

Chemical Analysis Report

NW-DIST-2018-11-06-01

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

Event Description: **Baker Run**
Request ID: **RQ-2018-11-05-28**
Customer: **NW-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 29-NOV-2018 14:55



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 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: Carpenters Creek upstream of Ninth ave

Collection Date/Time: 11/05/2018 09:25

Field ID: G4NW0415

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2039238	EPA 8321B	2,4-D	0.020		ug/L	P354119	
		Sucralose**	0.29		ug/L	P354118	
		Bentazon	8.0E-04	U	ug/L	P354119	
		MCP	0.0073	I	ug/L	P354119	MS
		Triclopyr**	0.0040	U	ug/L	P354119	
		Imidacloprid	0.043		ug/L	P354119	MS
		Diuron	0.0028	I	ug/L	P354119	
		Pyraclostrobin**	0.0020	U	ug/L	P354119	
		Primidone**	0.0040	U	ug/L	P354119	
		Linuron	0.0040	U	ug/L	P354119	
		Acetaminophen**	0.0080	U	ug/L	P354119	
		Fenuron	0.016	U	ug/L	P354119	
		Imazapyr**	0.0080	I	ug/L	P354119	
		Carbamazepine**	0.0014	I	ug/L	P354119	
		Fluridone**	4.0E-04	U	ug/L	P354119	
		Hydrocodone**	8.0E-04	U	ug/L	P354119	
		Naproxen**	0.0080	U	ug/L	P354119	
		Ibuprofen**	0.020	U	ug/L	P354119	
		Acesulfame K**	0.10	U	ug/L	P354118	

Sample Location: Carpenters Creek upstream of Ninth ave

Collection Date/Time: 11/05/2018 09:30

Field ID: G4NW0415_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2039239	EPA 8321B	2,4-D	0.016		ug/L	P354119	
		Sucralose**	0.31		ug/L	P354118	
		Bentazon	8.0E-04	U	ug/L	P354119	
		MCP	0.0064	I	ug/L	P354119	MS
		Triclopyr**	0.0040	U	ug/L	P354119	
		Imidacloprid	0.042		ug/L	P354119	MS
		Diuron	0.0026	I	ug/L	P354119	
		Pyraclostrobin**	0.0020	U	ug/L	P354119	
		Primidone**	0.0040	U	ug/L	P354119	
		Linuron	0.0040	U	ug/L	P354119	
		Acetaminophen**	0.0088	I	ug/L	P354119	
		Fenuron	0.016	U	ug/L	P354119	
		Imazapyr**	0.0067	I	ug/L	P354119	
		Carbamazepine**	0.0014	I	ug/L	P354119	
		Fluridone**	4.0E-04	U	ug/L	P354119	
		Hydrocodone**	8.0E-04	U	ug/L	P354119	
		Naproxen**	0.0080	U	ug/L	P354119	
		Ibuprofen**	0.020	U	ug/L	P354119	
		Acesulfame K**	0.10	U	ug/L	P354118	

Sample Location: Capenters Creek upstream of Ninth ave

Collection Date/Time: 11/05/2018 09:35

Field ID: BLANK_11052018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2039240	EPA 8321B	2,4-D	0.0020	U	ug/L	P354119	
		Sucralose**	0.010	U	ug/L	P354118	
		Bentazon	8.0E-04	U	ug/L	P354119	
		MCP	0.0020	U	ug/L	P354119	MS
		Triclopyr**	0.0040	U	ug/L	P354119	
		Imidacloprid	0.0020	U	ug/L	P354119	MS
		Diuron	0.0020	U	ug/L	P354119	
		Pyraclostrobin**	0.0020	U	ug/L	P354119	
		Primidone**	0.0040	U	ug/L	P354119	
		Linuron	0.0040	U	ug/L	P354119	
		Acetaminophen**	0.0080	U	ug/L	P354119	
		Fenuron	0.016	U	ug/L	P354119	
		Imazapyr**	0.0040	U	ug/L	P354119	
		Carbamazepine**	8.0E-04	U	ug/L	P354119	
		Fluridone**	4.0E-04	U	ug/L	P354119	
		Hydrocodone**	8.0E-04	U	ug/L	P354119	
		Naproxen**	0.0080	U	ug/L	P354119	
		Ibuprofen**	0.020	U	ug/L	P354119	
		Acesulfame K**	0.10	U	ug/L	P354118	

**Sample Location: Ates Creek NE of Bryant Bridge Road above
Blackwater River**

Collection Date/Time: 11/05/2018 10:45

Field ID: G4NW0332

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2039199	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P354307	
	EPA 300.0 Rev. 2.1	Chloride	3.7		mg Cl/L	P355115	
		Sulfate	0.81		mg SO4/L	P355061	
	SM 2120 B	Color (true)	17		PCU	P354286	
	SM 2320 B-97	Total Alkalinity	7.1		mg CaCO3/L	P354578	
	SM 2540 C-97	TDS	24	I	mg/L	P354705	
	SM 2540 D-97	TSS	2	I	mg/L	P354717	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P354581	
2039202	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P354631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.088	I	mg N/L	P354517	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.022		mg N/L	P354667	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P354441	
	SM 5310 B-00	Organic Carbon	1.4		mg C/L	P354401	
2039205	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354315	

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: Bear Creek @ Forest Rd 0.7mi W of Bear Lk

Collection Date/Time: 11/05/2018 11:35

Field ID: G4NW0380

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2039200	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P354307	
	EPA 300.0 Rev. 2.1	Chloride	2.4		mg Cl/L	P355116	
		Sulfate	0.36	I	mg SO4/L	P355119	
	SM 2120 B	Color (true)	30		PCU	P354286	
	SM 2320 B-97	Total Alkalinity	4.7		mg CaCO3/L	P354579	
	SM 2540 C-97	TDS	15	U	mg/L	P354705	
	SM 2540 D-97	TSS	3	I	mg/L	P354717	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P354582	
2039203	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P354631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P354517	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P354667	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P354441	
	SM 5310 B-00	Organic Carbon	3.6		mg C/L	P354401	
2039206	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354315	

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: SWEETWATER CREEK OFF DIRT

Collection Date/Time: 11/05/2018 11:55

Field ID: G4NW0419

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2039201	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P354307	
	EPA 300.0 Rev. 2.1	Chloride	2.7	A	mg Cl/L	P355116	
		Sulfate	0.68	A	mg SO4/L	P355119	
	SM 2120 B	Color (true)	31		PCU	P354286	
	SM 2320 B-97	Total Alkalinity	0.86	I	mg CaCO3/L	P354579	
	SM 2540 C-97	TDS	16	IA	mg/L	P354706	
	SM 2540 D-97	TSS	4	IA	mg/L	P354718	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P354582	
2039204	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P354631	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.14	I	mg N/L	P354517	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.073		mg N/L	P354667	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P354441	
	SM 5310 B-00	Organic Carbon	3.2		mg C/L	P354401	
2039207	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354315	

Ref. Method and Comment:

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

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: P354307

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355061

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355115

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355116

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355119

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354631

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354517

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354667

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354441

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354315

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

Reference Method: EPA 8321B
Batch ID: P354118

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P354119

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	8.0E-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
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P354286

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P354578

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

Reference Method: SM 2320 B-97
Batch ID: P354579

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P354705

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P354706

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354717

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354718

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P354581

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P354582

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P354401

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: P355061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	109		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355116

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355119

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354631

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354517

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354667

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354441

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.2		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P354118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	83.7		P	40 - 150
Sucralose	85.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354119

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	94.5		P	40 - 150
Acetaminophen	94.2		P	30 - 150
Bentazon	71.6		P	30 - 150
Carbamazepine	85.4		P	40 - 150
Diuron	74.5		P	40 - 150
Fenuron	120		P	40 - 150
Fluridone	115		P	40 - 150
Hydrocodone	101		P	40 - 150
Ibuprofen	89.6		P	40 - 150
Imazapyr	91.8		P	40 - 150
Imidacloprid	111		P	40 - 160
Linuron	87.3		P	40 - 150
MCP	108		P	40 - 150
Naproxen	91.3		P	40 - 150
Primidone	100		P	40 - 150
Pyraclostrobin	62.4		P	40 - 150
Triclopyr	105		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P354286

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

Reference Method: SM 2320 B-97
Batch ID: P354578

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 2320 B-97
Batch ID: P354579

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P354581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	91 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P354582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354401

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039199	Sulfate	110	109	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039199	Chloride	100	99.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039201	Chloride	101		P	90 - 110
2039941	Chloride	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039201	Sulfate	99.3		P	90 - 110
2039941	Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039203	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039204	Kjeldahl Nitrogen	99.2	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039178	NO2NO3-N	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039271	Total-P	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039206	O-Phosphate-P	100	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P354118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038773	Acesulfame K	120	115	P/P	40 - 150
2038773	Sucralose	94.8	84.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038797	2,4-D	124	118	P/P	40 - 150
2038797	Acetaminophen	109	103	P/P	30 - 150
2038797	Bentazon	44.6	43.8	P/P	30 - 150
2038797	Carbamazepine	77.5	82.0	P/P	40 - 150
2038797	Diuron	59.4	63.8	P/P	40 - 150
2038797	Fenuron	108	126	P/P	40 - 150
2038797	Fluridone	117	123	P/P	40 - 150
2038797	Hydrocodone	125	134	P/P	40 - 150
2038797	Ibuprofen	71.6	68.7	P/P	40 - 150
2038797	Imazapyr	130	143	P/P	40 - 150
2038797	Imidacloprid	175	200	F/F	40 - 160
2038797	Linuron	80.2	81.4	P/P	40 - 150
2038797	MCPP	152	129	F/P	40 - 150
2038797	Naproxen	90.3	104	P/P	40 - 150
2038797	Primidone	105	106	P/P	40 - 150
2038797	Pyraclostrobin	64.8	67.2	P/P	40 - 150
2038797	Triclopyr	136	133	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P354581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039268	Fluoride	99.1	97.7	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P354582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040253	Fluoride	100	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P354401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039269	Organic Carbon	100	97.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039265	Turbidity	8.74	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039199	Sulfate	0.804	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039199	Chloride	0.699	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039201	Chloride	0.198	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039201	Sulfate	1.41	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039203	Ammonia-N	0.228	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039204	Kjeldahl Nitrogen	0.713	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039178	NO2NO3-N	2.19	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039271	Total-P	2.94	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039206	O-Phosphate-P	0.794	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P354118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038773	Acesulfame K	3.85	Spike	P	0 - 30
2038773	Sucralose	9.90	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P354119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038797	2,4-D	4.98	Spike	P	0 - 30
2038797	Acetaminophen	5.37	Spike	P	0 - 30
2038797	Bentazon	1.82	Spike	P	0 - 30
2038797	Carbamazepine	5.63	Spike	P	0 - 30
2038797	Diuron	7.05	Spike	P	0 - 30
2038797	Fenuron	15.7	Spike	P	0 - 30
2038797	Fluridone	4.74	Spike	P	0 - 30
2038797	Hydrocodone	6.83	Spike	P	0 - 30
2038797	Ibuprofen	4.11	Spike	P	0 - 30
2038797	Imazapyr	9.15	Spike	P	0 - 30
2038797	Imidacloprid	13.4	Spike	P	0 - 30
2038797	Linuron	1.53	Spike	P	0 - 30
2038797	MCPP	16.4	Spike	P	0 - 30
2038797	Naproxen	13.9	Spike	P	0 - 30
2038797	Primidone	1.06	Spike	P	0 - 30
2038797	Pyraclostrobin	3.70	Spike	P	0 - 30
2038797	Triclopyr	2.46	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P354286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039265	Color (true)	0.0929	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
 Batch ID: P354578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039268	Total Alkalinity	0.671	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
 Batch ID: P354579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040253	Total Alkalinity	0.804	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P354705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039177	TDS	2.84	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P354581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039268	Fluoride	0.972	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P354582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040253	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P354401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039269	Organic Carbon	1.82	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: 2039238
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.5	P	30 - 160
EPA 8321B	Diuron-d6	85.5	P	30 - 160
EPA 8321B	Endothall-d6	98.0	P	40 - 160
EPA 8321B	Endothall-d6	98.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	95.7	P	30 - 160
EPA 8321B	Primidone-d5	95.1	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	40 - 160
EPA 8321B	Sucralose-d6	105	P	40 - 160

Lab Sample ID: 2039239
Field Sample ID: G4NW0415_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	107	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.6	P	30 - 160
EPA 8321B	Diuron-d6	83.7	P	30 - 160
EPA 8321B	Endothall-d6	98.6	P	40 - 160
EPA 8321B	Endothall-d6	98.6	P	40 - 160
EPA 8321B	Ibuprofen-d3	88.7	P	30 - 160
EPA 8321B	Primidone-d5	95.0	P	30 - 160
EPA 8321B	Sucralose-d6	98.8	P	40 - 160
EPA 8321B	Sucralose-d6	98.8	P	40 - 160

Lab Sample ID: 2039240
Field Sample ID: BLANK_11052018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	119	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.9	P	30 - 160
EPA 8321B	Diuron-d6	97.1	P	30 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Endothall-d6	101	P	40 - 160
EPA 8321B	Ibuprofen-d3	114	P	30 - 160
EPA 8321B	Primidone-d5	109	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	40 - 160
EPA 8321B	Sucralose-d6	104	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A87565

Included Lab Sample IDs: 2039199, 2039200, 2039201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.3	P/P	90 - 115
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A87570

Included Lab Sample IDs: 2039199, 2039200, 2039201

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A87573

Included Lab Sample IDs: 2039205, 2039206, 2039207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.5	P/P	90 - 110
O-Phosphate-P	99.5	99.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A87605

Included Lab Sample IDs: 2039238, 2039239, 2039240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	82.0	80.8	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A87614

Included Lab Sample IDs: 2039202, 2039203, 2039204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.1	97.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A87626

Included Lab Sample IDs: 2039238, 2039239, 2039240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.0	100	P/P	50 - 150
Bentazon	104	106	P/P	50 - 160
Ibuprofen	104	98.4	P/P	50 - 160
MCP	103	104	P/P	50 - 150
Naproxen	110	104	P/P	50 - 160
Triclopyr	95.7	97.1	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A87650

Included Lab Sample IDs: 2039238, 2039239, 2039240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	84.6	92.4	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87675

Included Lab Sample IDs: 2039202, 2039203, 2039204

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

Reference Method: EPA 8321B

Run ID: A87708

Included Lab Sample IDs: 2039238, 2039239, 2039240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	101	102	P/P	60 - 160
Carbamazepine	106	104	P/P	60 - 160
Diuron	110	115	P/P	60 - 150
Fenuron	122	119	P/P	60 - 150
Fluridone	127	122	P/P	60 - 160
Hydrocodone	109	122	P/P	60 - 150
Imazapyr	98.7	97.5	P/P	50 - 150
Imidacloprid	105	97.1	P/P	60 - 160
Linuron	125	125	P/P	60 - 150
Primidone	111	118	P/P	60 - 160
Pyraclostrobin	94.8	98.4	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A87712

Included Lab Sample IDs: 2039199, 2039200, 2039201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.5	P/P	90 - 110
Total Alkalinity	99.7	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A87712

Included Lab Sample IDs: 2039199, 2039200, 2039201

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A87729

Included Lab Sample IDs: 2039202, 2039203, 2039204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	105	P/P	90 - 110
Kjeldahl Nitrogen	102	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A87735

Included Lab Sample IDs: 2039202, 2039203, 2039204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.2	P/P	90 - 110
Ammonia-N	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87753

Included Lab Sample IDs: 2039202, 2039203, 2039204

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A87936

Included Lab Sample IDs: 2039199, 2039200, 2039201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	98.7	101	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110
Sulfate	103	102	P/P	90 - 110

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					8.74	
EPA 300.0 Rev. 2.1	Chloride	99.3	100	99.3			0.699
	Chloride	98.6	101	94.8		0.198	
	Sulfate	109	110	109			0.804
	Sulfate	97.7	99.3	95.7		1.41	
EPA 350.1 Rev. 2.0	Ammonia-N	102	102	102			0.228
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	99.2	100			0.713
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	101	104			2.19
EPA 365.1 Rev. 2.0	Total-P	101	101	104			2.94
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	100	101			0.794
EPA 8321B	2,4-D	94.5	124	118			4.98
	Acesulfame K	83.7	120	115			3.85
	Acetaminophen	94.2	109	103			5.37
	Bentazon	71.6	44.6	43.8			1.82
	Carbamazepine	85.4	77.5	82.0			5.63
	Diuron	74.5	59.4	63.8			7.05
	Fenuron	120	108	126			15.7
	Fluridone	115	117	123			4.74
	Hydrocodone	101	125	134			6.83
	Ibuprofen	89.6	71.6	68.7			4.11
	Imazapyr	91.8	130	143			9.15
	Imidacloprid	111	175	200			13.4
	Linuron	87.3	80.2	81.4			1.53
	MCP	108	152	129			16.4
	Naproxen	91.3	90.3	104			13.9
	Primidone	100	105	106			1.06
	Pyraclostrobin	62.4	64.8	67.2			3.70
	Sucralose	85.2	94.8	84.4			9.90
	Triclopyr	105	136	133			2.46
SM 2120 B	Color (true)	102				0.0929	
SM 2320 B-97	Total Alkalinity	101				0.671	
	Total Alkalinity	101				0.804	
SM 2540 C-97	TDS					2.84	
SM 4500 F-C-97	Fluoride	97.8	99.1	97.7			0.972
	Fluoride	101	100	100			0.0
SM 5310 B-00	Organic Carbon	98.1	100	97.1			1.82

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2039199, 2039200, 2039201
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2039199, 2039200, 2039201
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2039199, 2039200, 2039201
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2039202, 2039203, 2039204
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2039202, 2039203, 2039204
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2039202, 2039203, 2039204
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2039202, 2039203, 2039204

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2039205, 2039206, 2039207
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2039238, 2039239, 2039240
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2039238, 2039239, 2039240
SM 2120 B / E31780	True Color measured at 450 nm	2039199, 2039200, 2039201
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2039199, 2039200, 2039201
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2039199, 2039200, 2039201
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2039199, 2039200, 2039201
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2039199, 2039200, 2039201
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2039202, 2039203, 2039204

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	11/06/2018			11/06/2018 16:51	Megan Treadwell	2039199, 2039200, 2039201
EPA 300.0 Rev. 2.1	11/06/2018			11/22/2018 15:17	Lipi Saha	2039199
	11/06/2018			11/26/2018 14:17	Lipi Saha	2039199
	11/06/2018			11/26/2018 18:31	Lipi Saha	2039201
	11/06/2018			11/26/2018 19:19	Lipi Saha	2039200
EPA 350.1 Rev. 2.0	11/06/2018			11/09/2018 12:01	Ping Hua	2039203
	11/06/2018			11/09/2018 12:13	Ping Hua	2039202
	11/06/2018			11/09/2018 12:15	Ping Hua	2039204
EPA 351.2 Rev. 2.0	11/06/2018	11/09/2018 12:30	Adrian Shelby	11/13/2018 15:10	Joseph Suarez	2039202
	11/06/2018	11/09/2018 12:30	Adrian Shelby	11/13/2018 15:15	Joseph Suarez	2039203
	11/06/2018	11/09/2018 12:30	Adrian Shelby	11/13/2018 15:17	Joseph Suarez	2039204
EPA 353.2 Rev. 2.0	11/06/2018			11/14/2018 11:22	Lauren Bottorf	2039202
	11/06/2018			11/14/2018 11:24	Lauren Bottorf	2039203
	11/06/2018			11/14/2018 11:25	Lauren Bottorf	2039204
EPA 365.1 Rev. 2.0	11/06/2018	11/08/2018 12:25	Sima Feizi	11/09/2018 15:21	Beverly Y. Sanders	2039202
	11/06/2018	11/08/2018 12:25	Sima Feizi	11/09/2018 15:22	Beverly Y. Sanders	2039203
	11/06/2018	11/08/2018 12:25	Sima Feizi	11/09/2018 15:23	Beverly Y. Sanders	2039204
EPA 365.1 Rev. 2.0 dissolved	11/06/2018			11/06/2018 16:18	Jhamieka S. Greenwood	2039206
	11/06/2018			11/06/2018 16:21	Jhamieka S. Greenwood	2039207
	11/06/2018			11/06/2018 16:26	Jhamieka S. Greenwood	2039205
EPA 8321B	11/06/2018	11/07/2018 08:30	Mohammad Ghaffari	11/07/2018 12:11	Mohammad Ghaffari	2039238
	11/06/2018	11/07/2018 08:30	Mohammad Ghaffari	11/07/2018 12:25	Mohammad Ghaffari	2039239
	11/06/2018	11/07/2018 08:30	Mohammad Ghaffari	11/07/2018 12:40	Mohammad Ghaffari	2039240
	11/06/2018	11/07/2018 08:30	Mohammad Ghaffari	11/08/2018 16:18	Mohammad Ghaffari	2039238
	11/06/2018	11/07/2018 08:30	Mohammad Ghaffari	11/08/2018 16:32	Mohammad Ghaffari	2039239
	11/06/2018	11/07/2018 08:30	Mohammad Ghaffari	11/08/2018 16:46	Mohammad Ghaffari	2039240
	11/06/2018	11/07/2018 10:00	Hoor Shaik	11/09/2018 03:42	Juyoung Kim	2039238
	11/06/2018	11/07/2018 10:00	Hoor Shaik	11/09/2018 04:16	Juyoung Kim	2039239
	11/06/2018	11/07/2018 10:00	Hoor Shaik	11/09/2018 04:51	Juyoung Kim	2039240
	11/06/2018	11/07/2018 10:00	Hoor Shaik	11/10/2018 11:35	Juyoung Kim	2039238
	11/06/2018	11/07/2018 10:00	Hoor Shaik	11/10/2018 12:09	Juyoung Kim	2039239
	11/06/2018	11/07/2018 10:00	Hoor Shaik	11/10/2018 12:44	Juyoung Kim	2039240
SM 2120 B	11/06/2018			11/06/2018 14:48	Chelsea Hernandez	2039200, 2039201
	11/06/2018			11/06/2018 15:05	Chelsea Hernandez	2039199
SM 2320 B-97	11/06/2018			11/10/2018 07:22	Dale L. Simmons	2039199
	11/06/2018			11/10/2018 09:24	Dale L. Simmons	2039200
	11/06/2018			11/10/2018 09:36	Dale L. Simmons	2039201
SM 2540 C-97	11/06/2018			11/08/2018 14:01	Yijie Li	2039199, 2039200, 2039201
SM 2540 D-97	11/06/2018			11/08/2018 14:01	Yijie Li	2039199, 2039200, 2039201
SM 4500 F-C-97	11/06/2018			11/10/2018 07:22	Dale L. Simmons	2039199

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	11/06/2018			11/10/2018 09:24	Dale L. Simmons	2039200
	11/06/2018			11/10/2018 09:36	Dale L. Simmons	2039201
SM 5310 B-00	11/06/2018			11/07/2018 10:04	Megan Treadwell	2039202
	11/06/2018			11/07/2018 10:16	Megan Treadwell	2039203
	11/06/2018			11/07/2018 10:30	Megan Treadwell	2039204