

Chemical Analysis Report

NW-DIST-2016-01-27-01

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

Event Description: **SMP Sampling**
Request ID: **RQ-2016-01-25-63**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government St
Suite 208A
Pensacola, FL 32502-5794
Attn: Michael King

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

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 11-FEB-2016 16:10



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 group are included in this report: 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: Ten Mile Creek pine Forest Road

Collection Date/Time: 01/26/2016 10:00

Field ID: G5NW0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765558	EPA 180.1 Rev. 2.0	Turbidity	550		NTU	P297694	
	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P297775	
		Sulfate	4.2		mg SO4/L	P297780	
	SM 2120 B	Color (true)	25		PCU	P297661	
	SM 2320 B-97	Total Alkalinity	12		mg CaCO3/L	P298142	
	SM 2540 C-97	TDS	88		mg/L	P298282	
	SM 2540 D-97	TSS	302		mg/L	P298119	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765567	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P297991	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P297896	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.060		mg N/L	P297868	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P297765	
	SM 5310 B-00	Organic Carbon	7.0		mg C/L	P297846	

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: Jack's Branch at Jack's Branch Road

Collection Date/Time: 01/26/2016 10:30

Field ID: G5NW0037

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765559	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P297690	
	EPA 300.0 Rev. 2.1	Chloride	4.2		mg Cl/L	P297775	
		Sulfate	1.7		mg SO4/L	P297780	
	SM 2120 B	Color (true)	47		PCU	P297661	
	SM 2320 B-97	Total Alkalinity	1.6	I	mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	24	I	mg/L	P298282	
	SM 2540 D-97	TSS	2	U	mg/L	P298119	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765568	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P297991	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20	I	mg N/L	P297896	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.069		mg N/L	P297868	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P297765	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P297846	
1765577	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

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: Muscogee Creek 200 meters below Beulah Rd

Collection Date/Time: 01/26/2016 11:10

Field ID: G5NW0019

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765560	EPA 180.1 Rev. 2.0	Turbidity	7.3		NTU	P297690	
	EPA 300.0 Rev. 2.1	Chloride	4.8		mg Cl/L	P297775	
		Sulfate	3.1		mg SO4/L	P297780	
	SM 2120 B	Color (true)	59		PCU	P297661	

Field ID: G5NW0019

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765560	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	31		mg/L	P298283	
	SM 2540 D-97	TSS	2	I	mg/L	P298120	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765569	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P297991	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20		mg N/L	P297896	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P297868	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P297765	
	SM 5310 B-00	Organic Carbon	5.0		mg C/L	P297846	
1765578	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

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: Eight Mile Creek near Bankhead Drive

Collection Date/Time: 01/26/2016 11:45

Field ID: G5NW0056

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765561	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	7.3		mg Cl/L	P297775	
		Sulfate	5.1		mg SO4/L	P297780	
	SM 2120 B	Color (true)	45		PCU	P297661	
	SM 2320 B-97	Total Alkalinity	14		mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	50		mg/L	P298283	
	SM 2540 D-97	TSS	2	U	mg/L	P298120	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.045		mg N/L	P297992	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P298035	
1765570	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P297906	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P297846	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: The result was confirmed on 02/03/2016.

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

Sample Location: Eight Mile Creek near Bankhead Drive

Collection Date/Time: 01/26/2016 12:00

Field ID: G5NW0056DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765562	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	7.4		mg Cl/L	P297775	
		Sulfate	5.2		mg SO4/L	P297780	
	SM 2120 B	Color (true)	44	A	PCU	P297662	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	49		mg/L	P298283	

Field ID: G5NW0056DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765562	SM 2540 D-97	TSS	2	U	mg/L	P298120	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765571	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P297992	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P297896	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P297846	
1765580	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: The result was confirmed on 02/03/2016.

Sample Location: Clear creek CR 749 North

Collection Date/Time: 01/26/2016 12:40

Field ID: G4NW0359

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765563	EPA 180.1 Rev. 2.0	Turbidity	2.3	A	NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	9.5		mg Cl/L	P297775	
		Sulfate	4.3		mg SO4/L	P297780	
	SM 2120 B	Color (true)	32		PCU	P297662	
	SM 2320 B-97	Total Alkalinity	9.9		mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	36		mg/L	P298283	
	SM 2540 D-97	TSS	2	U	mg/L	P298120	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765572	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P297991	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P297896	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P297846	
1765581	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

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: Clear creek @ Tecumseh Trail

Collection Date/Time: 01/26/2016 13:10

Field ID: G4NW0358

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765564	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	8.3		mg Cl/L	P297775	
		Sulfate	7.2		mg SO4/L	P297780	
	SM 2120 B	Color (true)	23		PCU	P297662	
	SM 2320 B-97	Total Alkalinity	20		mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	47		mg/L	P298283	
	SM 2540 D-97	TSS	2	I	mg/L	P298120	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765573	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P297992	

Field ID: G4NW0358

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765573	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P297896	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.45		mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	2.5		mg C/L	P297846	
1765582	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

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: Thompson Bayou @ Scenic Hills

Collection Date/Time: 01/26/2016 13:40

Field ID: G4NW0223

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765565	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	8.7		mg Cl/L	P297775	
		Sulfate	6.1		mg SO4/L	P297780	
		Color (true)	31		PCU	P297662	
	SM 2320 B-97	Total Alkalinity	13		mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	37		mg/L	P298283	
	SM 2540 D-97	TSS	2	U	mg/L	P298120	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765574	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P297992	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21		mg N/L	P297740	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	3.6		mg C/L	P297846	
1765583	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

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: Thompson Bayou @ Scenic Hills

Collection Date/Time: 01/26/2016 14:00

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765566	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P297775	
		Sulfate	0.20	U	mg SO4/L	P297780	
		Color (true)	2.5	U	PCU	P297662	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	15	U	mg/L	P298281	
	SM 2540 D-97	TSS	2	U	mg/L	P298118	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765575	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P297992	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P297740	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.002	I	mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P297846	

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765584	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297630	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: The result was confirmed on 02/05/2016.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P297690

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P297691

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P297694

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P297775

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P297780

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P297991

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P297992

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P297740

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: P297896

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P298035

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297868

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297869

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297765

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297766

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297906

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297630

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

Reference Method: SM 2120 B
Batch ID: P297661

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P297662

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P297752

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

Reference Method: SM 2320 B-97
Batch ID: P298142

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

Reference Method: SM 2540 C-97
Batch ID: P298281

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P298282

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P298283

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P298118

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P298119

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P298120

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P297747

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P297846

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297775

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297780

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P297991

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P297992

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297740

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P298035

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P298035

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297868

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297869

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297765

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297766

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297906

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297630

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

Reference Method: SM 2320 B-97
Batch ID: P297752

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 105

Reference Method: SM 2320 B-97
Batch ID: P298142

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.7		P	95 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P297747

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

Reference Method: SM 5310 B-00
Batch ID: P297846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	106		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765543	Chloride	104		P	90 - 110
1765585	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297780

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765543	Sulfate	100		P	90 - 110
1765585	Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P297991

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765569	Ammonia-N	97.4	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P297992

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765574	Ammonia-N	100	98.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765574	Kjeldahl Nitrogen	94.9	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765568	Kjeldahl Nitrogen	93.4	93.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297868

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765568	NO2NO3-N	98.1	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297869

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765587	NO2NO3-N	97.5	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765508	Total-P	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765571	Total-P	99.2	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1766138	Total-P	102	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765577	O-Phosphate-P	101	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P297747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765585	Fluoride	97.0	97.0	P/P	94 - 107

Reference Method: SM 5310 B-00
Batch ID: P297846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765513	Organic Carbon	93.1	93.1	P/P	85 - 115

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P297690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765503	Turbidity	1.19	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P297691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765563	Turbidity	10.1	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P297694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765879	Turbidity	1.49	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765543	Chloride	0.475	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765543	Sulfate	0.0426	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P297991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765569	Ammonia-N	0.404	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P297992

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765574	Ammonia-N	1.51	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765574	Kjeldahl Nitrogen	5.66	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765568	Kjeldahl Nitrogen	0.220	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P298035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1767626	Kjeldahl Nitrogen	3.83	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765568	NO2NO3-N	1.13	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765587	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765508	Total-P	2.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765571	Total-P	5.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1766138	Total-P	3.92	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765577	O-Phosphate-P	1.57	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P297661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765544	Color (true)	0.326	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P297662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765562	Color (true)	0.841	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P297752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765585	Total Alkalinity	1.82	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P298142

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765325	Total Alkalinity	1.17	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P298281

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765285	TDS	6.28	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P298282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765664	TDS	5.41	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P298283

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765585	TDS	6.33	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P297747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765585	Fluoride	0.0	Spike	P	0 - 3.7

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P297846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765513	Organic Carbon	0.0403	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: A67286
Included Lab Sample IDs: 1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	103	P/P	90 - 110
Chloride	103	104	P/P	90 - 110
Sulfate	96.8	97.2	P/P	90 - 110
Sulfate	97.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A67295
Included Lab Sample IDs: 1765577, 1765578, 1765579, 1765580, 1765581, 1765582, 1765583, 1765584

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	98.4	P/P	90 - 110
O-Phosphate-P	98.4	99.1	P/P	90 - 110
O-Phosphate-P	98.9	99.4	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A67310
Included Lab Sample IDs: 1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	104	P/P	85 - 115
Color (true)	103	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A67317
Included Lab Sample IDs: 1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	100	100	P/P	95 - 105
Turbidity	99.0	100	P/P	95 - 105

Reference Method: SM 4500 F-C-97
Run ID: A67337
Included Lab Sample IDs: 1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A67337

Included Lab Sample IDs: 1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

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

Reference Method: SM 2320 B-97

Run ID: A67338

Included Lab Sample IDs: 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.8	99.8	P/P	90 - 110
Total Alkalinity	99.4	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67362

Included Lab Sample IDs: 1765567

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

Reference Method: SM 5310 B-00

Run ID: A67371

Included Lab Sample IDs: 1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.2	93.6	P/P	90 - 110
Organic Carbon	93.6	93.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67378

Included Lab Sample IDs: 1765568, 1765569, 1765571, 1765572, 1765573, 1765574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A67381

Included Lab Sample IDs: 1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A67384

Included Lab Sample IDs: 1765574, 1765575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	103	P/P	90 - 110
Kjeldahl Nitrogen	103	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67402

Included Lab Sample IDs: 1765575

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A67424

Included Lab Sample IDs: 1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A67428

Included Lab Sample IDs: 1765567, 1765568, 1765569, 1765571, 1765572, 1765573

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.5	99.2	P/P	90 - 110
Kjeldahl Nitrogen	98.7	98.7	P/P	90 - 110
Kjeldahl Nitrogen	99.2	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67451

Included Lab Sample IDs: 1765570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	98.0	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A67470

Included Lab Sample IDs: 1765558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A67482

Included Lab Sample IDs: 1765570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	102	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	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				1.19	
	Turbidity				10.1	
	Turbidity				1.49	
EPA 300.0 Rev. 2.1	Chloride	105	104	99.7	0.475	
	Sulfate	101	100	99.9	0.0426	
EPA 350.1 Rev. 2.0	Ammonia-N	97.7	97.4	97.0		0.404
	Ammonia-N	98.6	100	98.1		1.51
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	94.9	101		5.66
	Kjeldahl Nitrogen	93.5	93.4	93.1		0.220
	Kjeldahl Nitrogen	97.3				3.83
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	98.1	99.6		1.13
	NO2NO3-N	102	97.5	97.5		0.0
EPA 365.1 Rev. 2.0	Total-P	102	105	103		2.22
	Total-P	103	99.2	105		5.22
	Total-P	104	102	98.2		3.92
EPA 365.1 Rev. 2.0 dissolved SM 2120 B	O-Phosphate-P	101	101	103		1.57
	Color (true)				0.326	
	Color (true)				0.841	
SM 2320 B-97	Total Alkalinity	103			1.82	
	Total Alkalinity	99.7			1.17	
SM 2540 C-97	TDS				6.28	
	TDS				5.41	
	TDS				6.33	
SM 4500 F-C-97	Fluoride	97.1	97.0	97.0		0.0
SM 5310 B-00	Organic Carbon	106	93.1	93.1		0.0403

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1765577, 1765578, 1765579, 1765580, 1765581, 1765582, 1765583, 1765584
SM 2120 B / E31780	True Color measured at 450 nm	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575

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	01/27/2016			01/27/2016 17:25	Sima Feizi	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
EPA 300.0 Rev. 2.1	01/27/2016			01/29/2016	Ping Hua	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
EPA 350.1 Rev. 2.0	01/27/2016			02/03/2016	Diana M. Turner	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575
EPA 351.2 Rev. 2.0	01/27/2016	01/29/2016	Christopher Armour	02/01/2016	Bryan A. Werth	1765574, 1765575
	01/27/2016	02/02/2016	Christopher Armour	02/03/2016	Bryan A. Werth	1765567, 1765568, 1765569, 1765571, 1765572, 1765573
	01/27/2016	02/04/2016	Christopher Armour	02/05/2016	Bryan A. Werth	1765570
EPA 353.2 Rev. 2.0	01/27/2016			02/01/2016	Diana M. Turner	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575
EPA 365.1 Rev. 2.0	01/27/2016	01/29/2016	Christopher Armour	01/29/2016	Lipi Saha	1765567
	01/27/2016	01/29/2016	Christopher Armour	02/01/2016	Lipi Saha	1765568, 1765569, 1765571, 1765572, 1765573, 1765574
	01/27/2016	01/29/2016	Christopher Armour	02/02/2016	Lipi Saha	1765575
	01/27/2016	02/02/2016	Christopher Armour	02/04/2016	Lipi Saha	1765570
EPA 365.1 Rev. 2.0 dissolved	01/27/2016			01/27/2016 12:47	Julia Storbeck	1765577
	01/27/2016			01/27/2016 13:11	Julia Storbeck	1765584
	01/27/2016			01/27/2016 13:13	Julia Storbeck	1765579
	01/27/2016			01/27/2016 13:14	Julia Storbeck	1765580
	01/27/2016			01/27/2016 13:18	Julia Storbeck	1765578
	01/27/2016			01/27/2016 13:25	Julia Storbeck	1765581
	01/27/2016			01/27/2016 13:26	Julia Storbeck	1765582
	01/27/2016			01/27/2016 13:27	Julia Storbeck	1765583
SM 2120 B	01/27/2016			01/27/2016 14:19	Blanca Fach	1765558
	01/27/2016			01/27/2016 14:20	Blanca Fach	1765559, 1765560
	01/27/2016			01/27/2016 14:21	Blanca Fach	1765561
	01/27/2016			01/27/2016 14:25	Blanca Fach	1765562
	01/27/2016			01/27/2016 14:26	Blanca Fach	1765563, 1765564
	01/27/2016			01/27/2016 14:27	Blanca Fach	1765565
	01/27/2016			01/27/2016 14:28	Blanca Fach	1765566
SM 2320 B-97	01/27/2016			01/28/2016	Dale L. Simmons	1765559, 1765560, 1765561, 1765562, 1765563
	01/27/2016			01/29/2016	Dale L. Simmons	1765564, 1765565, 1765566
	01/27/2016			02/02/2016	Dale L. Simmons	1765558
SM 2540 C-97	01/27/2016			01/29/2016	Yijie Li	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	01/27/2016			01/29/2016	Yijie Li	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
SM 4500 F-C-97	01/27/2016			01/28/2016	Dale L. Simmons	1765558, 1765559, 1765560, 1765561, 1765562, 1765563, 1765564, 1765565, 1765566
SM 5310 B-00	01/27/2016			01/30/2016	Sofia Elnemr	1765567, 1765568, 1765569, 1765570, 1765571, 1765572, 1765573, 1765574, 1765575