TDS	137		mg/L	P300637	
	SM 2540 D-97	TSS	2	U	mg/L	P300406	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P300462	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P300571	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P300725	

Field ID: 20020124 Lake forest Cr. Univ.

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778835	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P300384	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P300613	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P300359	
1778840	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P300171	

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: G3NE0011 Alachua sink

Collection Date/Time: 03/09/2016 10:07

Field ID: G3NE0011 Alachua sink

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778831	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P300665	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P300295	
		Sulfate	11		mg SO4/L	P300297	
	SM 2120 B	Color (true)	170		PCU	P300175	
	SM 2320 B-97	Total Alkalinity	40		mg CaCO3/L	P300460	
	SM 2540 C-97	TDS	132		mg/L	P300637	
	SM 2540 D-97	TSS	2	U	mg/L	P300406	
1778836	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P300462	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.086		mg N/L	P300571	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P300726	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P300384	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P300615	
1778841	SM 5310 B-00	Organic Carbon	21		mg C/L	P300359	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.094		mg P/L	P300171	

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: G3NE0012 Biven arm outlet331

Collection Date/Time: 03/09/2016 10:45

Field ID: G3NE0012 Biven arm outlet331

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778832	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P300665	
	EPA 300.0 Rev. 2.1	Chloride	8.2	A	mg Cl/L	P300295	
		Sulfate	4.0		mg SO4/L	P300485	
	SM 2120 B	Color (true)	32		PCU	P300175	
	SM 2320 B-97	Total Alkalinity	89		mg CaCO3/L	P300460	
	SM 2540 C-97	TDS	125		mg/L	P300637	
	SM 2540 D-97	TSS	2	U	mg/L	P300406	
1778837	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P300462	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P300571	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P300726	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P300384	
	EPA 365.1 Rev. 2.0	Total-P	0.086		mg P/L	P300615	
	SM 5310 B-00	Organic Carbon	8.8		mg C/L	P300359	

Field ID: G3NE0012 Biven arm outlet331

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778842	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.062		mg P/L	P300171	

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: G3NE0010 Lake Alice Gale lemer

Collection Date/Time: 03/09/2016 11:10

Field ID: G3NE0010 Lake Alice Gale lemer

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778833	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P300665	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P300295	
		Sulfate	35		mg SO4/L	P300297	
	SM 2120 B	Color (true)	22		PCU	P300175	
	SM 2320 B-97	Total Alkalinity	94		mg CaCO3/L	P300460	
	SM 2540 C-97	TDS	207		mg/L	P300637	
	SM 2540 D-97	TSS	6	I	mg/L	P300406	
	SM 4500 F-C-97	Fluoride	0.33		mg F/L	P300462	
1778838	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P300847	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P300726	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P300384	
	EPA 365.1 Rev. 2.0	Total-P	0.80		mg P/L	P300615	
	SM 5310 B-00	Organic Carbon	6.7		mg C/L	P300359	
1778843	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.46		mg P/L	P300171	

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: 20020109 Little Hatchett at 24

Collection Date/Time: 03/09/2016 11:48

Field ID: 20020109 Little Hatchett at 24

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1778834	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P300665	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P300295	
		Sulfate	27		mg SO4/L	P300297	
	SM 2120 B	Color (true)	100		PCU	P300175	
	SM 2320 B-97	Total Alkalinity	68		mg CaCO3/L	P300460	
	SM 2540 C-97	TDS	180		mg/L	P300637	
	SM 2540 D-97	TSS	2	I	mg/L	P300406	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P300462	
1778839	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P300847	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P300726	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P300384	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P300615	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P300359	
1778844	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P300171	

Field ID: 20020109 Little Hatchett at 24

Matrix: W-SURF-FRH

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

Collection Date/Time: 03/09/2016 11:47

Field ID: Equipment Blank

Matrix: W-EQPMT-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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1778848	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P300295	
		Sulfate	0.20	U	mg SO4/L	P300297	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P300460	
	SM 2540 D-97	TSS	2	U	mg/L	P300406	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P300462	
1778849	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P300847	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P300726	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P300384	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P300615	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P300359	
1778850	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P300171	
1778903	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P300378	
		Iron	30	U	ug/L	P300378	
		Magnesium	0.040	U	mg/L	P300378	
		Potassium	0.30	U	mg/L	P300378	
		Sodium	0.50	U	mg/L	P300378	
		Zinc	5.0	U	ug/L	P300378	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P300378	
		Cadmium	0.020	U	ug/L	P300822	
		Chromium	0.050	U	ug/L	P300378	
		Copper	0.10	U	ug/L	P300378	
		Lead	0.050	U	ug/L	P300822	
		Nickel	0.050	U	ug/L	P300378	
		Silver	0.0050	U	ug/L	P300378	

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.

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 03/25/2016.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P300665

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P300378

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: P300378

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
Nickel	0.050	U	ug/L
Silver	0.0050	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300822

Component	Result	Code	Units
Cadmium	0.020	U	ug/L
Lead	0.050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300294

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300295

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300296

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300297

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300485

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300571

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300847

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300725

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300726

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300384

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300613

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300615

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300171

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P300175

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P300460

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

Reference Method: SM 2540 C-97
Batch ID: P300637

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P300406

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P300462

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P300359

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: P300378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	102		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	101		P	85 - 115
Sodium	103		P	85 - 115
Zinc	97.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300378

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cadmium	95.5		P	85 - 115
Chromium	92.5		P	85 - 115
Copper	91.6		P	85 - 115
Nickel	93.1		P	85 - 115
Silver	91.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cadmium	98.2		P	85 - 115
Lead	93.2		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300294

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300295

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300296

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300297

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300485

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300571

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300847

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300725

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300384

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	92.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300615

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300171

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

Reference Method: SM 2320 B-97
Batch ID: P300460

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

Reference Method: SM 4500 F-C-97
Batch ID: P300462

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	94 - 108

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P300359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P300378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778828	Calcium	108		P	80 - 120
1778828	Iron	104	103	P/P	80 - 120
1778828	Magnesium	106	105	P/P	80 - 120
1778828	Potassium	101	102	P/P	80 - 120
1778828	Sodium	106		P	80 - 120
1778828	Zinc	99.1	96.6	P/P	80 - 120
1778945	Calcium	110		P	80 - 120
1778945	Iron	106		P	80 - 120
1778945	Magnesium	106		P	80 - 120
1778945	Potassium	100		P	80 - 120
1778945	Sodium	106		P	80 - 120
1778945	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P300378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778828	Arsenic	97.3	99.6	P/P	80 - 120
1778828	Cadmium	95.7	97.2	P/P	80 - 120
1778828	Chromium	91.5	92.3	P/P	80 - 120
1778828	Copper	89.1	90.3	P/P	80 - 120
1778828	Nickel	91.8	92.2	P/P	80 - 120
1778828	Silver	91.4	92.1	P/P	80 - 120
1778945	Arsenic	101		P	80 - 120
1778945	Cadmium	99.4		P	80 - 120
1778945	Chromium	94.6		P	80 - 120
1778945	Copper	93.4		P	80 - 120
1778945	Nickel	94.0		P	80 - 120
1778945	Silver	93.8		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P300822

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778937	Cadmium	97.4	101	P/P	80 - 120
1778937	Lead	92.4	93.7	P/P	80 - 120
1781012	Cadmium	99.5		P	75 - 125
1781012	Lead	95.7		P	75 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778633	Chloride	107	107	P/P	90 - 110
1778634	Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778832	Chloride	104		P	90 - 110
1778834	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300296

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778633	Sulfate	103	104	P/P	90 - 110
1778634	Sulfate	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778832	Sulfate	101		P	90 - 110
1778834	Sulfate	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778845	Sulfate	102		P	90 - 110
1779206	Sulfate	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778835	Ammonia-N	100	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778856	Ammonia-N	99.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300725

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778595	Kjeldahl Nitrogen	103	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300384

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778858	NO2NO3-N	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778594	Total-P	93.5	92.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778836	Total-P	99.4	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300171

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778825	O-Phosphate-P	95.5	97.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P300462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779207	Fluoride	101	101	P/P	94 - 107

Reference Method: SM 5310 B-00
Batch ID: P300359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1778637	Organic Carbon	96.9	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778830	Turbidity	1.36	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P300378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778828	Calcium	0.998	Spike	P	0 - 20
1778828	Iron	0.455	Spike	P	0 - 20
1778828	Magnesium	0.478	Spike	P	0 - 20
1778828	Potassium	0.268	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P300378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778828	Sodium	0.385	Spike	P	0 - 20
1778828	Zinc	2.58	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778828	Arsenic	2.37	Spike	P	0 - 20
1778828	Cadmium	1.49	Spike	P	0 - 20
1778828	Chromium	0.890	Spike	P	0 - 20
1778828	Copper	0.893	Spike	P	0 - 20
1778828	Nickel	0.446	Spike	P	0 - 20
1778828	Silver	0.822	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778937	Cadmium	3.72	Spike	P	0 - 20
1778937	Lead	1.39	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300294

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778633	Chloride	0.0436	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778832	Chloride	4.36	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778633	Sulfate	0.473	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778832	Sulfate	4.50	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778845	Sulfate	2.67	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778835	Ammonia-N	1.38	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778856	Ammonia-N	1.31	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778595	Kjeldahl Nitrogen	1.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778836	Kjeldahl Nitrogen	2.65	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778858	NO2NO3-N	2.93	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778594	Total-P	1.60	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778836	Total-P	6.87	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778825	O-Phosphate-P	1.59	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P300175

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778851	Color (true)	0.389	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P300460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779207	Total Alkalinity	0.297	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P300637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778823	TDS	4.61	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P300462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779207	Fluoride	0.0	Spike	P	0 - 3.7

Reference Method: SM 5310 B-00
Batch ID: P300359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1778637	Organic Carbon	0.728	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A68089
Included Lab Sample IDs: 1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	99.6	P/P	90 - 110
Chloride	99.1	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A68089

Included Lab Sample IDs: 1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	99.1	P/P	90 - 110
Sulfate	98.5	99.5	P/P	90 - 110
Sulfate	98.5	98.5	P/P	90 - 110
Sulfate	98.9	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A68147

Included Lab Sample IDs: 1778840, 1778841, 1778842, 1778843, 1778844, 1778847, 1778850

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.5	95.7	P/P	90 - 110
O-Phosphate-P	98.5	98.2	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A68148

Included Lab Sample IDs: 1778830, 1778831, 1778832, 1778833, 1778834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.6	97.1	P/P	90 - 115
Color (true)	98.7	97.3	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A68152

Included Lab Sample IDs: 1778830, 1778831, 1778832, 1778833, 1778834, 1778845

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

Reference Method: SM 5310 B-00

Run ID: A68221

Included Lab Sample IDs: 1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A68232

Included Lab Sample IDs: 1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	100	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A68255

Included Lab Sample IDs: 1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A68255

Included Lab Sample IDs: 1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A68261

Included Lab Sample IDs: 1778832, 1778845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	96.6	99.1	P/P	90 - 110
Sulfate	99.1	96.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A68276

Included Lab Sample IDs: 1778902, 1778903

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	97.4	98.5	P/P	90 - 110
Cadmium	99.2	99.6	P/P	90 - 110
Chromium	96.1	97.6	P/P	90 - 110
Copper	94.5	94.3	P/P	90 - 110
Nickel	95.2	94.4	P/P	90 - 110
Silver	92.9	93.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A68284

Included Lab Sample IDs: 1778835, 1778836, 1778837

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A68343

Included Lab Sample IDs: 1778836, 1778837, 1778838, 1778839, 1778846

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A68346

Included Lab Sample IDs: 1778902, 1778903

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	99.2	P/P	90 - 110
Calcium	99.2	102	P/P	90 - 110
Iron	100	99.5	P/P	90 - 110
Iron	99.5	101	P/P	90 - 110
Magnesium	101	99.5	P/P	90 - 110
Magnesium	99.5	101	P/P	90 - 110
Potassium	98.0	99.2	P/P	90 - 110
Potassium	98.9	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A68346
Included Lab Sample IDs: 1778902, 1778903

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	98.4	99.9	P/P	90 - 110
Sodium	99.4	98.4	P/P	90 - 110
Zinc	96.5	99.8	P/P	90 - 110
Zinc	99.4	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A68367
Included Lab Sample IDs: 1778835, 1778849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.5	P/P	90 - 110
Total-P	99.5	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A68381
Included Lab Sample IDs: 1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.4	96.7	P/P	90 - 110
Kjeldahl Nitrogen	96.7	95.1	P/P	90 - 110
Kjeldahl Nitrogen	99.8	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A68389
Included Lab Sample IDs: 1778838, 1778839, 1778846, 1778849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	102	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A68420
Included Lab Sample IDs: 1778902, 1778903

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	100	100	P/P	90 - 110
Lead	95.7	97.8	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.36	
EPA 200.7 Rev. 4.4	Calcium	105	108 110			0.998
	Iron	102	104 103 106			0.455

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision	MS
			LCS	SMP	MS		
EPA 200.7 Rev. 4.4	Magnesium	107	106	105	106		0.478
	Potassium	101	101	102	100		0.268
	Sodium	103	106	106			0.385
	Zinc	97.2	99.1	96.6	101		2.58
EPA 200.8 Rev. 5.4	Arsenic	95.4	97.3	99.6	101		2.37
	Cadmium	95.5	95.7	97.2	99.4		1.49
	Cadmium	98.2	97.4	101	99.5		3.72
	Chromium	92.5	91.5	92.3	94.6		0.890
	Copper	91.6	89.1	90.3	93.4		0.893
	Lead	93.2	95.7	92.4	93.7		1.39
	Nickel	93.1	91.8	92.2	94.0		0.446
	Silver	91.2	91.4	92.1	93.8		0.822
EPA 300.0 Rev. 2.1	Chloride	107	107	107			0.0436
	Chloride	104	104	103		4.36	
	Sulfate	103	103	104	103		0.473
	Sulfate	102	101	99.9		4.50	
	Sulfate	101	102	99.5		2.67	
EPA 350.1 Rev. 2.0	Ammonia-N	101	100	102			1.38
	Ammonia-N	97.6	99.2	101			1.31
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.9	103	105			1.35
	Kjeldahl Nitrogen	96.1					2.65
EPA 353.2 Rev. 2.0	NO2NO3-N	101	101	104			2.93
EPA 365.1 Rev. 2.0	Total-P	92.0	93.5	92.0			1.60
	Total-P	94.9	99.4	109			6.87
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.9	95.5	97.1			1.59
SM 2120 B	Color (true)					0.389	
SM 2320 B-97	Total Alkalinity	102				0.297	
SM 2540 C-97	TDS					4.61	
SM 4500 F-C-97	Fluoride	98.3	101	101			0.0
SM 5310 B-00	Organic Carbon	99.4	96.9	97.8			0.728

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1778830, 1778831, 1778832, 1778833, 1778834, 1778845
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1778902, 1778903
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1778902, 1778903
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1778840, 1778841, 1778842, 1778843, 1778844, 1778847, 1778850

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2120 B / E31780	True Color measured at 450 nm	1778830, 1778831, 1778832, 1778833, 1778834
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1778830, 1778831, 1778832, 1778833, 1778834, 1778845
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/10/2016			03/10/2016 13:49	Sima Feizi	1778830, 1778831, 1778832, 1778833, 1778834, 1778845
EPA 200.7 Rev. 4.4	03/10/2016	03/15/2016	Elliott D. Healy	03/21/2016	Joshua Ayres	1778902, 1778903
EPA 200.8 Rev. 5.4	03/10/2016	03/15/2016	Elliott D. Healy	03/16/2016	Charles J. Peterson	1778902, 1778903
	03/10/2016	03/22/2016	Elliott D. Healy	03/23/2016	Charles J. Peterson	1778902, 1778903
EPA 300.0 Rev. 2.1	03/10/2016			03/11/2016	Julia Storbeck	1778830, 1778831, 1778832, 1778833, 1778834, 1778845
	03/10/2016			03/12/2016	Julia Storbeck	1778848
	03/10/2016			03/16/2016	Ping Hua	1778832, 1778845
EPA 350.1 Rev. 2.0	03/10/2016			03/17/2016	Diana M. Turner	1778835, 1778836, 1778837
	03/10/2016			03/22/2016	Diana M. Turner	1778838, 1778839, 1778846, 1778849
EPA 351.2 Rev. 2.0	03/10/2016	03/21/2016	Sofia Elnemr	03/22/2016	Christopher Armour	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849
EPA 353.2 Rev. 2.0	03/10/2016			03/15/2016	Peter D. Kaus	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849
EPA 365.1 Rev. 2.0	03/10/2016	03/18/2016	Christopher Armour	03/21/2016	Lipi Saha	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849
EPA 365.1 Rev. 2.0 dissolved	03/10/2016			03/10/2016 14:13	Ping Hua	1778840
	03/10/2016			03/10/2016 14:14	Ping Hua	1778841
	03/10/2016			03/10/2016 14:15	Ping Hua	1778842
	03/10/2016			03/10/2016 14:16	Ping Hua	1778843
	03/10/2016			03/10/2016 14:18	Ping Hua	1778850
	03/10/2016			03/10/2016 14:40	Ping Hua	1778844
	03/10/2016			03/10/2016 14:41	Ping Hua	1778847
SM 2120 B	03/10/2016			03/10/2016 14:19	Rochelle Y Jackson	1778830
	03/10/2016			03/10/2016 14:20	Rochelle Y Jackson	1778832
	03/10/2016			03/10/2016 14:21	Rochelle Y Jackson	1778833
	03/10/2016			03/10/2016 14:22	Rochelle Y Jackson	1778834
	03/10/2016			03/10/2016 14:47	Rochelle Y Jackson	1778831
SM 2320 B-97	03/10/2016			03/16/2016	Dale L. Simmons	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
SM 2540 C-97	03/10/2016			03/14/2016	Christopher Armour	1778830, 1778831, 1778832, 1778833, 1778834, 1778845
SM 2540 D-97	03/10/2016			03/14/2016	Christopher Armour	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
SM 4500 F-C-97	03/10/2016			03/16/2016	Dale L. Simmons	1778830, 1778831, 1778832, 1778833, 1778834, 1778845, 1778848
SM 5310 B-00	03/10/2016			03/15/2016	Sofia Elnemr	1778835, 1778836, 1778837, 1778838, 1778839, 1778846, 1778849