

Chemical Analysis Report

NW-DIST-2016-01-27-02

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

Event Description: **WBID 11a 24AA 260 635 10G 292**

Request ID: **RQ-2016-02-01-56**

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: 15-FEB-2016 10:08



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: WEST FORK @ HWY 87

Collection Date/Time: 01/26/2016 12:30

Field ID: G4NW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765591	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P297775	
		Sulfate	1.3		mg SO4/L	P297780	
	SM 2120 B	Color (true)	22		PCU	P297662	
	SM 2320 B-97	Total Alkalinity	1.4	I	mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	32		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	
1765594	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P297992	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P297740	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.5		mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	2.6		mg C/L	P297846	
1765597	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: WEST FORK @ HWY 87DUPLICATE

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

Field ID: G4NW0017DUPLICATE

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765592	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P297691	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P297775	
		Sulfate	1.3		mg SO4/L	P297780	
	SM 2120 B	Color (true)	21		PCU	P297662	
	SM 2320 B-97	Total Alkalinity	1.6	I	mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	37		mg/L	P298283	
	SM 2540 D-97	TSS	3	I	mg/L	P298120	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765595	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P297992	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.13	I	mg N/L	P297740	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.5		mg N/L	P297869	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	2.6		mg C/L	P297846	
1765598	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: SEVENMILE CREEK ABOVE QUINTETTE ROAD Collection Date/Time: 01/26/2016 13:25

Field ID: G4NW0344

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765593	EPA 180.1 Rev. 2.0	Turbidity	1.0	A	NTU	P297692	
	EPA 300.0 Rev. 2.1	Chloride	6.8		mg Cl/L	P297775	
		Sulfate	0.76		mg SO4/L	P297780	

Field ID: G4NW0344

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765593	SM 2120 B	Color (true)	7.7		PCU	P297662	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	41		mg/L	P298284	
	SM 2540 D-97	TSS	3	I	mg/L	P298121	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
1765596	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P297992	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.088	I	mg N/L	P297740	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.8		mg N/L	P297870	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P297766	
	SM 5310 B-00	Organic Carbon	1.1		mg C/L	P297846	
1765599	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297633	

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: WHITEOAK BAYOU BELOW CR 191

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

Field ID: G4NW0150

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765735	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P297693	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P297829	
		Sulfate	2.1		mg SO4/L	P297830	
	SM 2120 B	Color (true)	34		PCU	P297665	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P297752	
	SM 2540 C-97	TDS	27		mg/L	P298284	
	SM 2540 D-97	TSS	3	I	mg/L	P298121	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297747	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P297995	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24		mg N/L	P297818	
1765739	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P297872	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P297833	
	SM 5310 B-00	Organic Carbon	5.6		mg C/L	P297981	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297633	

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: LOCKLAND LAKE CR @ SR87

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

Field ID: G4NW0031

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765736	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P297693	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P297829	
		Sulfate	1.7		mg SO4/L	P297830	
	SM 2120 B	Color (true)	9.4		PCU	P297665	
	SM 2320 B-97	Total Alkalinity	8.8		mg CaCO3/L	P297753	
	SM 2540 C-97	TDS	40		mg/L	P298284	
	SM 2540 D-97	TSS	2	I	mg/L	P298121	

Field ID: G4NW0031

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765736	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297748	
1765740	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P297995	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P297818	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.69		mg N/L	P297872	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P297833	
	SM 5310 B-00	Organic Carbon	1.2		mg C/L	P297981	
1765744	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297633	

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 PAT BROWN RD

Collection Date/Time: 01/26/2016 11:50

Field ID: G4NW0360

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765737	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P297693	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P297829	
		Sulfate	0.49	I	mg SO4/L	P297830	
	SM 2120 B	Color (true)	8.4		PCU	P297665	
	SM 2320 B-97	Total Alkalinity	2.1	I	mg CaCO3/L	P297753	
	SM 2540 C-97	TDS	30		mg/L	P298284	
	SM 2540 D-97	TSS	4	I	mg/L	P298121	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297748	
1765741	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P297995	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P297818	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.0		mg N/L	P297872	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P297833	
	SM 5310 B-00	Organic Carbon	0.90	I	mg C/L	P297981	
1765745	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297633	

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: SEVENMILE CREEK ABOVE ALDERBROOK BLVD

Collection Date/Time: 01/26/2016 13:50

Field ID: G4NW0345

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765738	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P297693	
	EPA 300.0 Rev. 2.1	Chloride	6.5		mg Cl/L	P297829	
		Sulfate	0.79		mg SO4/L	P297830	
	SM 2120 B	Color (true)	8.8		PCU	P297665	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P297753	
	SM 2540 C-97	TDS	37		mg/L	P298284	
	SM 2540 D-97	TSS	4	I	mg/L	P298121	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P297748	
1765742	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P297995	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.13	I	mg N/L	P297818	

Field ID: G4NW0345

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1765742	EPA 353.2 Rev. 2.0	NO2NO3-N	2.6		mg N/L	P297872	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P297833	
	SM 5310 B-00	Organic Carbon	1.1		mg C/L	P297981	
1765746	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P297633	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

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: P297692

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P297693

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 300.0 Rev. 2.1
Batch ID: P297829

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297830

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

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 350.1 Rev. 2.0
Batch ID: P297995

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297818

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	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 353.2 Rev. 2.0
Batch ID: P297870

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297872

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/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: P297833

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

Quality Assurance Report Method Blank Results

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

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297633

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

Reference Method: SM 2120 B
Batch ID: P297662

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P297665

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 CaCO3/L

Reference Method: SM 2320 B-97
Batch ID: P297753

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

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

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P298284

Component	Result	Code	Units
TDS	15	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 2540 D-97
Batch ID: P298121

Component	Result	Code	Units
TSS	2	U	mg/L

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

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P297748

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

Reference Method: SM 5310 B-00
Batch ID: P297981

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 300.0 Rev. 2.1
Batch ID: P297829

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297830

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297830

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	102		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 350.1 Rev. 2.0
Batch ID: P297995

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: 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: P297818

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	100		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 353.2 Rev. 2.0
Batch ID: P297870

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297872

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: P297766

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P297833

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: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	104		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: P297753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.6		P	95 - 105

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 4500 F-C-97
Batch ID: P297748

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		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

Reference Method: SM 5310 B-00
Batch ID: P297981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.4		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 300.0 Rev. 2.1
Batch ID: P297829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765678	Chloride	102		P	90 - 110
1765693	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765678	Sulfate	103		P	90 - 110
1765693	Sulfate	101		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 350.1 Rev. 2.0
Batch ID: P297995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765821	Ammonia-N	98.2	98.3	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: P297818

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765725	Kjeldahl Nitrogen	97.3	100	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
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

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 353.2 Rev. 2.0
Batch ID: P297870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765666	NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297872

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765822	NO2NO3-N	99.5	100	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: P297833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765725	Total-P	102	103	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: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765743	O-Phosphate-P	97.5	98.6	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 4500 F-C-97
Batch ID: P297748

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765848	Fluoride	96.7	96.7	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

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

Reference Method: SM 5310 B-00
Batch ID: P297981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1765739	Organic Carbon	97.2	98.9	P/P	85 - 115

Quality Assurance Report Precision

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: P297692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765593	Turbidity	0.985	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P297693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765694	Turbidity	10.2	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 300.0 Rev. 2.1
Batch ID: P297829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765678	Chloride	0.0707	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P297830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765678	Sulfate	0.698	Sample	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 350.1 Rev. 2.0
Batch ID: P297995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765821	Ammonia-N	0.0676	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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P297818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765725	Kjeldahl Nitrogen	1.41	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 353.2 Rev. 2.0
Batch ID: P297870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765666	NO2NO3-N	0.506	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P297872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765822	NO2NO3-N	0.501	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: P297833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765725	Total-P	0.369	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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P297633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765743	O-Phosphate-P	1.12	Spike	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 2120 B
Batch ID: P297665

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765716	Color (true)	0.111	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

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P297753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765848	Total Alkalinity	1.06	Sample	P	0 - 4.8

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 2540 C-97
 Batch ID: P298284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765665	TDS	9.09	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

Reference Method: SM 4500 F-C-97
 Batch ID: P297748

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765848	Fluoride	0.0	Spike	P	0 - 3.7

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

Reference Method: SM 5310 B-00
 Batch ID: P297981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1765739	Organic Carbon	1.35	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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A67286

Included Lab Sample IDs: 1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	104	P/P	90 - 110
Chloride	104	106	P/P	90 - 110
Sulfate	97.2	100	P/P	90 - 110
Sulfate	98.9	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A67295

Included Lab Sample IDs: 1765597, 1765598, 1765599, 1765743, 1765744, 1765745, 1765746

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	99.1	98.2	P/P	90 - 110
O-Phosphate-P	99.4	98.2	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A67310

Included Lab Sample IDs: 1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A67317

Included Lab Sample IDs: 1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738

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

Reference Method: SM 4500 F-C-97

Run ID: A67337

Included Lab Sample IDs: 1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	99.5	P/P	90 - 110
Fluoride	99.0	98.5	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A67338

Included Lab Sample IDs: 1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.8	99.8	P/P	90 - 110
Total Alkalinity	99.8	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A67371

Included Lab Sample IDs: 1765594, 1765595, 1765596

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A67381

Included Lab Sample IDs: 1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A67384

Included Lab Sample IDs: 1765594, 1765595, 1765596

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A67399

Included Lab Sample IDs: 1765739, 1765740, 1765741, 1765742

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67402

Included Lab Sample IDs: 1765594, 1765595, 1765596

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A67409

Included Lab Sample IDs: 1765739, 1765740, 1765741, 1765742

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

Reference Method: SM 5310 B-00

Run ID: A67418

Included Lab Sample IDs: 1765739, 1765740, 1765741, 1765742

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A67424

Included Lab Sample IDs: 1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A67424

Included Lab Sample IDs: 1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	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	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				10.1	
	Turbidity				0.985	
	Turbidity				10.2	
EPA 300.0 Rev. 2.1	Chloride	105	104 99.7		0.475	
	Chloride	105	102 105		0.0707	
	Sulfate	101	100 99.9		0.0426	
	Sulfate	102	103 101		0.698	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	100 98.1			1.51
	Ammonia-N	100	98.2 98.3			0.0676
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	94.9 101			5.66
	Kjeldahl Nitrogen	100	97.3 100			1.41
EPA 353.2 Rev. 2.0	NO2NO3-N	102	97.5 97.5			0.0
	NO2NO3-N	101	98.5 99.0			0.506
	NO2NO3-N	102	99.5 100			0.501
EPA 365.1 Rev. 2.0	Total-P	103	99.2 105			5.22
	Total-P	104	102 103			0.369
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	101 103			1.57
	O-Phosphate-P	104	97.5 98.6			1.12
SM 2120 B	Color (true)				0.841	
	Color (true)				0.111	
SM 2320 B-97	Total Alkalinity	103			1.82	
	Total Alkalinity	99.6			1.06	
SM 2540 C-97	TDS				6.33	
	TDS				9.09	
SM 4500 F-C-97	Fluoride	97.1	97.0 97.0			0.0
	Fluoride	97.6	96.7 96.7			0.0
SM 5310 B-00	Organic Carbon	106	93.1 93.1			0.0403
	Organic Carbon	98.4	97.2 98.9			1.35

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1765597, 1765598, 1765599, 1765743, 1765744, 1765745, 1765746
SM 2120 B / E31780	True Color measured at 450 nm	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1765591, 1765592, 1765593, 1765735, 1765736, 1765737, 1765738
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1765594, 1765595, 1765596, 1765739, 1765740, 1765741, 1765742

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	1765591, 1765592, 1765593
EPA 300.0 Rev. 2.1	01/27/2016			01/29/2016	Ping Hua	1765591, 1765592, 1765593
	01/27/2016			01/30/2016	Ping Hua	1765735, 1765736, 1765737, 1765738
EPA 350.1 Rev. 2.0	01/27/2016			02/03/2016	Diana M. Turner	1765594, 1765595, 1765596
EPA 351.2 Rev. 2.0	01/27/2016	01/29/2016	Christopher Armour	02/01/2016	Bryan A. Werth	1765594, 1765595, 1765596
	01/27/2016	02/01/2016	Christopher Armour	02/02/2016	Bryan A. Werth	1765739, 1765740, 1765741, 1765742
EPA 353.2 Rev. 2.0	01/27/2016			02/01/2016	Diana M. Turner	1765739, 1765740, 1765741, 1765742
EPA 365.1 Rev. 2.0	01/27/2016	01/29/2016	Christopher Armour	02/02/2016	Lipi Saha	1765594, 1765595, 1765596
	01/27/2016	02/01/2016	Christopher Armour	02/02/2016	Lipi Saha	1765739, 1765740, 1765741, 1765742
EPA 365.1 Rev. 2.0 dissolved	01/27/2016			01/27/2016 13:04	Julia Storbeck	1765743
	01/27/2016			01/27/2016 13:15	Julia Storbeck	1765597
	01/27/2016			01/27/2016 13:16	Julia Storbeck	1765598
	01/27/2016			01/27/2016 13:28	Julia Storbeck	1765599
	01/27/2016			01/27/2016 13:41	Julia Storbeck	1765744, 1765745
	01/27/2016			01/27/2016 13:42	Julia Storbeck	1765746
SM 2120 B	01/27/2016			01/27/2016 14:30	Blanca Fach	1765591
	01/27/2016			01/27/2016 14:31	Blanca Fach	1765592
	01/27/2016			01/27/2016 14:32	Blanca Fach	1765593
	01/27/2016			01/27/2016 14:58	Blanca Fach	1765735
	01/27/2016			01/27/2016 14:59	Blanca Fach	1765736, 1765737
	01/27/2016			01/27/2016 15:00	Blanca Fach	1765738
SM 2320 B-97	01/27/2016			01/29/2016	Dale L. Simmons	1765735, 1765736, 1765737, 1765738
SM 2540 C-97	01/27/2016			01/29/2016	Yijie Li	1765735, 1765736, 1765737, 1765738
SM 2540 D-97	01/27/2016			01/29/2016	Yijie Li	1765591, 1765592, 1765593
SM 4500 F-C-97	01/27/2016			01/28/2016	Dale L. Simmons	1765735, 1765736, 1765737, 1765738
SM 5310 B-00	01/27/2016			01/30/2016	Sofia Elnemr	1765594, 1765595, 1765596
	01/27/2016			02/02/2016	Sofia Elnemr	1765739, 1765740, 1765741, 1765742