

Chemical Analysis Report

CEN-DIST-2019-01-15-01

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

Event Description: **Dot / Bear Head / Bass / Jane X2/ Terrace**
Request ID: **RQ-2019-01-14-22**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 30-JAN-2019 15:03



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: LAKE DOT @ CENTER OF LAKE

Collection Date/Time: 01/14/2019 09:43

Field ID: G2CE0067

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2054040	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P357323	
	EPA 300.0 Rev. 2.1	Chloride	9.1		mg Cl/L	P357415	
		Sulfate	15		mg SO4/L	P357417	
	SM 2120 B	Color (true)	8.0		PCU	P357302	
	SM 2320 B-97	Total Alkalinity	76	A	mg CaCO3/L	P357659	
	SM 2540 C-97	TDS	116	A	mg/L	P357763	
	SM 2540 D-97	TSS	2	IA	mg/L	P357860	
	SM 4500 F-C-97	Fluoride	0.052	I	mg F/L	P357663	
2054041	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P357320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P357344	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P357411	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P357351	
	SM 5310 B-00	Organic Carbon	3.1		mg C/L	P357395	
2054042	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P357296	
2054067	EPA 8321B	2,4-D	0.0035	I	ug/L	P357055	
		Sucralose**	0.077		ug/L	P357257	
		Bentazon	0.011		ug/L	P357055	
		MCP	0.0020	U	ug/L	P357055	
		Triclopyr**	0.0040	U	ug/L	P357055	
		Imidacloprid	0.036		ug/L	P357055	MS
		Diuron	0.11		ug/L	P357055	
		Pyraclostrobin**	0.0020	U	ug/L	P357055	
		Primidone**	0.0040	U	ug/L	P357055	
		Linuron	0.0040	U	ug/L	P357055	
		Acetaminophen**	0.0080	U	ug/L	P357055	
		Fenuron	0.016	U	ug/L	P357055	
		Imazapyr**	0.0053	I	ug/L	P357055	
		Carbamazepine**	0.0039		ug/L	P357055	
		Fluridone**	0.0020	I	ug/L	P357055	
		Hydrocodone**	0.0020	U	ug/L	P357055	
		Naproxen**	0.0080	U	ug/L	P357055	
		Ibuprofen**	0.020	U	ug/L	P357055	
		Glyphosate**	0.18	I	ug/L	P357257	
		AMPA**	0.34	I	ug/L	P357257	
		Endothall**	0.25	U	ug/L	P357257	
		Glufosinate**	0.10	U	ug/L	P357257	
		Acesulfame K**	0.10	U	ug/L	P357257	

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: LAKE JANE @ CENTER OF LAKE

Collection Date/Time: 01/14/2019 10:15

Field ID: G4CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2054043	EPA 180.1 Rev. 2.0	Turbidity	7.8		NTU	P357323	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P357415	
		Sulfate	16		mg SO4/L	P357417	
	SM 2120 B	Color (true)	27		PCU	P357302	
	SM 2320 B-97	Total Alkalinity	49		mg CaCO3/L	P357659	
	SM 2540 C-97	TDS	112		mg/L	P357763	
	SM 2540 D-97	TSS	8	I	mg/L	P357860	
	SM 4500 F-C-97	Fluoride	0.093	I	mg F/L	P357663	
2054044	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P357320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P357345	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P357411	
	EPA 365.1 Rev. 2.0	Total-P	0.096		mg P/L	P357351	
	SM 5310 B-00	Organic Carbon	9.1		mg C/L	P357395	
2054045	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P357296	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE BASS @ CENTER OF LAKE

Collection Date/Time: 01/14/2019 10:55

Field ID: G4CE0147

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2054046	EPA 180.1 Rev. 2.0	Turbidity	12	A	NTU	P357323	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P357415	
		Sulfate	21		mg SO4/L	P357417	
	SM 2120 B	Color (true)	9.7		PCU	P357302	
	SM 2320 B-97	Total Alkalinity	46		mg CaCO3/L	P357659	
	SM 2540 C-97	TDS	111		mg/L	P357763	
	SM 2540 D-97	TSS	7	I	mg/L	P357860	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P357663	
2054049	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P357320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.99		mg N/L	P357345	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.077		mg N/L	P357411	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P357358	
	SM 5310 B-00	Organic Carbon	5.0		mg C/L	P357395	
2054052	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P357296	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE TERRACE @ CENTER OF LAKE

Collection Date/Time: 01/14/2019 11:25

Field ID: G4CE0153

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2054047	EPA 180.1 Rev. 2.0	Turbidity	9.7		NTU	P357323	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P357415	
		Sulfate	23		mg SO4/L	P357417	
	SM 2120 B	Color (true)	14		PCU	P357302	
	SM 2320 B-97	Total Alkalinity	39		mg CaCO3/L	P357659	
	SM 2540 C-97	TDS	107		mg/L	P357763	
	SM 2540 D-97	TSS	8	I	mg/L	P357860	
	SM 4500 F-C-97	Fluoride	0.045	I	mg F/L	P357663	
2054050	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P357367	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P357345	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.084		mg N/L	P357411	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P357358	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P357395	
2054053	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P357296	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: BEAR HEAD LAKE @ CENTER OF LAKE

Collection Date/Time: 01/14/2019 13:15

Field ID: G4CE0126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2054048	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P357323	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P357415	
		Sulfate	13		mg SO4/L	P357417	
	SM 2120 B	Color (true)	22		PCU	P357302	
	SM 2320 B-97	Total Alkalinity	36		mg CaCO3/L	P357659	
	SM 2540 C-97	TDS	103	A	mg/L	P357764	
	SM 2540 D-97	TSS	3	IA	mg/L	P357861	
	SM 4500 F-C-97	Fluoride	0.048	I	mg F/L	P357663	
2054051	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P357320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P357345	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P357411	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P357358	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P357395	
2054054	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P357296	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P357323

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357415

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357417

Component	Result	Code	Units
Sulfate	0.20	U	mg SO ₄ /L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357320

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357367

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357344

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357345

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357411

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357351

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: P357358

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357296

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

Reference Method: EPA 8321B
Batch ID: P357055

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	8.0E-04	U	ug/L
Hydrocodone	0.0020	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: EPA 8321B
Batch ID: P357257

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P357302

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P357659

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: P357763

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P357764

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P357860

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P357861

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P357663

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P357395

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: P357415

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357417

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357320

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357367

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357344

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357345

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357411

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	107		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357358

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P357296

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.6		P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P357055

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	67.7		P	40 - 150
Acetaminophen	104		P	30 - 150
Bentazon	73.2		P	30 - 150
Carbamazepine	92.5		P	40 - 150
Diuron	75.0		P	40 - 150
Fenuron	111		P	40 - 150
Fluridone	102		P	40 - 150
Hydrocodone	101		P	40 - 150
Ibuprofen	73.1		P	40 - 150
Imazapyr	91.3		P	40 - 150
Imidacloprid	107		P	40 - 160
Linuron	77.3		P	40 - 150
MCPP	95.4		P	40 - 150
Naproxen	52.5		P	40 - 150
Primidone	92.6		P	40 - 150
Pyraclostrobin	65.0		P	40 - 150
Triclopyr	45.1		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P357257

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	127		P	40 - 150
AMPA	117		P	40 - 150
Endothall	96.6		P	40 - 150
Glufosinate	98.8		P	40 - 150
Glyphosate	105		P	40 - 140
Sucralose	104		P	40 - 150

Reference Method: SM 2120 B
 Batch ID: P357302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	85 - 115

Reference Method: SM 2320 B-97
 Batch ID: P357659

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97
 Batch ID: P357663

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 5310 B-00
Batch ID: P357395

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: P357415

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054028	Chloride	93.0		P	90 - 110
2054093	Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054028	Sulfate	95.9		P	90 - 110
2054093	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054049	Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357367

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2053826	Ammonia-N	97.6	97.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2053832	Kjeldahl Nitrogen	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054031	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054041	Total-P	104	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357358

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054065	Total-P	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357296

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054161	O-Phosphate-P	97.0	98.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P357055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2053633	2,4-D	82.2	74.7	P/P	40 - 150
2053633	Acetaminophen	113	109	P/P	30 - 150
2053633	Bentazon	37.5	35.0	P/P	30 - 150
2053633	Carbamazepine	81.6	78.5	P/P	40 - 150
2053633	Diuron	65.5	62.7	P/P	40 - 150
2053633	Fenuron	88.3	85.3	P/P	40 - 150
2053633	Fluridone	89.1	91.5	P/P	40 - 150
2053633	Hydrocodone	109	105	P/P	40 - 150
2053633	Ibuprofen	67.1	62.3	P/P	40 - 150
2053633	Imazapyr	114	107	P/P	40 - 150
2053633	Imidacloprid	196	192	F/F	40 - 160
2053633	Linuron	66.0	67.3	P/P	40 - 150
2053633	MCP	111	102	P/P	40 - 150
2053633	Naproxen	51.3	53.8	P/P	40 - 150
2053633	Primidone	96.9	91.0	P/P	40 - 150
2053633	Pyraclostrobin	65.1	64.4	P/P	40 - 150
2053633	Triclopyr	61.6	56.3	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P357257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2053633	Acesulfame K	104	104	P/P	40 - 150
2053633	AMPA	113	116	P/P	40 - 150
2053633	Endothall	87.1	85.0	P/P	40 - 150
2053633	Glufosinate	103	81.9	P/P	40 - 150
2053633	Glyphosate	101	76.1	P/P	40 - 140
2053633	Sucralose	104	109	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P357663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054040	Fluoride	96.7	96.7	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P357395

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2054030	Organic Carbon	98.4		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P357323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054046	Turbidity	5.13	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054028	Chloride	1.42	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P357417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054028	Sulfate	0.862	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054049	Ammonia-N	0.397	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P357367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2053826	Ammonia-N	0.308	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2053832	Kjeldahl Nitrogen	0.807	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P357345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054044	Kjeldahl Nitrogen	2.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P357411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054031	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054041	Total-P	3.84	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P357358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054065	Total-P	2.05	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P357296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054161	O-Phosphate-P	1.53	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P357055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2053633	2,4-D	9.54	Spike	P	0 - 30
2053633	Acetaminophen	4.04	Spike	P	0 - 30
2053633	Bentazon	6.81	Spike	P	0 - 30
2053633	Carbamazepine	3.85	Spike	P	0 - 30
2053633	Diuron	4.38	Spike	P	0 - 30
2053633	Fenuron	3.48	Spike	P	0 - 30
2053633	Fluridone	2.63	Spike	P	0 - 30
2053633	Hydrocodone	3.30	Spike	P	0 - 30
2053633	Ibuprofen	7.35	Spike	P	0 - 30
2053633	Imazapyr	5.97	Spike	P	0 - 30
2053633	Imidacloprid	2.04	Spike	P	0 - 30
2053633	Linuron	1.96	Spike	P	0 - 30
2053633	MCP	9.02	Spike	P	0 - 30
2053633	Naproxen	4.75	Spike	P	0 - 30
2053633	Primidone	6.28	Spike	P	0 - 30
2053633	Pyraclostrobin	1.04	Spike	P	0 - 30
2053633	Triclopyr	9.09	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P357257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2053633	Acesulfame K	0.310	Spike	P	0 - 30
2053633	AMPA	2.49	Spike	P	0 - 30
2053633	Endothall	2.40	Spike	P	0 - 30
2053633	Glufosinate	23.1	Spike	P	0 - 30
2053633	Glyphosate	28.4	Spike	P	0 - 30
2053633	Sucralose	4.95	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P357302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054063	Color (true)	2.75	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P357659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054040	Total Alkalinity	0.286	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P357763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054040	TDS	6.01	Sample	P	0 - 10

Reference Method: SM 2540 C-97
 Batch ID: P357764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054048	TDS	3.88	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P357663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054040	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P357395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2054030	Organic Carbon	0.238	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: 2054067
Field Sample ID: G2CE0067

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	115	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.6	P	30 - 160
EPA 8321B	Diuron-d6	69.5	P	30 - 160
EPA 8321B	Endothall-d6	69.6	P	40 - 160
EPA 8321B	Endothall-d6	69.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	50.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	50.3	P	40 - 160
EPA 8321B	Ibuprofen-d3	61.2	P	30 - 160
EPA 8321B	Primidone-d5	99.8	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	40 - 160
EPA 8321B	Sucralose-d6	111	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A88788

Included Lab Sample IDs: 2054040, 2054043, 2054046, 2054047, 2054048

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	99.5	P/P	90 - 110
Chloride	98.4	101	P/P	90 - 110
Sulfate	100	98.6	P/P	90 - 110
Sulfate	99.1	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A88821

Included Lab Sample IDs: 2054042, 2054045, 2054052, 2054053, 2054054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	98.8	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A88822

Included Lab Sample IDs: 2054040, 2054043, 2054046, 2054047, 2054048

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88830

Included Lab Sample IDs: 2054041, 2054044, 2054049, 2054051

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A88832

Included Lab Sample IDs: 2054040, 2054043, 2054046, 2054047, 2054048

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88851

Included Lab Sample IDs: 2054050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	98.9	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A88861

Included Lab Sample IDs: 2054041, 2054044, 2054049, 2054050, 2054051

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	99.7	P/P	90 - 110
Organic Carbon	100	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88870

Included Lab Sample IDs: 2054041, 2054044, 2054049, 2054050, 2054051

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

Reference Method: EPA 8321B

Run ID: A88872

Included Lab Sample IDs: 2054067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	112	115	P/P	60 - 160
Glufosinate	105	100	P/P	60 - 160
Glyphosate	111	116	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A88874

Included Lab Sample IDs: 2054067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	115	110	P/P	60 - 160
Endothall	86.2	78.4	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A88886

Included Lab Sample IDs: 2054041, 2054044, 2054049, 2054050, 2054051

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	105	P/P	90 - 110
Kjeldahl Nitrogen	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88898

Included Lab Sample IDs: 2054051

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88899

Included Lab Sample IDs: 2054044, 2054049, 2054050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88913

Included Lab Sample IDs: 2054041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A88926

Included Lab Sample IDs: 2054067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	79.7	81.2	P/P	50 - 150
Acetaminophen	113	110	P/P	60 - 160
Bentazon	101	103	P/P	50 - 160
Carbamazepine	106	103	P/P	60 - 150
Diuron	106	105	P/P	60 - 150
Fenuron	107	106	P/P	60 - 150
Fluridone	106	109	P/P	60 - 160
Hydrocodone	99.4	102	P/P	60 - 150
Ibuprofen	89.4	110	P/P	50 - 160
Imazapyr	94.1	95.2	P/P	50 - 150
Imidacloprid	104	101	P/P	60 - 150
Linuron	111	110	P/P	60 - 150
MCPP	80.4	93.4	P/P	50 - 150
Naproxen	96.6	94.2	P/P	50 - 160
Primidone	105	107	P/P	60 - 150
Pyraclostrobin	109	101	P/P	60 - 150
Triclopyr	91.7	88.6	P/P	50 - 150

Reference Method: SM 2320 B-97

Run ID: A88947

Included Lab Sample IDs: 2054040, 2054043, 2054046, 2054047, 2054048

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

Reference Method: SM 4500 F-C-97

Run ID: A88947

Included Lab Sample IDs: 2054040, 2054043, 2054046, 2054047, 2054048

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

Reference Method: EPA 8321B

Run ID: A88955

Included Lab Sample IDs: 2054067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	122	107	P/P	60 - 160

* 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				5.13	
EPA 300.0 Rev. 2.1	Chloride	97.2	93.0	95.5	1.42	
	Sulfate	96.4	95.9	95.8	0.862	
EPA 350.1 Rev. 2.0	Ammonia-N	105	104	104		0.397
	Ammonia-N	99.2	97.6	97.3		0.308
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.7	104	102		0.807
	Kjeldahl Nitrogen	104				2.44
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	97.0	97.0		0.0
EPA 365.1 Rev. 2.0	Total-P	107	104	108		3.84
	Total-P	104	103	105		2.05
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6	97.0	98.5		1.53
EPA 8321B	2,4-D	67.7	82.2	74.7		9.54
	Acesulfame K	127	104	104		0.310
	Acetaminophen	104	113	109		4.04
	AMPA	117	113	116		2.49
	Bentazon	73.2	37.5	35.0		6.81
	Carbamazepine	92.5	81.6	78.5		3.85
	Diuron	75.0	65.5	62.7		4.38
	Endothall	96.6	87.1	85.0		2.40
	Fenuron	111	88.3	85.3		3.48
	Fluridone	102	89.1	91.5		2.63
	Glufosinate	98.8	103	81.9		23.1
	Glyphosate	105	101	76.1		28.4
	Hydrocodone	101	109	105		3.30
	Ibuprofen	73.1	67.1	62.3		7.35
	Imazapyr	91.3	114	107		5.97
	Imidacloprid	107	196	192		2.04
	Linuron	77.3	66.0	67.3		1.96
	MCPP	95.4	111	102		9.02
	Naproxen	52.5	51.3	53.8		4.75
	Primidone	92.6	96.9	91.0		6.28
	Pyraclostrobin	65.0	65.1	64.4		1.04
	Sucralose	104	104	109		4.95
	Triclopyr	45.1	61.6	56.3		9.09
SM 2120 B	Color (true)	99.6			2.75	
SM 2320 B-97	Total Alkalinity	102			0.286	
SM 2540 C-97	TDS				6.01	
	TDS				3.88	
SM 4500 F-C-97	Fluoride	97.9	96.7	96.7		0.0
SM 5310 B-00	Organic Carbon	98.1	98.4			0.238

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2054040, 2054043, 2054046, 2054047, 2054048
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2054040, 2054043, 2054046, 2054047, 2054048
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2054040, 2054043, 2054046, 2054047, 2054048
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2054041, 2054044, 2054049, 2054050, 2054051
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2054041, 2054044, 2054049, 2054050, 2054051

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2054041, 2054044, 2054049, 2054050, 2054051
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2054041, 2054044, 2054049, 2054050, 2054051
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2054042, 2054045, 2054052, 2054053, 2054054
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2054067
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2054067
SM 2120 B / E31780	True Color measured at 450 nm	2054040, 2054043, 2054046, 2054047, 2054048
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2054040, 2054043, 2054046, 2054047, 2054048
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2054040, 2054043, 2054046, 2054047, 2054048
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2054040, 2054043, 2054046, 2054047, 2054048
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2054040, 2054043, 2054046, 2054047, 2054048
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2054041, 2054044, 2054049, 2054050, 2054051

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	01/15/2019			01/15/2019 17:10	Megan Treadwell	2054040, 2054043, 2054046, 2054047, 2054048
EPA 300.0 Rev. 2.1	01/15/2019			01/16/2019 16:46	Lipi Saha	2054040
	01/15/2019			01/16/2019 16:58	Lipi Saha	2054043
	01/15/2019			01/16/2019 17:11	Lipi Saha	2054046
	01/15/2019			01/16/2019 17:47	Lipi Saha	2054047
	01/15/2019			01/16/2019 17:59	Lipi Saha	2054048
EPA 350.1 Rev. 2.0	01/15/2019			01/15/2019 14:02	Ping Hua	2054049
	01/15/2019			01/15/2019 14:14	Ping Hua	2054041
	01/15/2019			01/15/2019 14:16	Ping Hua	2054044
	01/15/2019			01/15/2019 14:17	Ping Hua	2054051
	01/15/2019			01/16/2019 13:05	Ping Hua	2054050
EPA 351.2 Rev. 2.0	01/15/2019	01/16/2019 11:15	Adrian Shelby	01/17/2019 13:59	Joseph Suarez	2054041
	01/15/2019	01/16/2019 11:15	Adrian Shelby	01/17/2019 14:04	Joseph Suarez	2054044
	01/15/2019	01/16/2019 11:15	Adrian Shelby	01/17/2019 14:12	Joseph Suarez	2054049
	01/15/2019	01/16/2019 11:15	Adrian Shelby	01/17/2019 14:13	Joseph Suarez	2054050
	01/15/2019	01/16/2019 11:15	Adrian Shelby	01/17/2019 14:15	Joseph Suarez	2054051
EPA 353.2 Rev. 2.0	01/15/2019			01/16/2019 11:27	Beverly Y. Sanders	2054041
	01/15/2019			01/16/2019 11:28	Beverly Y. Sanders	2054044
	01/15/2019			01/16/2019 11:29	Beverly Y. Sanders	2054049
	01/15/2019			01/16/2019 11:30	Beverly Y. Sanders	2054050
	01/15/2019			01/16/2019 11:31	Beverly Y. Sanders	2054051
EPA 365.1 Rev. 2.0	01/15/2019	01/16/2019 12:15	Sima Feizi	01/17/2019 14:31	Rosalyn Ballman	2054044
	01/15/2019	01/16/2019 12:15	Sima Feizi	01/17/2019 14:38	Rosalyn Ballman	2054049
	01/15/2019	01/16/2019 12:15	Sima Feizi	01/17/2019 14:39	Rosalyn Ballman	2054050
	01/15/2019	01/16/2019 12:15	Sima Feizi	01/17/2019 16:30	Rosalyn Ballman	2054051
	01/15/2019	01/16/2019 12:15	Sima Feizi	01/18/2019 14:56	Rosalyn Ballman	2054041
EPA 365.1 Rev. 2.0 dissolved	01/15/2019			01/15/2019 14:38	Jhamieka S. Greenwood	2054042
	01/15/2019			01/15/2019 14:39	Jhamieka S. Greenwood	2054045
	01/15/2019			01/15/2019 14:40	Jhamieka S. Greenwood	2054052
	01/15/2019			01/15/2019 14:41	Jhamieka S. Greenwood	2054053
	01/15/2019			01/15/2019 14:42	Jhamieka S. Greenwood	2054054
EPA 8321B	01/15/2019	01/16/2019 09:30	Rebecca Ware	01/16/2019 11:22	Rebecca Ware	2054067
	01/15/2019	01/16/2019 09:30	Rebecca Ware	01/16/2019 14:20	Rebecca Ware	2054067
	01/15/2019	01/16/2019 09:30	Rebecca Ware	01/22/2019 23:21	Mohammad Ghaffari	2054067
	01/15/2019	01/17/2019 09:00	Hoor Shaik	01/18/2019 00:10	Juyoung Kim	2054067
SM 2120 B	01/15/2019			01/15/2019 15:34	Chelsea Hernandez	2054040
	01/15/2019			01/15/2019 15:35	Chelsea Hernandez	2054043
	01/15/2019			01/15/2019 15:36	Chelsea Hernandez	2054046, 2054047
	01/15/2019			01/15/2019 15:37	Chelsea Hernandez	2054048

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	01/15/2019			01/21/2019 16:25	Dale L. Simmons	2054040
	01/15/2019			01/21/2019 17:33	Dale L. Simmons	2054043
	01/15/2019			01/21/2019 17:47	Dale L. Simmons	2054046
	01/15/2019			01/21/2019 17:58	Dale L. Simmons	2054047
	01/15/2019			01/21/2019 18:11	Dale L. Simmons	2054048
SM 2540 C-97	01/15/2019			01/17/2019 13:55	Yijie Li	2054040, 2054043, 2054046, 2054047, 2054048
SM 2540 D-97	01/15/2019			01/17/2019 13:55	Yijie Li	2054040, 2054043, 2054046, 2054047, 2054048
SM 4500 F-C-97	01/15/2019			01/21/2019 16:15	Dale L. Simmons	2054040
	01/15/2019			01/21/2019 17:33	Dale L. Simmons	2054043
	01/15/2019			01/21/2019 17:47	Dale L. Simmons	2054046
	01/15/2019			01/21/2019 17:58	Dale L. Simmons	2054047
	01/15/2019			01/21/2019 18:11	Dale L. Simmons	2054048
SM 5310 B-00	01/15/2019			01/16/2019 14:29	Megan Treadwell	2054041
	01/15/2019			01/16/2019 14:41	Megan Treadwell	2054044
	01/15/2019			01/16/2019 15:18	Megan Treadwell	2054049
	01/15/2019			01/16/2019 15:32	Megan Treadwell	2054050
	01/15/2019			01/16/2019 15:44	Megan Treadwell	2054051