

Chemical Analysis Report

NW-DIST-2016-04-19-03

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

Event Description: **WBID 167 76 101 35A 196 167**

Request ID: **RQ-2016-04-18-55**

Customer: **NW-DIST**

Project ID: **SMP**

Send Reports to:
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 11-MAY-2016 15:55



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: Long Creek ABV Campground Rd

Collection Date/Time: 04/18/2016 11:30

Field ID: G4NW0303

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790291	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P302555	
	EPA 300.0 Rev. 2.1	Chloride	5.2		mg Cl/L	P302870	
		Sulfate	0.97		mg SO4/L	P302872	
	SM 2120 B	Color (true)	70		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	8.2		mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	45		mg/L	P302956	
	SM 2540 D-97	TSS	4	I	mg/L	P302890	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
1790301	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P303373	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P303395	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.77		mg N/L	P302867	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P303069	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P302950	
1790311	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P302518	

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: Long Creek upstream of CR2

Collection Date/Time: 04/18/2016 12:00

Field ID: g4nw0304

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790292	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P302555	
	EPA 300.0 Rev. 2.1	Chloride	4.2		mg Cl/L	P302870	
		Sulfate	0.80		mg SO4/L	P302872	
	SM 2120 B	Color (true)	58		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	7.1		mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	40		mg/L	P302956	
	SM 2540 D-97	TSS	2	I	mg/L	P302890	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
1790302	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26		mg N/L	P303395	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.47		mg N/L	P302867	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P303069	
	SM 5310 B-00	Organic Carbon	4.1		mg C/L	P302950	
1790312	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P302518	

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: Pine Log Creek CR-2

Collection Date/Time: 04/18/2016 12:30

Field ID: G4NW0317

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790293	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P302555	
	EPA 300.0 Rev. 2.1	Chloride	2.9		mg Cl/L	P302870	
		Sulfate	0.49	I	mg SO4/L	P302872	

Field ID: G4NW0317

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790293	SM 2120 B	Color (true)	110		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	5.1		mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	38		mg/L	P302956	
	SM 2540 D-97	TSS	2	I	mg/L	P302890	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
1790303	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P303395	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	6.5		mg C/L	P302950	
1790313	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P302518	

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: Pine Log Creek upstream of Long Road

Collection Date/Time: 04/18/2016 12:45

Field ID: G4NW0315

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790294	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P302555	
	EPA 300.0 Rev. 2.1	Chloride	2.8		mg Cl/L	P302870	
		Sulfate	0.86		mg SO4/L	P302872	
	SM 2120 B	Color (true)	90		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	3.8		mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	25		mg/L	P302955	
	SM 2540 D-97	TSS	7	I	mg/L	P302889	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P303395	
1790304	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	5.5		mg C/L	P302950	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P302519	

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: Long Creek Long Rd

Collection Date/Time: 04/18/2016 13:10

Field ID: G4NW0308

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790295	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P302555	
	EPA 300.0 Rev. 2.1	Chloride	3.1		mg Cl/L	P302870	
		Sulfate	0.66		mg SO4/L	P302872	
	SM 2120 B	Color (true)	59		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	2.1	I	mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	31		mg/L	P302957	
	SM 2540 D-97	TSS	5	I	mg/L	P302891	

Field ID: G4NW0308

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790295	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
1790305	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P303395	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P302950	
1790315	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P302519	

Sample Location: Beech Tree Creek unnamed rd

Collection Date/Time: 04/18/2016 13:30

Field ID: G4NW0330

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790296	EPA 180.1 Rev. 2.0	Turbidity	8.3	A	NTU	P302524	
	EPA 300.0 Rev. 2.1	Chloride	2.3		mg Cl/L	P302870	
		Sulfate	0.84		mg SO4/L	P302872	
	SM 2120 B	Color (true)	50		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	18	I	mg/L	P302957	
	SM 2540 D-97	TSS	13		mg/L	P302891	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
1790306	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P303395	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	3.2		mg C/L	P302950	
1790316	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302519	

Sample Location: Pine Log Creek upstream of Lumber Ridge Road

Collection Date/Time: 04/18/2016 14:20

Field ID: G4NW0313

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790297	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P302524	
	EPA 300.0 Rev. 2.1	Chloride	2.9		mg Cl/L	P302870	
		Sulfate	1.1		mg SO4/L	P302872	
	SM 2120 B	Color (true)	15		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	17	I	mg/L	P302957	
	SM 2540 D-97	TSS	3	I	mg/L	P302891	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
1790307	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.13	I	mg N/L	P303395	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	2.3		mg C/L	P302950	

Field ID: G4NW0313

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790317	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P302519	

Sample Location: Pond Creek In McCloud Bay upstream of Lake Ella Road **Collection Date/Time: 04/18/2016 14:45**

Field ID: G4NW0350

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790298	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P302524	
	EPA 300.0 Rev. 2.1	Chloride	3.6		mg Cl/L	P302870	
		Sulfate	1.0		mg SO4/L	P302872	
	SM 2120 B	Color (true)	69		PCU	P302502	
	SM 2320 B-97	Total Alkalinity	5.5		mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	33		mg/L	P302957	
	SM 2540 D-97	TSS	8	I	mg/L	P302891	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P303395	
1790308	EPA 353.2 Rev. 2.0	NO2NO3-N	0.32		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	4.6		mg C/L	P302950	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P302519	

Sample Location: Pond Creek In McCloud Bay at pipeline off Sunburst Drive **Collection Date/Time: 04/18/2016 15:10**

Field ID: G4NW0351

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790299	EPA 180.1 Rev. 2.0	Turbidity	5.5		NTU	P302524	
	EPA 300.0 Rev. 2.1	Chloride	3.4		mg Cl/L	P302870	
		Sulfate	1.3		mg SO4/L	P302872	
	SM 2120 B	Color (true)	63		PCU	P302503	
	SM 2320 B-97	Total Alkalinity	3.9		mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	33		mg/L	P302957	
	SM 2540 D-97	TSS	7	I	mg/L	P302891	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P303395	
1790309	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	4.4		mg C/L	P302950	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P302519	

Sample Location: Juniper CR FLA 393 **Collection Date/Time: 04/18/2016 15:30**

Field ID: G4NW0349

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1790300	EPA 180.1 Rev. 2.0	Turbidity	6.6		NTU	P302524	
	EPA 300.0 Rev. 2.1	Chloride	3.4		mg Cl/L	P302870	
		Sulfate	1.3		mg SO4/L	P302872	
	SM 2120 B	Color (true)	62	A	PCU	P302503	
	SM 2320 B-97	Total Alkalinity	4.0		mg CaCO3/L	P302740	
	SM 2540 C-97	TDS	37		mg/L	P302957	
	SM 2540 D-97	TSS	9	I	mg/L	P302891	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P302745	
1790310	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P303365	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P303395	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P302998	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P303070	
	SM 5310 B-00	Organic Carbon	4.4		mg C/L	P302950	
1790320	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P302519	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P302524

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P302555

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P302870

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P302872

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P303365

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P303373

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303373

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303395

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302867

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302998

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303069

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303070

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302518

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302519

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

Reference Method: SM 2120 B
Batch ID: P302502

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P302503

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P302740

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

Reference Method: SM 2540 C-97
Batch ID: P302955

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P302956

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P302957

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P302889

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P302890

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P302891

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P302745

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P302950

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: P302870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302872

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303365

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303373

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303395

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302867

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302998

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303069

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303069

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303070

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302518

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302519

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

Reference Method: SM 2320 B-97
Batch ID: P302740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P302745

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P302950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790172	Chloride	100		P	90 - 110
1790175	Chloride	101		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302872

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790172	Sulfate	99.2		P	90 - 110
1790175	Sulfate	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303365

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790308	Ammonia-N	99.1	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790180	Ammonia-N	98.4	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303395

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790301	Kjeldahl Nitrogen	106	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790176	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302998

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790303	NO2NO3-N	98.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303069

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790176	Total-P	98.5	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303070

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790303	Total-P	97.8	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790181	O-Phosphate-P	102	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302519

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790315	O-Phosphate-P	99.1	99.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P302745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1789841	Fluoride	97.4	96.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P302950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1790176	Organic Carbon	94.6	95.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790296	Turbidity	0.725	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790175	Turbidity	5.89	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790172	Chloride	1.04	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P302872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790172	Sulfate	1.50	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790308	Ammonia-N	1.56	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790180	Ammonia-N	0.607	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790301	Kjeldahl Nitrogen	4.30	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790176	NO2NO3-N	0.282	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P302998

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790303	NO2NO3-N	0.656	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790176	Total-P	3.56	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303070

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790303	Total-P	1.17	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790181	O-Phosphate-P	0.391	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302519

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790315	O-Phosphate-P	0.289	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P302502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790175	Color (true)	3.28	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P302503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790300	Color (true)	0.633	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P302740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789841	Total Alkalinity	0.305	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P302955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789957	TDS	8.00	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P302956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790152	TDS	4.43	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P302957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790358	TDS	5.91	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P302891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790358	TSS	7.59	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P302745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1789841	Fluoride	0.530	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P302950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1790176	Organic Carbon	0.918	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: A68939

Included Lab Sample IDs: 1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.4	99.5	P/P	90 - 110
Chloride	99.5	100	P/P	90 - 110
Sulfate	98.0	99.7	P/P	90 - 110
Sulfate	99.2	98.0	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A68952

Included Lab Sample IDs: 1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	99.9	P/P	90 - 115
Color (true)	99.7	99.2	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A68960

Included Lab Sample IDs: 1790311, 1790312, 1790313, 1790314, 1790315, 1790316, 1790317, 1790318, 1790319, 1790320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.4	P/P	90 - 110
O-Phosphate-P	98.5	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68961

Included Lab Sample IDs: 1790296, 1790297, 1790298, 1790299, 1790300

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68973

Included Lab Sample IDs: 1790291, 1790292, 1790293, 1790294, 1790295

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A69026

Included Lab Sample IDs: 1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.4	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A69026

Included Lab Sample IDs: 1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69066

Included Lab Sample IDs: 1790301, 1790302

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	93.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A69096

Included Lab Sample IDs: 1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.8	95.3	P/P	90 - 110
Organic Carbon	94.6	93.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69105

Included Lab Sample IDs: 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69203

Included Lab Sample IDs: 1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	98.2	P/P	90 - 110
Total-P	98.2	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69207

Included Lab Sample IDs: 1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.9	97.4	P/P	90 - 110
Ammonia-N	99.3	99.4	P/P	90 - 110
Ammonia-N	100	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69302

Included Lab Sample IDs: 1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	101	P/P	90 - 110
Kjeldahl Nitrogen	105	101	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				0.725	
	Turbidity				5.89	
EPA 300.0 Rev. 2.1	Chloride	99.9	100 101		1.04	
	Sulfate	98.8	99.2 99.3		1.50	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	99.1 101			1.56
	Ammonia-N	97.1	98.4 97.7			0.607
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.6	106 101			4.30
EPA 353.2 Rev. 2.0	NO2NO3-N	108	106 106			0.282
	NO2NO3-N	101	98.5 99.5			0.656
EPA 365.1 Rev. 2.0	Total-P	97.8	98.5 102			3.56
	Total-P	102	97.8 99.0			1.17
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.0	102 102			0.391
	O-Phosphate-P	102	99.1 99.4			0.289
SM 2120 B	Color (true)				3.28	
	Color (true)				0.633	
SM 2320 B-97	Total Alkalinity	101			0.305	
SM 2540 C-97	TDS				8.00	
	TDS				4.43	
	TDS				5.91	
SM 2540 D-97	TSS				7.59	
SM 4500 F-C-97	Fluoride	97.0	97.4 96.8			0.530
SM 5310 B-00	Organic Carbon	94.6	94.6 95.8			0.918

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1790311, 1790312, 1790313, 1790314, 1790315, 1790316, 1790317, 1790318, 1790319, 1790320
SM 2120 B / E31780	True Color measured at 450 nm	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310

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	04/19/2016			04/19/2016 14:16	Blanca Fach	1790291, 1790292, 1790293, 1790294, 1790295
	04/19/2016			04/19/2016 15:03	Sima Feizi	1790296, 1790297, 1790298, 1790299, 1790300
EPA 300.0 Rev. 2.1	04/19/2016			04/22/2016	Julia Storbeck	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
EPA 350.1 Rev. 2.0	04/19/2016			05/02/2016	Diana M. Turner	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310
EPA 351.2 Rev. 2.0	04/19/2016	05/03/2016	Sofia Elnemr	05/04/2016	Christopher Armour	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310
EPA 353.2 Rev. 2.0	04/19/2016			04/22/2016	Peter D. Kaus	1790301, 1790302
	04/19/2016			04/26/2016	Peter D. Kaus	1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310
EPA 365.1 Rev. 2.0	04/19/2016	04/27/2016	Lipi Saha	04/28/2016	Lipi Saha	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310
EPA 365.1 Rev. 2.0 dissolved	04/19/2016			04/19/2016 14:35	Ping Hua	1790315
	04/19/2016			04/19/2016 15:08	Ping Hua	1790311
	04/19/2016			04/19/2016 15:09	Ping Hua	1790312
	04/19/2016			04/19/2016 15:10	Ping Hua	1790313, 1790314
	04/19/2016			04/19/2016 15:11	Ping Hua	1790316
	04/19/2016			04/19/2016 15:12	Ping Hua	1790317
	04/19/2016			04/19/2016 15:13	Ping Hua	1790318
	04/19/2016			04/19/2016 15:14	Ping Hua	1790319
	04/19/2016			04/19/2016 15:15	Ping Hua	1790320
	04/19/2016			04/19/2016 14:00	Rochelle Y Jackson	1790291
SM 2120 B	04/19/2016			04/19/2016 14:01	Rochelle Y Jackson	1790292
	04/19/2016			04/19/2016 14:02	Rochelle Y Jackson	1790293, 1790294
	04/19/2016			04/19/2016 14:03	Rochelle Y Jackson	1790295
	04/19/2016			04/19/2016 14:04	Rochelle Y Jackson	1790296
	04/19/2016			04/19/2016 14:05	Rochelle Y Jackson	1790297, 1790298
	04/19/2016			04/19/2016 14:09	Rochelle Y Jackson	1790299
	04/19/2016			04/19/2016 14:10	Rochelle Y Jackson	1790300
SM 2320 B-97	04/19/2016			04/21/2016	Dale L. Simmons	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 2540 C-97	04/19/2016			04/20/2016	Yijie Li	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	04/19/2016			04/20/2016	Yijie Li	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 4500 F-C-97	04/19/2016			04/21/2016	Dale L. Simmons	1790291, 1790292, 1790293, 1790294, 1790295, 1790296, 1790297, 1790298, 1790299, 1790300
SM 5310 B-00	04/19/2016			04/26/2016	Sofia Elnemr	1790301, 1790302, 1790303, 1790304, 1790305, 1790306, 1790307, 1790308, 1790309, 1790310