

Chemical Analysis Report

NE-DIST-2018-06-20-01

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

Event Description: **Suwannee North 2**
Request ID: **RQ-2018-06-18-13**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 13-JUL-2018 13:43

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the "T" and a long horizontal stroke at the end.

Case Narrative

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

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

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: LITTLE CREEK AT US 441

Collection Date/Time: 06/19/2018 12:10

Field ID: 21010033

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002171	EPA 180.1 Rev. 2.0	Turbidity	1.8	A	NTU	P347228	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P347539	
		Sulfate	0.20	U	mg SO4/L	P347543	
	SM 2120 B	Color (true)	850		PCU	P347207	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P347375	RPD
	SM 2540 C-97	TDS	136		mg/L	P347759	
	SM 2540 D-97	TSS	2	I	mg/L	P347733	
	SM 4500 F-C-97	Fluoride	0.065	I	mg F/L	P347379	
2002172	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P347389	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P347866	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P347367	
	EPA 365.1 Rev. 2.0	Total-P	0.093		mg P/L	P347719	
	SM 5310 B-00	Organic Carbon	66		mg C/L	P347527	
2002173	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.074		mg P/L	P347212	
2002195	EPA 8321B	2,4-D	0.0020	U	ug/L	P346981	
		Bentazon	8.0E-04	U	ug/L	P346981	
		MCP	0.0020	U	ug/L	P346981	
		Triclopyr**	0.0040	U	ug/L	P346981	
		Imidacloprid	0.0020	U	ug/L	P346981	
		Diuron	0.0020	U	ug/L	P346981	
		Pyraclostrobin**	0.0020	U	ug/L	P346981	
		Primidone**	0.0040	U	ug/L	P346981	
		Linuron	0.0040	U	ug/L	P346981	
		Acetaminophen**	0.0080	U	ug/L	P346981	
		Fenuron	0.016	U	ug/L	P346981	
		Imazapyr**	0.025		ug/L	P346981	
		Carbamazepine**	4.0E-04	U	ug/L	P346981	
		Fluridone**	4.0E-04	U	ug/L	P346981	
		Hydrocodone**	8.0E-04	U	ug/L	P346981	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: Insufficient sample to perform matrix spikes.

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: DEEP CREEK @ HYWY 441

Collection Date/Time: 06/19/2018 10:55

Field ID: 21010051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002174	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P347228	
	EPA 300.0 Rev. 2.1	Chloride	4.3		mg Cl/L	P347539	
		Sulfate	0.20	U	mg SO4/L	P347543	
	SM 2120 B	Color (true)	880		PCU	P347207	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P347841	
	SM 2540 C-97	TDS	122		mg/L	P347759	
	SM 2540 D-97	TSS	2	I	mg/L	P347733	
	SM 4500 F-C-97	Fluoride	0.050	I	mg F/L	P347845	
2002175	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P347389	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P347866	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P347367	
	EPA 365.1 Rev. 2.0	Total-P	0.077		mg P/L	P347719	
	SM 5310 B-00	Organic Carbon	59		mg C/L	P347527	
2002176	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.062		mg P/L	P347212	
2002196	EPA 8321B	2,4-D	0.0020	U	ug/L	P346981	
		Bentazon	8.0E-04	U	ug/L	P346981	
		MCP	0.0020	U	ug/L	P346981	
		Triclopyr**	0.0040	U	ug/L	P346981	
		Imidacloprid	0.0020	U	ug/L	P346981	
		Diuron	0.0020	U	ug/L	P346981	
		Pyraclostrobin**	0.0020	U	ug/L	P346981	
		Primidone**	0.0040	U	ug/L	P346981	
		Linuron	0.0040	U	ug/L	P346981	
		Acetaminophen**	0.0080	U	ug/L	P346981	
		Fenuron	0.016	U	ug/L	P346981	
		Imazapyr**	0.0040	U	ug/L	P346981	
		Carbamazepine**	4.0E-04	U	ug/L	P346981	
		Fluridone**	4.0E-04	U	ug/L	P346981	
		Hydrocodone**	8.0E-04	U	ug/L	P346981	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: Insufficient sample to perform matrix spikes.

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: FALLING CREEK @ US 441

Collection Date/Time: 06/19/2018 09:55

Field ID: 21010064

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002177	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P347228	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P347539	
		Sulfate	0.47	I	mg SO4/L	P347543	
	SM 2120 B	Color (true)	660		PCU	P347208	
	SM 2320 B-97	Total Alkalinity	2.1	I	mg CaCO3/L	P347841	
	SM 2540 C-97	TDS	120		mg/L	P347759	
	SM 2540 D-97	TSS	3	I	mg/L	P347733	
	SM 4500 F-C-97	Fluoride	0.048	I	mg F/L	P347845	
2002178	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P347389	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P348067	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P347367	
	EPA 365.1 Rev. 2.0	Total-P	0.096		mg P/L	P347719	
	SM 5310 B-00	Organic Carbon	48		mg C/L	P347527	
2002179	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.072		mg P/L	P347213	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: NE ROC DI

Collection Date/Time: 06/19/2018 10:10

Field ID: blank 06192018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002180	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P347228	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P347539	
		Sulfate	0.20	U	mg SO4/L	P347543	
	SM 2120 B	Color (true)	2.5	U	PCU	P347208	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P347841	
	SM 2540 C-97	TDS	15	U	mg/L	P347756	
	SM 2540 D-97	TSS	2	U	mg/L	P347730	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P347845	
2002181	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P347352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P348067	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P347367	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P347426	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P347527	
2002182	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P347213	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P347228

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347539

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347543

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347352

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347389

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347866

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348067

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347367

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347426

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
Batch ID: P347719

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347212

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347213

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

Reference Method: EPA 8321B
Batch ID: P346981

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P347114

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P347207

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P347208

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P347375

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

Reference Method: SM 2320 B-97
Batch ID: P347841

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

Reference Method: SM 2540 C-97
Batch ID: P347756

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P347759

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P347730

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P347733

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P347379

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P347845

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P347527

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: P347539

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347352

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: P347389

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347866

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: P348067

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347367

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: P347426

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347719

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347212

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347213

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P346981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	76.0	87.4	P/P	40 - 150
Acetaminophen	93.2	95.3	P/P	30 - 150
Bentazon	83.3	88.9	P/P	30 - 150
Carbamazepine	90.2	93.1	P/P	40 - 150
Diuron	85.2	85.4	P/P	40 - 150
Fenuron	102	106	P/P	40 - 150
Fluridone	88.7	89.4	P/P	40 - 150
Hydrocodone	93.5	93.8	P/P	40 - 150
Imazapyr	87.9	90.6	P/P	40 - 150
Imidacloprid	98.6	101	P/P	40 - 160
Linuron	66.0	66.3	P/P	40 - 150
MCPP	101	107	P/P	40 - 150
Primidone	90.8	95.4	P/P	40 - 150
Pyraclostrobin	80.3	82.8	P/P	40 - 150
Triclopyr	95.0	101	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P347114

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	79.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P347375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P347841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P347379

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P347845

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.5		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P347527

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347539

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002065	Chloride	101		P	90 - 110
2002171	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002065	Sulfate	101		P	90 - 110
2002171	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002230	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002105	Ammonia-N	92.9	93.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347866

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002107	Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002247	Kjeldahl Nitrogen	100	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347367

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002107	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347426

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002230	Total-P	95.4	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002106	Total-P	98.7	95.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002108	O-Phosphate-P	96.1	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002249	O-Phosphate-P	95.1	96.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P347379

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002011	Fluoride	98.3	97.1	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P347845

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002246	Fluoride	96.6	97.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P347527

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002105	Organic Carbon	96.6	95.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P347228

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002171	Turbidity	7.24	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002065	Chloride	2.62	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002065	Sulfate	0.864	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002230	Ammonia-N	0.0562	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002105	Ammonia-N	1.03	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P347866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002107	Kjeldahl Nitrogen	0.918	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002247	Kjeldahl Nitrogen	3.21	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002107	NO2NO3-N	0.370	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347426

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002230	Total-P	3.52	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002106	Total-P	2.85	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002108	O-Phosphate-P	0.208	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002249	O-Phosphate-P	1.46	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P346981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	2,4-D	14.0	LCS	P	0 - 30
LFB	Acetaminophen	2.14	LCS	P	0 - 30
LFB	Bentazon	6.49	LCS	P	0 - 30
LFB	Carbamazepine	3.18	LCS	P	0 - 30
LFB	Diuron	0.178	LCS	P	0 - 30
LFB	Fenuron	3.12	LCS	P	0 - 30
LFB	Fluridone	0.762	LCS	P	0 - 30
LFB	Hydrocodone	0.316	LCS	P	0 - 30
LFB	Imazapyr	3.12	LCS	P	0 - 30
LFB	Imidacloprid	1.94	LCS	P	0 - 30
LFB	Linuron	0.344	LCS	P	0 - 30
LFB	MCPP	5.82	LCS	P	0 - 30
LFB	Primidone	4.95	LCS	P	0 - 30
LFB	Pyraclostrobin	3.03	LCS	P	0 - 30
LFB	Triclopyr	5.70	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P347114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2001676	Sucralose	19.8	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P347207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002368	Color (true)	0.631	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P347208

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002227	Color (true)	0.184	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P347375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002011	Total Alkalinity	6.11	Sample	F	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P347841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002246	Total Alkalinity	0.581	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P347756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002007	TDS	1.65	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P347759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002246	TDS	5.83	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P347379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002011	Fluoride	0.940	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P347845

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002246	Fluoride	0.480	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P347527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002105	Organic Carbon	0.795	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 Surrogates

Lab Sample ID: 2002195
Field Sample ID: 21010033

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	67.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.6	P	30 - 160
EPA 8321B	Diuron-d6	40.9	P	30 - 160
EPA 8321B	Primidone-d5	58.2	P	30 - 160
EPA 8321B	Sucralose-d6	44.3	P	40 - 160

Lab Sample ID: 2002196
Field Sample ID: 21010051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	73.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.2	P	30 - 160
EPA 8321B	Diuron-d6	42.8	P	30 - 160
EPA 8321B	Primidone-d5	67.6	P	30 - 160
EPA 8321B	Sucralose-d6	54.9	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A84722

Included Lab Sample IDs: 2002171, 2002174, 2002177, 2002180

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	85 - 115
Color (true)	101	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84723

Included Lab Sample IDs: 2002173, 2002176, 2002179, 2002182

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	97.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A84731

Included Lab Sample IDs: 2002171, 2002174, 2002177, 2002180

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84777

Included Lab Sample IDs: 2002181

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84781

Included Lab Sample IDs: 2002172, 2002175, 2002178, 2002181

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

Reference Method: SM 2320 B-97

Run ID: A84785

Included Lab Sample IDs: 2002171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84785

Included Lab Sample IDs: 2002171

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84788

Included Lab Sample IDs: 2002172, 2002175, 2002178

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84826

Included Lab Sample IDs: 2002195, 2002196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	68.3	71.2	P/P	60 - 160
Sucralose	74.0	68.3	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A84844

Included Lab Sample IDs: 2002172, 2002175, 2002178, 2002181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	95.6	P/P	90 - 110
Organic Carbon	95.6	96.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84847

Included Lab Sample IDs: 2002171, 2002174, 2002177, 2002180

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.6	99.8	P/P	90 - 110
Chloride	99.8	101	P/P	90 - 110
Sulfate	100	103	P/P	90 - 110
Sulfate	97.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84934

Included Lab Sample IDs: 2002181

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

Reference Method: SM 2320 B-97

Run ID: A84969

Included Lab Sample IDs: 2002174, 2002177, 2002180

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84969

Included Lab Sample IDs: 2002174, 2002177, 2002180

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84975

Included Lab Sample IDs: 2002172, 2002175, 2002178

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.0	96.9	P/P	90 - 110
Total-P	96.9	94.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84988

Included Lab Sample IDs: 2002195, 2002196

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	103	P/P	50 - 150
Acetaminophen	122	124	P/P	60 - 160
Bentazon	134	135	P/P	50 - 150
Carbamazepine	110	109	P/P	60 - 160
Diuron	113	109	P/P	60 - 150
Fenuron	106	108	P/P	60 - 150
Fluridone	105	106	P/P	60 - 160
Hydrocodone	105	107	P/P	60 - 150
Imazapyr	100	93.5	P/P	50 - 150
Imidacloprid	98.4	102	P/P	60 - 150
Linuron	104	100	P/P	60 - 150
MCPP	122	124	P/P	50 - 150
Primidone	80.1	91.1	P/P	60 - 150
Pyraclostrobin	109	106	P/P	60 - 150
Triclopyr	111	113	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85028

Included Lab Sample IDs: 2002172, 2002175

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85111

Included Lab Sample IDs: 2002178, 2002181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	103	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 180.1 Rev. 2.0	Turbidity					7.24	
EPA 300.0 Rev. 2.1	Chloride	98.7		101	101	2.62	
	Sulfate	98.2		101	101	0.864	
EPA 350.1 Rev. 2.0	Ammonia-N	101		101	101		0.0562
	Ammonia-N	96.9		92.9	93.9		1.03
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		103	104		0.918
	Kjeldahl Nitrogen	98.5		100	106		3.21
EPA 353.2 Rev. 2.0	NO2NO3-N	101		101	101		0.370
EPA 365.1 Rev. 2.0	Total-P	96.4		95.4	101		3.52
	Total-P	98.1		98.7	95.6		2.85
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7		96.1	95.9		0.208
	O-Phosphate-P	97.9		95.1	96.5		1.46
EPA 8321B	2,4-D	76.0	87.4			14.0	
	Acetaminophen	95.3	93.2			2.14	
	Bentazon	83.3	88.9			6.49	
	Carbamazepine	93.1	90.2			3.18	
	Diuron	85.2	85.4			0.178	
	Fenuron	106	102			3.12	
	Fluridone	88.7	89.4			0.762	
	Hydrocodone	93.8	93.5			0.316	
	Imazapyr	87.9	90.6			3.12	
	Imidacloprid	101	98.6			1.94	
	Linuron	66.0	66.3			0.344	
	MCP	101	107			5.82	
	Primidone	95.4	90.8			4.95	
	Pyraclostrobin	80.3	82.8			3.03	
	Sucralose	79.2					19.8
	Triclopyr	95.0	101			5.70	
SM 2120 B	Color (true)					0.631	
	Color (true)					0.184	
SM 2320 B-97	Total Alkalinity	100				6.11	
	Total Alkalinity	103				0.581	
SM 2540 C-97	TDS					1.65	
	TDS					5.83	
SM 4500 F-C-97	Fluoride	97.9		98.3	97.1		0.940
	Fluoride	96.5		96.6	97.2		0.480
SM 5310 B-00	Organic Carbon	95.7		96.6	95.7		0.795

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2002171, 2002174, 2002177, 2002180
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2002171, 2002174, 2002177, 2002180
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2002171, 2002174, 2002177, 2002180
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2002172, 2002175, 2002178, 2002181
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2002172, 2002175, 2002178, 2002181
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2002172, 2002175, 2002178, 2002181

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2002172, 2002175, 2002178, 2002181
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2002173, 2002176, 2002179, 2002182
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2002195, 2002196
SM 2120 B / E31780	True Color measured at 450 nm	2002171, 2002174, 2002177, 2002180
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2002171, 2002174, 2002177, 2002180
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2002171, 2002174, 2002177, 2002180
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2002171, 2002174, 2002177, 2002180
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2002171, 2002174, 2002177, 2002180
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2002172, 2002175, 2002178, 2002181

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	06/20/2018			06/20/2018 16:21	William L. Brown IV	2002171, 2002174, 2002177, 2002180
EPA 300.0 Rev. 2.1	06/20/2018			06/25/2018 22:15	Lipi Saha	2002171
	06/20/2018			06/26/2018 00:50	Lipi Saha	2002174
	06/20/2018			06/26/2018 01:02	Lipi Saha	2002177
	06/20/2018			06/26/2018 01:14	Lipi Saha	2002180
EPA 350.1 Rev. 2.0	06/20/2018			06/22/2018 12:33	Ping Hua	2002181
	06/20/2018			06/22/2018 14:58	Julia Storbeck	2002172
	06/20/2018			06/22/2018 15:00	Julia Storbeck	2002175
	06/20/2018			06/22/2018 15:01	Julia Storbeck	2002178
EPA 351.2 Rev. 2.0	06/20/2018	07/03/2018 10:40	Adrian Shelby	07/05/2018 12:32	Tanya Welborn	2002172
	06/20/2018	07/03/2018 10:40	Adrian Shelby	07/05/2018 12:33	Tanya Welborn	2002175
	06/20/2018	07/09/2018 10:25	Tanya Welborn	07/10/2018 09:15	Joseph Suarez	2002178
	06/20/2018	07/09/2018 10:25	Tanya Welborn	07/10/2018 09:16	Joseph Suarez	2002181
EPA 353.2 Rev. 2.0	06/20/2018			06/22/2018 13:40	Lauren Bottorf	2002181
	06/20/2018			06/22/2018 13:45	Lauren Bottorf	2002172
	06/20/2018			06/22/2018 13:46	Lauren Bottorf	2002175
	06/20/2018			06/22/2018 13:47	Lauren Bottorf	2002178
EPA 365.1 Rev. 2.0	06/20/2018	06/25/2018 09:50	Sima Feizi	06/29/2018 14:10	Beverly Y. Sanders	2002181
	06/20/2018	06/29/2018 11:10	Sima Feizi	07/02/2018 10:41	Beverly Y. Sanders	2002172
	06/20/2018	06/29/2018 11:10	Sima Feizi	07/02/2018 10:42	Beverly Y. Sanders	2002175
	06/20/2018	06/29/2018 11:10	Sima Feizi	07/02/2018 10:46	Beverly Y. Sanders	2002178
EPA 365.1 Rev. 2.0 dissolved	06/20/2018			06/20/2018 14:54	Megan Treadwell	2002173
	06/20/2018			06/20/2018 14:55	Megan Treadwell	2002176
	06/20/2018			06/20/2018 14:56	Megan Treadwell	2002179
	06/20/2018			06/20/2018 14:58	Megan Treadwell	2002182
EPA 8321B	06/20/2018	06/21/2018 10:00	Hoor Shaik	07/02/2018 03:30	Juyoung Kim	2002195
	06/20/2018	06/21/2018 10:00	Hoor Shaik	07/02/2018 04:05	Juyoung Kim	2002196
	06/20/2018	06/21/2018 10:00	Hoor Shaik	07/03/2018 15:19	Juyoung Kim	2002195
	06/20/2018	06/21/2018 10:00	Hoor Shaik	07/03/2018 15:54	Juyoung Kim	2002196
	06/20/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 21:07	Mohammad Ghaffari	2002195
	06/20/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 21:45	Mohammad Ghaffari	2002196
SM 2120 B	06/20/2018			06/20/2018 14:41	Blanca Fach	2002180
	06/20/2018			06/20/2018 14:52	Blanca Fach	2002171
	06/20/2018			06/20/2018 14:53	Blanca Fach	2002174
	06/20/2018			06/20/2018 14:54	Blanca Fach	2002177
SM 2320 B-97	06/20/2018			06/22/2018 09:14	Lauren Bottorf	2002171
	06/20/2018			07/01/2018 19:54	Dale L. Simmons	2002174
	06/20/2018			07/01/2018 20:03	Dale L. Simmons	2002177
	06/20/2018			07/01/2018 20:16	Dale L. Simmons	2002180
SM 2540 C-97	06/20/2018			06/22/2018 15:45	Yijie Li	2002171, 2002174, 2002177, 2002180

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	06/20/2018			06/22/2018 15:45	Yijie Li	2002171, 2002174, 2002177, 2002180
SM 4500 F-C-97	06/20/2018			06/22/2018 09:14	Lauren Bottorf	2002171
	06/20/2018			07/01/2018 19:54	Dale L. Simmons	2002174
	06/20/2018			07/01/2018 20:03	Dale L. Simmons	2002177
	06/20/2018			07/01/2018 20:16	Dale L. Simmons	2002180
SM 5310 B-00	06/20/2018			06/26/2018 03:41	Megan Treadwell	2002172
	06/20/2018			06/26/2018 04:29	Megan Treadwell	2002175
	06/20/2018			06/26/2018 04:45	Megan Treadwell	2002178
	06/20/2018			06/26/2018 05:00	Megan Treadwell	2002181