

Chemical Analysis Report

NW-DIST-2016-05-11-01

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

Event Description: **WBID 275 30 27 336 28 88**

Request ID: **RQ-2016-05-09-22**

Customer: **NW-DIST**

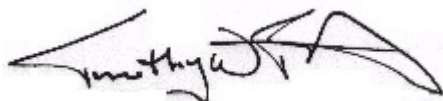
Project ID: **SMP**

Send Reports to:
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Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 03-JUN-2016 15:58

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals and Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Bear Creek @ Forest Rd.

Collection Date/Time: 05/10/2016 11:15

Field ID: G4NW0380

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797576	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P304132	
	EPA 300.0 Rev. 2.1	Chloride	2.4		mg Cl/L	P304780	
		Sulfate	0.45	I	mg SO4/L	P304783	
	SM 2120 B	Color (true)	38		PCU	P304067	
	SM 2320 B-97	Total Alkalinity	6.2		mg CaCO3/L	P304666	
	SM 2540 C-97	TDS	19	I	mg/L	P304857	
	SM 2540 D-97	TSS	2	U	mg/L	P304757	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P304669	
1797582	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P304942	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P304816	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P304655	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P304915	MS
	SM 5310 B-00	Organic Carbon	2.8		mg C/L	P304979	
1797588	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P304079	

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: Mare Ck. Above Mattie Kennfoyl Rd.

Collection Date/Time: 05/10/2016 12:15

Field ID: G4NW0353

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797577	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P304132	
	EPA 300.0 Rev. 2.1	Chloride	2.7		mg Cl/L	P304780	
		Sulfate	3.0		mg SO4/L	P304783	
	SM 2120 B	Color (true)	70		PCU	P304067	
	SM 2320 B-97	Total Alkalinity	3.9		mg CaCO3/L	P304666	
	SM 2540 C-97	TDS	31		mg/L	P304857	
	SM 2540 D-97	TSS	2	U	mg/L	P304757	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P304669	
1797583	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P304942	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P304816	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P304655	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P304915	MS
	SM 5310 B-00	Organic Carbon	3.5		mg C/L	P304979	
1797589	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P304079	

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: Baggett Ck. Above Kenser Mill Rd.

Collection Date/Time: 05/10/2016 13:10

Field ID: G4NW0335

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797578	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P304132	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P304780	
		Sulfate	0.62		mg SO4/L	P304783	

Field ID: G4NW0335

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797578	SM 2120 B	Color (true)	25		PCU	P304067	
	SM 2320 B-97	Total Alkalinity	3.5		mg CaCO3/L	P304666	
	SM 2540 C-97	TDS	17	I	mg/L	P304857	
	SM 2540 D-97	TSS	4	I	mg/L	P304757	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P304669	
1797584	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P304545	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.12	I	mg N/L	P304816	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.76		mg N/L	P304655	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P304916	
	SM 5310 B-00	Organic Carbon	2.5		mg C/L	P304979	
1797590	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P304079	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: Baggett Ck. Above U.S. 90

Collection Date/Time: 05/10/2016 13:30

Field ID: G4NW0336

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797579	EPA 180.1 Rev. 2.0	Turbidity	6.1	A	NTU	P304133	
	EPA 300.0 Rev. 2.1	Chloride	3.9		mg Cl/L	P304780	
		Sulfate	0.93		mg SO4/L	P304783	
	SM 2120 B	Color (true)	43		PCU	P304067	
	SM 2320 B-97	Total Alkalinity	7.6		mg CaCO3/L	P304666	
	SM 2540 C-97	TDS	34		mg/L	P304857	
	SM 2540 D-97	TSS	8	I	mg/L	P304757	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P304669	
1797585	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P304545	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P304817	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.54		mg N/L	P304529	
	EPA 365.1 Rev. 2.0	Total-P	0.032		mg P/L	P304916	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P304980	
1797591	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P304080	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: Yellow R @ S.R. 2

Collection Date/Time: 05/10/2016 14:50

Field ID: G4NW0261

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797573	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P304132	
	EPA 300.0 Rev. 2.1	Chloride	3.5		mg Cl/L	P304780	
		Sulfate	1.3		mg SO4/L	P304783	
	SM 2120 B	Color (true)	47	A	PCU	P304067	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P304666	

Field ID: G4NW0261

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797573	SM 2540 C-97	TDS	49		mg/L	P304857	
	SM 2540 D-97	TSS	8	I	mg/L	P304757	
	SM 4500 F-C-97	Fluoride	0.040	I	mg F/L	P304669	
1797574	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P304545	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P304816	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P304529	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P304915	MS
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P304979	
1797575	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P304078	
1797645	EPA 200.7 Rev. 4.4	Calcium	11.2		mg/L	P304458	
		Iron	940		ug/L	P304458	
		Magnesium	2.13		mg/L	P304458	
		Potassium	0.52	I	mg/L	P304458	
		Sodium	2.2		mg/L	P304458	
		Zinc	5.0	U	ug/L	P304458	
	EPA 200.8 Rev. 5.4	Arsenic	0.50		ug/L	P304458	
		Cadmium	0.020	U	ug/L	P304458	
		Chromium	0.33		ug/L	P304458	
		Copper	0.26	I	ug/L	P304458	
		Lead	0.18	I	ug/L	P304458	
		Nickel	0.22		ug/L	P304458	
		Silver	0.0050	U	ug/L	P304458	

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: Big Horse Ck. @ S.R. 2

Collection Date/Time: 05/10/2016 15:10

Field ID: G4NW0299

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797580	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P304133	
	EPA 300.0 Rev. 2.1	Chloride	3.4		mg Cl/L	P304780	
		Sulfate	0.77		mg SO4/L	P304783	
	SM 2120 B	Color (true)	37		PCU	P304067	
	SM 2320 B-97	Total Alkalinity	2.2	I	mg CaCO3/L	P304666	
	SM 2540 C-97	TDS	23	I	mg/L	P304857	
	SM 2540 D-97	TSS	7	I	mg/L	P304757	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P304669	
1797586	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P304545	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P304817	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P304529	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P304916	
	SM 5310 B-00	Organic Carbon	2.7		mg C/L	P304980	
1797592	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P304080	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: Big Horse Ck. Above Old River Rd.

Collection Date/Time: 05/10/2016 15:30

Field ID: G4NW0298

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1797581	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P304133	
	EPA 300.0 Rev. 2.1	Chloride	3.6		mg Cl/L	P304780	
		Sulfate	0.87		mg SO4/L	P304783	
	SM 2120 B	Color (true)	34		PCU	P304067	
	SM 2320 B-97	Total Alkalinity	2.6		mg CaCO3/L	P304666	
	SM 2540 C-97	TDS	21	I	mg/L	P304857	
	SM 2540 D-97	TSS	5	I	mg/L	P304757	
1797587	SM 4500 F-C-97	Fluoride	0.036	I	mg F/L	P304669	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P304545	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P304817	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P304529	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P304916	
1797593	SM 5310 B-00	Organic Carbon	2.4		mg C/L	P304980	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P304080	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Matrix spike recovery data 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: P304132

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P304133

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P304458

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: P304458

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304458

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304780

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304783

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304545

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304942

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304816

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304817

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304529

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304655

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P304915

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P304916

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304078

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304079

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304080

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

Reference Method: SM 2120 B
Batch ID: P304067

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P304666

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

Reference Method: SM 2540 C-97
Batch ID: P304857

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P304757

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P304669

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P304979

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

Reference Method: SM 5310 B-00
Batch ID: P304980

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: P304458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	109		P	85 - 115
Iron	106		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	107		P	85 - 115
Sodium	109		P	85 - 115
Zinc	99.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	95.8		P	85 - 115
Cadmium	95.6		P	85 - 115
Chromium	96.9		P	85 - 115
Copper	95.6		P	85 - 115
Lead	95.9		P	85 - 115
Nickel	97.8		P	85 - 115
Silver	91.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304780

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304545

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304942

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304816

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304817

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304529

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304655

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P304915

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P304916

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304078

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P304079

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: P304080

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

Reference Method: SM 2320 B-97
 Batch ID: P304666

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

Reference Method: SM 4500 F-C-97
 Batch ID: P304669

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.4		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P304979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.4		P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P304980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P304458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797985	Calcium	111		P	80 - 120
1797985	Iron	106		P	80 - 120
1797985	Magnesium	106		P	80 - 120
1797985	Potassium	104		P	80 - 120
1797985	Sodium	104		P	80 - 120
1797985	Zinc	98.9		P	80 - 120
1798052	Calcium	113		P	80 - 120
1798052	Iron	107	107	P/P	80 - 120
1798052	Magnesium	103		P	80 - 120
1798052	Potassium	107	107	P/P	80 - 120
1798052	Sodium	109	109	P/P	80 - 120
1798052	Zinc	99.2	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797985	Arsenic	98.2		P	80 - 120
1797985	Cadmium	97.8		P	80 - 120
1797985	Chromium	98.3		P	80 - 120
1797985	Copper	96.9		P	80 - 120
1797985	Lead	97.4		P	80 - 120
1797985	Nickel	98.6		P	80 - 120
1797985	Silver	91.8		P	80 - 120
1798052	Arsenic	98.3	97.2	P/P	80 - 120
1798052	Cadmium	97.3	97.9	P/P	80 - 120
1798052	Chromium	97.9	96.9	P/P	80 - 120
1798052	Copper	96.3	93.7	P/P	80 - 120
1798052	Lead	93.9	94.1	P/P	80 - 120
1798052	Nickel	97.0	96.1	P/P	80 - 120
1798052	Silver	92.8	92.0	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304780

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797995	Chloride	100		P	90 - 110
1798016	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797995	Sulfate	96.4		P	90 - 110
1798016	Sulfate	94.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797584	Ammonia-N	98.1	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797582	Ammonia-N	98.1	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304816

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797501	Kjeldahl Nitrogen	94.2	92.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304817

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797586	Kjeldahl Nitrogen	95.1	98.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797586	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1798264	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P304915

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797565	Total-P	101	114	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797575	O-Phosphate-P	99.0	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797588	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797593	O-Phosphate-P	98.5	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P304669

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1798058	Fluoride	97.4	97.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P304979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797388	Organic Carbon	104		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P304980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1797585	Organic Carbon	95.4	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P304132

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797496	Turbidity	1.56	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P304133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797579	Turbidity	1.65	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P304458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1798052	Calcium	1.10	Spike	P	0 - 20
1798052	Iron	0.369	Spike	P	0 - 20
1798052	Magnesium	0.149	Spike	P	0 - 20
1798052	Potassium	0.280	Spike	P	0 - 20
1798052	Sodium	0.431	Spike	P	0 - 20
1798052	Zinc	1.93	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1798052	Arsenic	1.10	Spike	P	0 - 20
1798052	Cadmium	0.547	Spike	P	0 - 20
1798052	Chromium	0.991	Spike	P	0 - 20
1798052	Copper	2.73	Spike	P	0 - 20
1798052	Lead	0.221	Spike	P	0 - 20
1798052	Nickel	0.989	Spike	P	0 - 20
1798052	Silver	0.869	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797995	Chloride	0.0797	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P304783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797995	Sulfate	2.70	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797584	Ammonia-N	2.12	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P304942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797582	Ammonia-N	0.915	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797501	Kjeldahl Nitrogen	1.41	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P304817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797586	Kjeldahl Nitrogen	2.62	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797586	NO2NO3-N	0.810	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1798264	NO2NO3-N	1.85	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P304915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797565	Total-P	11.5	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P304916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797730	Total-P	2.01	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797575	O-Phosphate-P	0.668	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797588	O-Phosphate-P	0.884	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797593	O-Phosphate-P	1.16	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P304067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797573	Color (true)	0.0942	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P304666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1798058	Total Alkalinity	0.887	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P304857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797994	TDS	5.41	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P304669

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1798058	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P304979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797388	Organic Carbon	1.86	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P304980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1797585	Organic Carbon	1.39	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: A39620
Included Lab Sample IDs: 1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	99.8	P/P	90 - 110
Chloride	99.8	99.8	P/P	90 - 110
Sulfate	97.8	99.0	P/P	90 - 110
Sulfate	98.9	97.8	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A69424
Included Lab Sample IDs: 1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.8	97.4	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A69429
Included Lab Sample IDs: 1797575, 1797588, 1797589, 1797590, 1797591, 1797592, 1797593

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	102	P/P	90 - 110
O-Phosphate-P	103	101	P/P	90 - 110
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A69439
Included Lab Sample IDs: 1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A69550
Included Lab Sample IDs: 1797574, 1797585, 1797586, 1797587

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69554

Included Lab Sample IDs: 1797574, 1797584, 1797585, 1797586, 1797587

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	99.4	P/P	90 - 110
Ammonia-N	98.8	98.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A69570

Included Lab Sample IDs: 1797645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.4	99.3	P/P	90 - 110
Cadmium	97.1	97.7	P/P	90 - 110
Chromium	98.6	99.6	P/P	90 - 110
Copper	99.0	97.7	P/P	90 - 110
Lead	94.7	95.4	P/P	90 - 110
Nickel	100	98.6	P/P	90 - 110
Silver	95.0	94.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69587

Included Lab Sample IDs: 1797582, 1797583, 1797584

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

Reference Method: SM 2320 B-97

Run ID: A69588

Included Lab Sample IDs: 1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	97.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A69588

Included Lab Sample IDs: 1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	98.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A69589

Included Lab Sample IDs: 1797645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.9	101	P/P	90 - 110
Iron	99.8	101	P/P	90 - 110
Magnesium	100	101	P/P	90 - 110
Potassium	102	103	P/P	90 - 110
Sodium	103	102	P/P	90 - 110
Zinc	98.3	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69674

Included Lab Sample IDs: 1797582, 1797583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.3	P/P	90 - 110
Ammonia-N	99.3	99.9	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A69683

Included Lab Sample IDs: 1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69702

Included Lab Sample IDs: 1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.9	94.4	P/P	90 - 110
Kjeldahl Nitrogen	92.9	93.8	P/P	90 - 110
Kjeldahl Nitrogen	93.0	92.9	P/P	90 - 110
Kjeldahl Nitrogen	93.8	91.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69722

Included Lab Sample IDs: 1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	98.0	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						1.56	
	Turbidity						1.65	
EPA 200.7 Rev. 4.4	Calcium	109		111	113			1.10
	Iron	106		106	107	107		0.369
	Magnesium	102		106	103			0.149
	Potassium	107		104	107	107		0.280
	Sodium	109		104	109	109		0.431
	Zinc	99.9		98.9	99.2	101		1.93
EPA 200.8 Rev. 5.4	Arsenic	95.8		98.2	98.3	97.2		1.10
	Cadmium	95.6		97.8	97.3	97.9		0.547
	Chromium	96.9		98.3	97.9	96.9		0.991
	Copper	95.6		96.9	96.3	93.7		2.73
	Lead	95.9		97.4	93.9	94.1		0.221

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision	
			LCS	SMP	MS	SMP	MS
EPA 200.8 Rev. 5.4	Nickel	97.8	98.6	97.0	96.1		0.989
	Silver	91.9	91.8	92.8	92.0		0.869
EPA 300.0 Rev. 2.1	Chloride	98.7	100	100		0.0797	
	Sulfate	96.9	96.4	94.5		2.70	
EPA 350.1 Rev. 2.0	Ammonia-N	98.7	98.1	101			2.12
	Ammonia-N	99.0	98.1	99.1			0.915
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.6	94.2	92.2			1.41
	Kjeldahl Nitrogen	94.3	95.1	98.0			2.62
EPA 353.2 Rev. 2.0	NO2NO3-N	104	101	102			0.810
	NO2NO3-N	104	102	104			1.85
EPA 365.1 Rev. 2.0	Total-P	104	101	114			11.5
	Total-P	103					2.01
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	99.0	99.7			0.668
	O-Phosphate-P	104	101	102			0.884
	O-Phosphate-P	101	98.5	99.8			1.16
SM 2120 B	Color (true)					0.0942	
SM 2320 B-97	Total Alkalinity	102				0.887	
SM 2540 C-97	TDS					5.41	
SM 4500 F-C-97	Fluoride	98.4	97.4	97.4			0.0
SM 5310 B-00	Organic Carbon	97.4	104				1.86
	Organic Carbon	101	95.4	97.0			1.39

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1797645
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1797645
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1797575, 1797588, 1797589, 1797590, 1797591, 1797592, 1797593
SM 2120 B / E31780	True Color measured at 450 nm	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587

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	05/11/2016			05/11/2016 15:59	Sima Feizi	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
EPA 200.7 Rev. 4.4	05/11/2016	05/17/2016	Elliott D. Healy	05/19/2016	Joshua Ayres	1797645
EPA 200.8 Rev. 5.4	05/11/2016	05/17/2016	Elliott D. Healy	05/18/2016	Charles J. Peterson	1797645
EPA 300.0 Rev. 2.1	05/11/2016			05/20/2016	Elisa J Lutz	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
EPA 350.1 Rev. 2.0	05/11/2016			05/18/2016	Diana M. Turner	1797574, 1797584, 1797585, 1797586, 1797587
	05/11/2016			05/24/2016	Diana M. Turner	1797582, 1797583
EPA 351.2 Rev. 2.0	05/11/2016	05/23/2016	Sofia Elnemr	05/25/2016	Christopher Armour	1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587
EPA 353.2 Rev. 2.0	05/11/2016			05/18/2016	Peter D. Kaus	1797574, 1797585, 1797586, 1797587
	05/11/2016			05/19/2016	Peter D. Kaus	1797582, 1797583, 1797584
EPA 365.1 Rev. 2.0	05/11/2016	05/24/2016	Vijayalakshmi Reddy	05/25/2016	Rochelle Y Jackson	1797574, 1797582, 1797583, 1797584, 1797585, 1797586, 1797587
EPA 365.1 Rev. 2.0 dissolved	05/11/2016			05/11/2016 13:58	Julia Storbeck	1797575
	05/11/2016			05/11/2016 14:02	Julia Storbeck	1797588
	05/11/2016			05/11/2016 14:11	Julia Storbeck	1797593
	05/11/2016			05/11/2016 15:03	Julia Storbeck	1797589
	05/11/2016			05/11/2016 15:04	Julia Storbeck	1797590
	05/11/2016			05/11/2016 15:05	Julia Storbeck	1797591
	05/11/2016			05/11/2016 15:06	Julia Storbeck	1797592
SM 2120 B	05/11/2016			05/11/2016 14:28	Rochelle Y Jackson	1797573
	05/11/2016			05/11/2016 14:29	Rochelle Y Jackson	1797576
	05/11/2016			05/11/2016 14:30	Rochelle Y Jackson	1797577, 1797578
	05/11/2016			05/11/2016 14:31	Rochelle Y Jackson	1797579
	05/11/2016			05/11/2016 14:32	Rochelle Y Jackson	1797580
	05/11/2016			05/11/2016 14:33	Rochelle Y Jackson	1797581
SM 2320 B-97	05/11/2016			05/19/2016	Dale L. Simmons	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 2540 C-97	05/11/2016			05/13/2016	Yijie Li	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 2540 D-97	05/11/2016			05/13/2016	Yijie Li	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 4500 F-C-97	05/11/2016			05/19/2016	Dale L. Simmons	1797573, 1797576, 1797577, 1797578, 1797579, 1797580, 1797581
SM 5310 B-00	05/11/2016			05/24/2016	Diana M. Turner	1797574, 1797582, 1797583
	05/11/2016			05/25/2016	Diana M. Turner	1797584, 1797585, 1797586, 1797587