

Chemical Analysis Report

SO-DIST-2016-04-21-01

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

Event Description: **SMP: Lee County Creeks**

Request ID: **RQ-2016-04-11-08**

Customer: **SO-DIST**

Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901
Attn: Ben Paswater

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 17-MAY-2016 17:21



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: Manuel Branch upstream of Weir

Collection Date/Time: 04/20/2016 10:40

Field ID: G3SD04202016-1

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791466	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P302761	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P303241	
		Sulfate	28		mg SO4/L	P303244	
	SM 2120 B	Color (true)	62		PCU	P302697	
	SM 2320 B-97	Total Alkalinity	188		mg CaCO3/L	P302971	
	SM 2540 C-97	TDS	390		mg/L	P303546	
	SM 2540 D-97	TSS	4	I	mg/L	P303252	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P302975	
1791473	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P303499	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P303661	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P303522	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P303334	
	SM 5310 B-00	Organic Carbon	9.6		mg C/L	P303485	
1791480	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P302712	

Sample Location: Chapel Creek south of SR 78

Collection Date/Time: 04/20/2016 11:10

Field ID: G3SD04202016-2

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791467	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P302761	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P303241	
		Sulfate	12		mg SO4/L	P303244	
	SM 2120 B	Color (true)	45	A	PCU	P302697	
	SM 2320 B-97	Total Alkalinity	226	A	mg CaCO3/L	P302971	
	SM 2540 C-97	TDS	333		mg/L	P303546	
	SM 2540 D-97	TSS	5	I	mg/L	P303252	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P302975	
1791474	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P303499	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P303661	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.075		mg N/L	P303522	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P303334	
	SM 5310 B-00	Organic Carbon	9.9		mg C/L	P303485	
1791481	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P302712	

Sample Location: Winkler Canal @ princeton St

Collection Date/Time: 04/20/2016 12:00

Field ID: G3SD04202016-3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791468	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P302761	
	EPA 300.0 Rev. 2.1	Chloride	110		mg Cl/L	P303241	
		Sulfate	56		mg SO4/L	P303244	
	SM 2120 B	Color (true)	23		PCU	P302697	
	SM 2320 B-97	Total Alkalinity	212		mg CaCO3/L	P302971	

Field ID: G3SD04202016-3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791468	SM 2540 C-97	TDS	504	A	mg/L	P303546	
	SM 2540 D-97	TSS	17	A	mg/L	P303252	
	SM 4500 F-C-97	Fluoride	0.37		mg F/L	P302975	
1791475	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P303499	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P303661	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P303522	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P303334	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P303485	
1791482	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P302712	

Sample Location: Oak Creek @ Oak Creek Preserve

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

Field ID: G3SD04202016-4

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791469	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P302761	
	EPA 300.0 Rev. 2.1	Chloride	43		mg Cl/L	P303241	
		Sulfate	19		mg SO4/L	P303244	
	SM 2120 B	Color (true)	21		PCU	P302697	
	SM 2320 B-97	Total Alkalinity	306		mg CaCO3/L	P302971	
	SM 2540 C-97	TDS	406		mg/L	P303546	
	SM 2540 D-97	TSS	3	I	mg/L	P303252	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P302975	
1791476	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P303499	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P303661	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P303523	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P303335	
	SM 5310 B-00	Organic Carbon	8.0		mg C/L	P303485	
1791483	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P302712	

Sample Location: Oak Creek @ Kentucky St

Collection Date/Time: 04/20/2016 14:00

Field ID: G3SD04202016-5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791470	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P302761	
	EPA 300.0 Rev. 2.1	Chloride	1.5E+03		mg Cl/L	P303241	
		Sulfate	220		mg SO4/L	P303244	
	SM 2120 B	Color (true)	54		PCU	P302697	
	SM 2320 B-97	Total Alkalinity	252		mg CaCO3/L	P302971	
	SM 2540 C-97	TDS	2.95E+03		mg/L	P303546	
	SM 2540 D-97	TSS	6	I	mg/L	P303252	
	SM 4500 F-C-97	Fluoride	0.19		mg F/L	P302975	
1791477	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P303487	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P303764	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P303060	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P303333	

Field ID: G3SD04202016-5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791477	SM 5310 B-00	Organic Carbon	12		mg C/L	P303738	
1791484	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.015		mg P/L	P302716	

Sample Location: Cocohatchee @ Wiggins Pass Rd Above Dam **Collection Date/Time: 04/20/2016 15:00**

Field ID: G3SD04202016-6

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791471	EPA 180.1 Rev. 2.0	Turbidity	4.8	A	NTU	P302762	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P303241	
		Sulfate	10		mg SO4/L	P303244	
	SM 2120 B	Color (true)	75		PCU	P302697	
	SM 2320 B-97	Total Alkalinity	299		mg CaCO3/L	P302972	
	SM 2540 C-97	TDS	598		mg/L	P303546	
	SM 2540 D-97	TSS	3	I	mg/L	P303252	
	SM 4500 F-C-97	Fluoride	0.065	I	mg F/L	P302976	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P303499	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P303766	
1791478	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P303523	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P303335	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P303485	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P302712	
1791485							

Sample Location: 3278C @ Bridge by CVS on Old 41

Collection Date/Time: 04/20/2016 14:40

Field ID: G3SD04202016-7

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1791472	EPA 180.1 Rev. 2.0	Turbidity	21		NTU	P302762	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P303241	
		Sulfate	8.0		mg SO4/L	P303244	
	SM 2120 B	Color (true)	70		PCU	P302784	
	SM 2320 B-97	Total Alkalinity	305		mg CaCO3/L	P302972	
	SM 2540 C-97	TDS	593		mg/L	P303546	
	SM 2540 D-97	TSS	25		mg/L	P303252	
	SM 4500 F-C-97	Fluoride	0.063	I	mg F/L	P302976	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.26		mg N/L	P303681	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P303766	
1791479	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P303523	
	EPA 365.1 Rev. 2.0	Total-P	0.094		mg P/L	P303335	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P303485	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P302712	
1791486							

Quality Assurance Report
Method Blank Results

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302761

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302762

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303241

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303244

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303487

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303499

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303681

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303661

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303764

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: P303766

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303060

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303522

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303523

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303333

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303334

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303335

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302712

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302716

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P302697

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P302784

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P302971

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

Reference Method: SM 2320 B-97
Batch ID: P302972

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

Reference Method: SM 2540 C-97
Batch ID: P303546

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P303252

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P302975

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P302976

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P303485

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

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P303738

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: P303241

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: P303244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	93.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303487

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303499

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303681

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303661

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303764

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303766

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: P303766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303060

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: P303522

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303523

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: P303333

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303334

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303335

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302712

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302716

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P302971

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.7		P	95 - 105

Reference Method: SM 2320 B-97
Batch ID: P302972

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.3		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P302975

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.1		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P302976

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P303485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P303738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791423	Chloride	100		P	90 - 110
1791539	Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791423	Sulfate	95.1		P	90 - 110
1791539	Sulfate	91.7		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791477	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303499

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791426	Ammonia-N	105	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791530	Ammonia-N	98.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791427	Kjeldahl Nitrogen	96.8	93.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791226	Kjeldahl Nitrogen	97.5	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791478	Kjeldahl Nitrogen	95.8	92.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791227	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791473	NO2NO3-N	98.0	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791478	NO2NO3-N	99.8		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791223	Total-P	90.9	90.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791425	Total-P	101	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303335

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791476	Total-P	99.6	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791333	O-Phosphate-P	98.8	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302716

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791443	O-Phosphate-P	99.4	99.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P302975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791467	Fluoride	97.9	98.7	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P302976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791756	Fluoride	96.4	96.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P303485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1791391	Organic Carbon	94.0	94.7	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P303738

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1792225	Organic Carbon	95.0	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791420	Turbidity	5.62	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P302762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791471	Turbidity	2.72	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791539	Chloride	0.0786	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P303244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791539	Sulfate	0.407	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791477	Ammonia-N	0.442	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303499

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791426	Ammonia-N	0.780	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P303681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791530	Ammonia-N	2.10	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791427	Kjeldahl Nitrogen	3.58	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791226	Kjeldahl Nitrogen	1.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P303766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791478	Kjeldahl Nitrogen	2.28	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791227	NO2NO3-N	0.980	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791473	NO2NO3-N	2.20	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P303523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791478	NO2NO3-N	0.718	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791223	Total-P	0.303	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791425	Total-P	2.81	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P303335

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791476	Total-P	3.00	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791333	O-Phosphate-P	0.489	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P302716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791443	O-Phosphate-P	0.282	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P302697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791467	Color (true)	0.447	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P302784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791337	Color (true)	0.101	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P302971

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791467	Total Alkalinity	0.882	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P302972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791756	Total Alkalinity	0.111	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P303546

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791468	TDS	0.397	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P303252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791468	TSS	0.0	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P302975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791467	Fluoride	0.483	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P302976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791756	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P303485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1791391	Organic Carbon	0.451	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P303738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1792225	Organic Carbon	0.560	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: SM 2120 B
Run ID: A69017
Included Lab Sample IDs: 1791466, 1791467, 1791468, 1791469, 1791470, 1791471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.6	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A69022
Included Lab Sample IDs: 1791480, 1791481, 1791482, 1791483, 1791484, 1791485, 1791486

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.7	P/P	90 - 110
O-Phosphate-P	98.6	100	P/P	90 - 110
O-Phosphate-P	99.6	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A69035
Included Lab Sample IDs: 1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A69035

Included Lab Sample IDs: 1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105
Turbidity	101	100	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A69040

Included Lab Sample IDs: 1791472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	98.4	P/P	90 - 115

Reference Method: SM 2320 B-97

Run ID: A69103

Included Lab Sample IDs: 1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.8	99.5	P/P	90 - 110
Total Alkalinity	99.1	96.8	P/P	90 - 110
Total Alkalinity	99.5	95.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A69103

Included Lab Sample IDs: 1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.5	100	P/P	90 - 110
Fluoride	98.5	98.0	P/P	90 - 110
Fluoride	99.5	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69129

Included Lab Sample IDs: 1791477

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A69144

Included Lab Sample IDs: 1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	101	102	P/P	90 - 110
Sulfate	97.7	99.5	P/P	90 - 110
Sulfate	99.5	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69238

Included Lab Sample IDs: 1791473, 1791474, 1791475, 1791476, 1791477, 1791478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69238

Included Lab Sample IDs: 1791473, 1791474, 1791475, 1791476, 1791477, 1791478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	103	P/P	90 - 110
Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69246

Included Lab Sample IDs: 1791473, 1791474, 1791475, 1791479

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

Reference Method: SM 5310 B-00

Run ID: A69261

Included Lab Sample IDs: 1791473, 1791474, 1791475, 1791476, 1791478, 1791479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69269

Included Lab Sample IDs: 1791476, 1791477, 1791478

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.5	P/P	90 - 110
Total-P	99.5	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69271

Included Lab Sample IDs: 1791473, 1791474, 1791475, 1791476, 1791478, 1791479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	106	P/P	90 - 110
NO2NO3-N	102	104	P/P	90 - 110
NO2NO3-N	106	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69311

Included Lab Sample IDs: 1791479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.7	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A69322

Included Lab Sample IDs: 1791477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	95.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69362

Included Lab Sample IDs: 1791473, 1791474, 1791475, 1791476

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.4	91.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69369

Included Lab Sample IDs: 1791477, 1791478, 1791479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.3	99.0	P/P	90 - 110
Kjeldahl Nitrogen	97.3	96.3	P/P	90 - 110
Kjeldahl Nitrogen	97.7	97.3	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						5.62	
	Turbidity						2.72	
EPA 300.0 Rev. 2.1	Chloride	99.9		98.9	100		0.0786	
	Sulfate	93.3		91.7	95.1		0.407	
EPA 350.1 Rev. 2.0	Ammonia-N	103		103	103			0.442
	Ammonia-N	101		105	104			0.780
	Ammonia-N	98.4		98.2	101			2.10
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.9		96.8	93.0			3.58
	Kjeldahl Nitrogen	104		97.5	96.2			1.17
	Kjeldahl Nitrogen	99.1		95.8	92.2			2.28
EPA 353.2 Rev. 2.0	NO2NO3-N	102		102	102			0.980
	NO2NO3-N	100		98.0	101			2.20
	NO2NO3-N	102		99.8				0.718
EPA 365.1 Rev. 2.0	Total-P	97.1		90.9	90.6			0.303
	Total-P	104		101	97.9			2.81
	Total-P	100		99.6	103			3.00
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		98.8	99.6			0.489
	O-Phosphate-P	102		99.4	99.1			0.282
SM 2120 B	Color (true)						0.447	
	Color (true)						0.101	
SM 2320 B-97	Total Alkalinity	97.7					0.882	
	Total Alkalinity	97.3					0.111	
SM 2540 C-97	TDS						0.397	
SM 2540 D-97	TSS						0.0	
SM 4500 F-C-97	Fluoride	95.1		97.9	98.7			0.483
	Fluoride	95.6		96.4	96.4			0.0
SM 5310 B-00	Organic Carbon	97.1		94.0	94.7			0.451
	Organic Carbon	93.8		95.0	95.6			0.560

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1791473, 1791474, 1791475, 1791476, 1791477, 1791478, 1791479
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1791473, 1791474, 1791475, 1791476, 1791477, 1791478, 1791479
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1791473, 1791474, 1791475, 1791476, 1791477, 1791478, 1791479
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1791473, 1791474, 1791475, 1791476, 1791477, 1791478, 1791479
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1791480, 1791481, 1791482, 1791483, 1791484, 1791485, 1791486
SM 2120 B / E31780	True Color measured at 450 nm	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1791473, 1791474, 1791475, 1791476, 1791477, 1791478, 1791479

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	04/21/2016			04/21/2016 15:04	Sima Feizi	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
EPA 300.0 Rev. 2.1	04/21/2016			04/29/2016	Elisa J Lutz	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
EPA 350.1 Rev. 2.0	04/21/2016			05/03/2016	Diana M. Turner	1791473, 1791474, 1791475, 1791476, 1791477, 1791478
	04/21/2016			05/05/2016	Diana M. Turner	1791479
EPA 351.2 Rev. 2.0	04/21/2016	05/06/2016	Sofia Elnemr	05/09/2016	Christopher Armour	1791473, 1791474, 1791475, 1791476
	04/21/2016	05/09/2016	Sofia Elnemr	05/10/2016	Christopher Armour	1791477, 1791478, 1791479
EPA 353.2 Rev. 2.0	04/21/2016			04/27/2016	Peter D. Kaus	1791477
	04/21/2016			05/04/2016	Peter D. Kaus	1791473, 1791474, 1791475, 1791476, 1791478, 1791479
EPA 365.1 Rev. 2.0	04/21/2016	05/02/2016	Vijayalakshmi Reddy	05/03/2016	Lipi Saha	1791473, 1791474, 1791475, 1791479
	04/21/2016	05/02/2016	Vijayalakshmi Reddy	05/04/2016	Lipi Saha	1791476, 1791477, 1791478
EPA 365.1 Rev. 2.0 dissolved	04/21/2016			04/21/2016 14:01	Ping Hua	1791480, 1791481
	04/21/2016			04/21/2016 14:02	Ping Hua	1791482
	04/21/2016			04/21/2016 14:03	Ping Hua	1791483
	04/21/2016			04/21/2016 14:04	Ping Hua	1791485
	04/21/2016			04/21/2016 14:09	Ping Hua	1791486
	04/21/2016			04/21/2016 14:40	Ping Hua	1791484
SM 2120 B	04/21/2016			04/21/2016 12:29	Rochelle Y Jackson	1791466
	04/21/2016			04/21/2016 12:30	Rochelle Y Jackson	1791467
	04/21/2016			04/21/2016 12:31	Rochelle Y Jackson	1791468
	04/21/2016			04/21/2016 12:32	Rochelle Y Jackson	1791469
	04/21/2016			04/21/2016 12:33	Rochelle Y Jackson	1791470, 1791471
	04/21/2016			04/21/2016 16:10	Chrisoulla Rakowski	1791472
SM 2320 B-97	04/21/2016			04/25/2016	Dale L. Simmons	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 2540 C-97	04/21/2016			04/25/2016	Sima Feizi	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 2540 D-97	04/21/2016			04/25/2016	Sima Feizi	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 4500 F-C-97	04/21/2016			04/25/2016	Dale L. Simmons	1791466, 1791467, 1791468, 1791469, 1791470, 1791471, 1791472
SM 5310 B-00	04/21/2016			05/03/2016	Sofia Elnemr	1791473, 1791474, 1791475, 1791476, 1791478, 1791479
	04/21/2016			05/06/2016	Sofia Elnemr	1791477