

Chemical Analysis Report

SE-DIST-2018-11-28-01

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

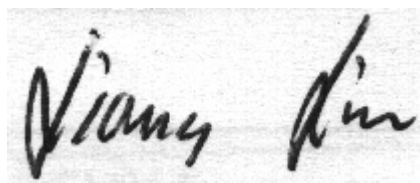
Event Description: **SMP- Loxah**
Request ID: **RQ-2018-11-26-07**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 21-DEC-2018 13:52

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: Metals, 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: NF LOX @ COUNTY LINE

Collection Date/Time: 11/27/2018 13:45

Field ID: G2SE0021

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2043883	EPA 180.1 Rev. 2.0	Turbidity	4.2	A	NTU	P355265	
	SM 2320 B-97	Total Alkalinity	128		mg CaCO3/L	P355707	
	SM 2540 D-97	TSS	8	I	mg/L	P355824	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P355711	
2043885	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P355441	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P355314	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P355479	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P355322	
	SM 5310 B-00	Organic Carbon	4.3		mg C/L	P355426	
2043887	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P355300	

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: NF LOX @ GIRL SCOUT BOAT RAMP

Collection Date/Time: 11/27/2018 14:00

Field ID: G2SE0036

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2043884	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P355266	
	SM 2320 B-97	Total Alkalinity	129		mg CaCO3/L	P355707	
	SM 2540 D-97	TSS	9	I	mg/L	P355824	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P355711	
2043886	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P355441	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P355314	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P355479	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P355322	
	SM 5310 B-00	Organic Carbon	4.3		mg C/L	P355426	
2043888	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P355300	

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: TIDAL CREEK TO LOX

Collection Date/Time: 11/27/2018 14:30

Field ID: G2SE0027

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2043889	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P355266	
	SM 2320 B-97	Total Alkalinity	131		mg CaCO3/L	P355707	
	SM 2540 D-97	TSS	4	I	mg/L	P355824	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P355711	
2043890	EPA 350.1 Rev. 2.0	Ammonia-N	0.044		mg N/L	P355588	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39	I	mg N/L	P355314	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P355479	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P355322	
	SM 5310 B-00	Organic Carbon	3.2		mg C/L	P355426	
2043891	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P355300	
2043928	EPA 8321B	2,4-D	0.0043	I	ug/L	P355221	
		Bentazon	0.011		ug/L	P355221	
		MCP	0.0020	U	ug/L	P355221	
		Triclopyr**	0.0040	U	ug/L	P355221	
		Imidacloprid	0.0021	I	ug/L	P355221	MS
		Diuron	0.0020	U	ug/L	P355221	
		Pyraclostrobin**	0.0020	U	ug/L	P355221	
		Primidone**	0.0040	U	ug/L	P355221	
		Linuron	0.0040	U	ug/L	P355221	
		Acetaminophen**	0.0080	U	ug/L	P355221	
		Fenuron	0.016	U	ug/L	P355221	
		Imazapyr**	0.022		ug/L	P355221	
		Carbamazepine**	8.0E-04	U	ug/L	P355221	
		Fluridone**	0.0016		ug/L	P355221	
		Hydrocodone**	8.0E-04	U	ug/L	P355221	
		Naproxen**	0.0080	U	ug/L	P355221	
		Ibuprofen**	0.020	U	ug/L	P355221	
		Sucralose**	0.034	I	ug/L	P355225	
		Acesulfame K**	0.10	U	ug/L	P355225	

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: C-17 @ 45TH

Collection Date/Time: 11/27/2018 15:00

Field ID: G3SE0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2043892	EPA 180.1 Rev. 2.0	Turbidity	5.4	A	NTU	P355266	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P355687	
		Sulfate	15		mg SO4/L	P355689	
	SM 2120 B	Color (true)	38		PCU	P355252	
	SM 2320 B-97	Total Alkalinity	151		mg CaCO3/L	P355559	
	SM 2540 C-97	TDS	275	A	mg/L	P355725	
	SM 2540 D-97	TSS	7	IA	mg/L	P355819	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P355562	
2043893	EPA 350.1 Rev. 2.0	Ammonia-N	0.054		mg N/L	P355443	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P355310	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P355333	
	EPA 365.1 Rev. 2.0	Total-P	0.060		mg P/L	P355319	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P355424	
2043894	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P355295	
2043931	EPA 200.7 Rev. 4.4	Calcium	66.6		mg/L	P355304	
		Iron	330		ug/L	P355304	
		Magnesium	5.00		mg/L	P355304	
		Potassium	3.8		mg/L	P355304	
		Sodium	31.3		mg/L	P355304	
		Zinc	5.0	U	ug/L	P355304	
	EPA 200.8 Rev. 5.4	Arsenic	2.33		ug/L	P355304	
		Cadmium	0.020	U	ug/L	P355304	
		Chromium	0.65	I	ug/L	P355304	
		Copper	1.85		ug/L	P355304	
		Lead	0.54		ug/L	P355304	
		Nickel	0.41	I	ug/L	P355304	
		Silver	0.010	U	ug/L	P355304	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: ROEBUCK CREEK @ LOCKS RD

Collection Date/Time: 11/27/2018 11:00

Field ID: G2SE0029

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2043877	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P355265	
	SM 2320 B-97	Total Alkalinity	252		mg CaCO3/L	P355945	
	SM 2540 D-97	TSS	3	I	mg/L	P355822	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P355948	
2043879	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P355443	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P355310	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.085		mg N/L	P355333	
	EPA 365.1 Rev. 2.0	Total-P	0.41		mg P/L	P355319	
	SM 5310 B-00	Organic Carbon	7.1		mg C/L	P355424	
2043881	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.30		mg P/L	P355295	
2043926	EPA 8321B	2,4-D	0.0020	U	ug/L	P355221	
		Bentazon	0.042		ug/L	P355221	
		MCP	0.0020	U	ug/L	P355221	
		Triclopyr**	0.0040	U	ug/L	P355221	
		Imidacloprid	0.0020	U	ug/L	P355221	MS
		Diuron	0.0020	U	ug/L	P355221	
		Pyraclostrobin**	0.0020	U	ug/L	P355221	
		Primidone**	0.0040	U	ug/L	P355221	
		Linuron	0.0040	U	ug/L	P355221	
		Acetaminophen**	0.0080	U	ug/L	P355221	
		Fenuron	0.016	U	ug/L	P355221	
		Imazapyr**	0.14		ug/L	P355221	
		Carbamazepine**	8.0E-04	U	ug/L	P355221	
		Fluridone**	7.7E-04	I	ug/L	P355221	
		Hydrocodone**	8.0E-04	U	ug/L	P355221	
		Naproxen**	0.0080	U	ug/L	P355221	
		Ibuprofen**	0.020	U	ug/L	P355221	
		Sucralose**	1.1		ug/L	P355225	
		Acesulfame K**	1.3		ug/L	P355225	
2043929	EPA 200.7 Rev. 4.4	Iron	380		ug/L	P355304	
		Zinc	5.0	U	ug/L	P355304	
	EPA 200.8 Rev. 5.4	Arsenic	0.76		ug/L	P355304	
		Cadmium	0.020	U	ug/L	P355304	
		Chromium	0.40	U	ug/L	P355304	
		Copper	0.20	U	ug/L	P355304	
		Lead	0.050	U	ug/L	P355304	
		Nickel	0.20	I	ug/L	P355304	
		Silver	0.010	U	ug/L	P355304	

Ref. Method and Comment:

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

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: ROEBUCK CREEK @ MOUTH

Collection Date/Time: 11/27/2018 11:20

Field ID: G2SE0005

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2043878	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P355265	
	SM 2320 B-97	Total Alkalinity	167		mg CaCO3/L	P355707	
	SM 2540 D-97	TSS	5	IA	mg/L	P355824	
	SM 4500 F-C-97	Fluoride	0.48		mg F/L	P355711	
2043880	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P355441	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P355314	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P355479	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P355322	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P355426	
2043882	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P355300	
2043927	EPA 8321B	2,4-D	0.0093		ug/L	P355221	
		Bentazon	0.012		ug/L	P355221	
		MCP	0.0020	U	ug/L	P355221	
		Triclopyr**	0.0040	U	ug/L	P355221	
		Imidacloprid	0.0040	I	ug/L	P355221	MS
		Diuron	0.0044	I	ug/L	P355221	
		Pyraclostrobin**	0.0020	U	ug/L	P355221	
		Primidone**	0.0040	U	ug/L	P355221	
		Linuron	0.0040	U	ug/L	P355221	
		Acetaminophen**	0.0080	U	ug/L	P355221	
		Fenuron	0.016	U	ug/L	P355221	
		Imazapyr**	0.062		ug/L	P355221	
		Carbamazepine**	8.0E-04	U	ug/L	P355221	
		Fluridone**	0.0056		ug/L	P355221	
		Hydrocodone**	8.0E-04	U	ug/L	P355221	
		Naproxen**	0.0080	U	ug/L	P355221	
		Ibuprofen**	0.020	U	ug/L	P355221	
		Sucralose**	0.13		ug/L	P355225	
		Acesulfame K**	0.10	U	ug/L	P355225	
2043930	EPA 200.7 Rev. 4.4	Iron	140		ug/L	P355538	
		Zinc	5.0	U	ug/L	P355538	
	EPA 200.8 Rev. 5.4	Arsenic	2.27		ug/L	P355538	
		Cadmium	0.060	U	ug/L	P355538	
		Chromium	1.2	U	ug/L	P355538	
		Copper	3.2		ug/L	P355538	
		Lead	0.15	U	ug/L	P355538	
		Nickel	0.60	U	ug/L	P355538	
		Silver	0.030	U	ug/L	P355538	

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: P355265

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355266

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355304

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355538

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355304

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355538

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355687

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355689

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355441

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355443

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355588

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355310

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355314

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355333

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355479

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355319

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355322

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355295

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355300

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

Reference Method: EPA 8321B
Batch ID: P355221

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
MCP	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: P355225

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B
Batch ID: P355252

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P355559

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

Reference Method: SM 2320 B-97
Batch ID: P355707

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

Reference Method: SM 2320 B-97
Batch ID: P355945

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

Reference Method: SM 2540 C-97
Batch ID: P355725

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P355819

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P355822

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P355824

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P355562

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P355711

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P355948

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P355424

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

Reference Method: SM 5310 B-00
Batch ID: P355426

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355304

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	102		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	95.6		P	85 - 115
Sodium	101		P	85 - 115
Zinc	95.7		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	109		P	85 - 115
Zinc	96.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355304

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	108		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	103		P	85 - 115
Copper	106		P	85 - 115
Lead	99.9		P	85 - 115
Nickel	105		P	85 - 115
Silver	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	105		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	101		P	85 - 115
Copper	102		P	85 - 115
Lead	106		P	85 - 115
Nickel	103		P	85 - 115
Silver	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355687

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355689

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355441

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355443

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355588

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: P355310

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355314

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355333

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355479

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: P355319

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355322

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355295

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355300

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

Reference Method: EPA 8321B
Batch ID: P355221

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.0		P	40 - 150
Acetaminophen	105		P	30 - 150
Bentazon	113		P	30 - 150
Carbamazepine	92.0		P	40 - 150
Diuron	74.8		P	40 - 150
Fenuron	95.9		P	40 - 150
Fluridone	102		P	40 - 150
Hydrocodone	91.1		P	40 - 150
Ibuprofen	72.7		P	40 - 150
Imazapyr	105		P	40 - 150
Imidacloprid	101		P	40 - 160
Linuron	71.7		P	40 - 150
MCPP	111		P	40 - 150
Naproxen	88.0		P	40 - 150
Primidone	95.6		P	40 - 150
Pyraclostrobin	56.6		P	40 - 150
Triclopyr	69.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355225

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 150
Sucralose	114		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P355252

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

Reference Method: SM 2320 B-97
Batch ID: P355559

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P355707

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

Reference Method: SM 2320 B-97
Batch ID: P355945

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.2		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P355562

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

Reference Method: SM 4500 F-C-97
Batch ID: P355711

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

Reference Method: SM 4500 F-C-97
Batch ID: P355948

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P355424

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P355426

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355304

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043856	Calcium	108		P	80 - 120
2043856	Iron	107		P	80 - 120
2043856	Magnesium	104		P	80 - 120
2043856	Potassium	101		P	80 - 120
2043856	Sodium	105		P	80 - 120
2043856	Zinc	94.6		P	80 - 120
2043929	Iron	109	95.7	P/P	80 - 120
2043929	Magnesium	109	94.4	P/P	80 - 120
2043929	Potassium	99.7	92.4	P/P	80 - 120
2043929	Sodium	102		P	80 - 120
2043929	Zinc	101	88.4	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044355	Iron	103	103	P/P	70 - 130
2044355	Zinc	90.0	92.2	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355304

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043856	Arsenic	106		P	80 - 120
2043856	Cadmium	109		P	80 - 120
2043856	Chromium	102		P	80 - 120
2043856	Copper	98.8		P	80 - 120
2043856	Lead	101		P	80 - 120
2043856	Nickel	101		P	80 - 120
2043856	Silver	107		P	80 - 120
2043929	Arsenic	110	109	P/P	80 - 120
2043929	Cadmium	112	107	P/P	80 - 120
2043929	Chromium	104	104	P/P	80 - 120
2043929	Copper	102	102	P/P	80 - 120
2043929	Lead	103	104	P/P	80 - 120
2043929	Nickel	102	102	P/P	80 - 120
2043929	Silver	106	107	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044355	Arsenic	115	116	P/P	80 - 120
2044355	Cadmium	101	103	P/P	80 - 120
2044355	Chromium	92.0	90.8	P/P	80 - 120
2044355	Copper	102	103	P/P	80 - 120
2044355	Lead	106	107	P/P	80 - 120
2044355	Nickel	106	106	P/P	80 - 120
2044355	Silver	96.2	99.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043940	Chloride	99.6		P	90 - 110
2043947	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043940	Sulfate	100		P	90 - 110
2043947	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043738	Ammonia-N	102	96.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043879	Ammonia-N	99.4	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043890	Ammonia-N	105	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043879	Kjeldahl Nitrogen	98.8	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043890	Kjeldahl Nitrogen	98.9	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043879	NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043880	NO2NO3-N	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043943	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355322

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044093	Total-P	96.0	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043916	O-Phosphate-P	97.3	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043891	O-Phosphate-P	96.5	98.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P355221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043959	2,4-D	92.1	104	P/P	40 - 150
2043959	Acetaminophen	115	114	P/P	30 - 150
2043959	Bentazon	73.3	75.9	P/P	30 - 150
2043959	Carbamazepine	82.0	86.1	P/P	40 - 150
2043959	Diuron	61.3	65.9	P/P	40 - 150
2043959	Fenuron	98.7	104	P/P	40 - 150
2043959	Fluridone	109	119	P/P	40 - 150
2043959	Hydrocodone	65.4	79.8	P/P	40 - 150
2043959	Ibuprofen	67.7	71.1	P/P	40 - 150
2043959	Imazapyr	99.9	103	P/P	40 - 150
2043959	Imidacloprid	168	180	F/F	40 - 160
2043959	Linuron	67.5	73.0	P/P	40 - 150
2043959	MCPP	110	128	P/P	40 - 150
2043959	Naproxen	68.0	69.0	P/P	40 - 150
2043959	Primidone	94.1	101	P/P	40 - 150
2043959	Pyraclostrobin	61.4	69.3	P/P	40 - 150
2043959	Triclopyr	51.7	68.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P355225

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043566	Acesulfame K	99.8	100	P/P	40 - 150
2043566	Sucralose	114	113	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P355562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2044762	Fluoride	98.3	99.0	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P355711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043746	Fluoride	99.0	99.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P355424

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043814	Organic Carbon	97.0		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P355426

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2043880	Organic Carbon	93.7	95.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355265

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043883	Turbidity	3.30	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P355266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043892	Turbidity	3.12	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355304

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043929	Calcium	0.459	Spike	P	0 - 20
2043929	Iron	11.7	Spike	P	0 - 20
2043929	Magnesium	7.50	Spike	P	0 - 20
2043929	Potassium	5.51	Spike	P	0 - 20
2043929	Sodium	2.77	Spike	P	0 - 20
2043929	Zinc	13.5	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P355538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044355	Iron	0.389	Spike	P	0 - 20
2044355	Zinc	2.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355304

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043929	Arsenic	1.30	Spike	P	0 - 20
2043929	Cadmium	5.13	Spike	P	0 - 20
2043929	Chromium	0.223	Spike	P	0 - 20
2043929	Copper	0.365	Spike	P	0 - 20
2043929	Lead	0.601	Spike	P	0 - 20
2043929	Nickel	0.318	Spike	P	0 - 20
2043929	Silver	0.959	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044355	Arsenic	0.855	Spike	P	0 - 20
2044355	Cadmium	2.36	Spike	P	0 - 20
2044355	Chromium	1.30	Spike	P	0 - 20
2044355	Copper	0.545	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P355538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044355	Lead	0.638	Spike	P	0 - 20
2044355	Nickel	0.191	Spike	P	0 - 20
2044355	Silver	3.53	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043940	Chloride	0.353	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043940	Sulfate	0.131	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043738	Ammonia-N	3.53	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043879	Ammonia-N	0.933	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P355588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043890	Ammonia-N	1.04	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043879	Kjeldahl Nitrogen	0.804	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P355314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043890	Kjeldahl Nitrogen	2.30	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043879	NO2NO3-N	0.349	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P355479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043880	NO2NO3-N	0.944	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043943	Total-P	1.83	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P355322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044093	Total-P	4.88	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043916	O-Phosphate-P	1.73	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P355300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043891	O-Phosphate-P	1.81	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P355221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043959	2,4-D	10.7	Spike	P	0 - 30
2043959	Acetaminophen	0.693	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P355221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043959	Bentazon	3.50	Spike	P	0 - 30
2043959	Carbamazepine	4.83	Spike	P	0 - 30
2043959	Diuron	7.10	Spike	P	0 - 30
2043959	Fenuron	5.25	Spike	P	0 - 30
2043959	Fluridone	8.56	Spike	P	0 - 30
2043959	Hydrocodone	19.8	Spike	P	0 - 30
2043959	Ibuprofen	4.94	Spike	P	0 - 30
2043959	Imazapyr	2.92	Spike	P	0 - 30
2043959	Imidacloprid	6.95	Spike	P	0 - 30
2043959	Linuron	7.89	Spike	P	0 - 30
2043959	MCPP	14.8	Spike	P	0 - 30
2043959	Naproxen	1.41	Spike	P	0 - 30
2043959	Primidone	6.64	Spike	P	0 - 30
2043959	Pyraclostrobin	12.1	Spike	P	0 - 30
2043959	Triclopyr	28.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P355225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043566	Acesulfame K	0.180	Spike	P	0 - 30
2043566	Sucralose	1.25	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P355252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043941	Color (true)	0.463	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P355559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044762	Total Alkalinity	0.394	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P355707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043746	Total Alkalinity	0.211	Sample	P	0 - 1.6

Reference Method: SM 2320 B-97
Batch ID: P355945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2046779	Total Alkalinity	0.129	Sample	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P355725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043892	TDS	2.18	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P355562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2044762	Fluoride	0.470	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P355711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043746	Fluoride	0.470	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
 Batch ID: P355948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2046779	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P355424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043814	Organic Carbon	0.771	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P355426

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2043880	Organic Carbon	1.12	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: 2043926
Field Sample ID: G2SE0029

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	136	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.2	P	30 - 160
EPA 8321B	Diuron-d6	74.5	P	30 - 160
EPA 8321B	Endothall-d6	97.3	P	40 - 160
EPA 8321B	Ibuprofen-d3	78.7	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	127	P	40 - 160

Lab Sample ID: 2043927
Field Sample ID: G2SE0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.6	P	30 - 160
EPA 8321B	Diuron-d6	75.8	P	30 - 160
EPA 8321B	Endothall-d6	71.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	75.8	P	30 - 160
EPA 8321B	Primidone-d5	87.8	P	30 - 160
EPA 8321B	Sucralose-d6	97.9	P	40 - 160

Lab Sample ID: 2043928
Field Sample ID: G2SE0027

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	128	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.2	P	30 - 160
EPA 8321B	Diuron-d6	80.3	P	30 - 160
EPA 8321B	Endothall-d6	86.2	P	40 - 160
EPA 8321B	Ibuprofen-d3	78.4	P	30 - 160
EPA 8321B	Primidone-d5	91.6	P	30 - 160
EPA 8321B	Sucralose-d6	59.4	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A88016
Included Lab Sample IDs: 2043892

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A88018
Included Lab Sample IDs: 2043877, 2043878, 2043883, 2043884, 2043889, 2043892

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A88035
Included Lab Sample IDs: 2043881, 2043882, 2043887, 2043888, 2043891, 2043894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	99.6	98.2	P/P	90 - 110
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A88043
Included Lab Sample IDs: 2043879, 2043893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A88056
Included Lab Sample IDs: 2043880, 2043885, 2043886, 2043890

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A88062
Included Lab Sample IDs: 2043879, 2043893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	99.9	P/P	90 - 110
Kjeldahl Nitrogen	99.9	100	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A88068
Included Lab Sample IDs: 2043879, 2043880, 2043885, 2043886, 2043890, 2043893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.8	93.8	P/P	90 - 110
Organic Carbon	95.0	94.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88077

Included Lab Sample IDs: 2043879, 2043880, 2043885, 2043886, 2043893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	102	P/P	90 - 110
Ammonia-N	101	100	P/P	90 - 110
Ammonia-N	101	98.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A88078

Included Lab Sample IDs: 2043926, 2043927, 2043928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.2	100	P/P	50 - 150
2,4-D	100	98.8	P/P	50 - 150
Acetaminophen	106	130	P/P	60 - 160
Acetaminophen	91.0	106	P/P	60 - 160
Bentazon	121	133	P/P	50 - 160
Bentazon	131	121	P/P	50 - 160
Carbamazepine	109	110	P/P	60 - 160
Carbamazepine	110	103	P/P	60 - 160
Diuron	104	99.4	P/P	60 - 150
Diuron	99.4	107	P/P	60 - 150
Fenuron	101	97.1	P/P	60 - 150
Fenuron	102	101	P/P	60 - 150
Fluridone	108	107	P/P	60 - 160
Fluridone	108	108	P/P	60 - 160
Hydrocodone	93.2	99.9	P/P	60 - 150
Hydrocodone	99.9	94.8	P/P	60 - 150
Ibuprofen	80.9	95.6	P/P	50 - 160
Ibuprofen	95.6	76.3	P/P	50 - 160
Imazapyr	101	102	P/P	50 - 150
Imazapyr	102	115	P/P	50 - 150
Imidacloprid	94.8	99.7	P/P	60 - 160
Imidacloprid	99.7	96.8	P/P	60 - 160
Linuron	101	96.8	P/P	60 - 150
Linuron	96.8	102	P/P	60 - 150
MCPP	95.9	96.8	P/P	50 - 150
MCPP	96.8	94.2	P/P	50 - 150
Naproxen	118	94.6	P/P	50 - 160
Naproxen	94.6	80.6	P/P	50 - 160
Primidone	103	93.7	P/P	60 - 160
Primidone	93.7	98.4	P/P	60 - 160
Pyraclostrobin	101	98.9	P/P	60 - 150
Pyraclostrobin	98.9	97.9	P/P	60 - 150
Triclopyr	102	83.9	P/P	50 - 160
Triclopyr	105	102	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A88079

Included Lab Sample IDs: 2043926, 2043927, 2043928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	71.2	63.2	P/P	60 - 160
Acesulfame K	90.8	71.2	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A88081

Included Lab Sample IDs: 2043926, 2043927, 2043928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	116	123	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88087

Included Lab Sample IDs: 2043879, 2043880, 2043893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	105	P/P	90 - 110
Total-P	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A88100

Included Lab Sample IDs: 2043880, 2043885, 2043886, 2043890

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A88113

Included Lab Sample IDs: 2043892

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A88117

Included Lab Sample IDs: 2043885, 2043886, 2043890

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A88123

Included Lab Sample IDs: 2043929, 2043931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	107	107	P/P	90 - 110
Iron	107	107	P/P	90 - 110
Magnesium	106	106	P/P	90 - 110
Potassium	100	101	P/P	90 - 110
Sodium	104	104	P/P	90 - 110
Zinc	104	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A88134

Included Lab Sample IDs: 2043892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A88134

Included Lab Sample IDs: 2043892

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A88149

Included Lab Sample IDs: 2043890

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A88178

Included Lab Sample IDs: 2043930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	103	102	P/P	90 - 110
Zinc	98.8	97.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A88191

Included Lab Sample IDs: 2043878, 2043883, 2043884, 2043889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.9	P/P	90 - 110
Total Alkalinity	98.2	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A88191

Included Lab Sample IDs: 2043878, 2043883, 2043884, 2043889

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A88217

Included Lab Sample IDs: 2043929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	100	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Chromium	102	103	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Lead	101	101	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Silver	103	103	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A88275

Included Lab Sample IDs: 2043877

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

Reference Method: SM 2320 B-97
Run ID: A88275
Included Lab Sample IDs: 2043877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.1	97.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A88275
Included Lab Sample IDs: 2043877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	98.1	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A88345
Included Lab Sample IDs: 2043930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	104	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Chromium	100	100	P/P	90 - 110
Copper	103	104	P/P	90 - 110
Lead	105	105	P/P	90 - 110
Nickel	104	105	P/P	90 - 110
Silver	102	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A88421
Included Lab Sample IDs: 2043931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	106	104	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Chromium	103	104	P/P	90 - 110
Copper	107	106	P/P	90 - 110
Lead	106	108	P/P	90 - 110
Nickel	107	105	P/P	90 - 110
Silver	103	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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					3.30	
	Turbidity					3.12	
EPA 200.7 Rev. 4.4	Calcium	106		108			0.459
	Iron	102		107	109	95.7	11.7
	Iron	109		103	103		0.389
	Magnesium	104		104	109	94.4	7.50
	Potassium	95.6		101	99.7	92.4	5.51
	Sodium	101		105	102		2.77
	Zinc	95.7		94.6	101	88.4	13.5
	Zinc	96.1		90.0	92.2		2.47
EPA 200.8 Rev. 5.4	Arsenic	108		106	110	109	1.30
	Arsenic	105		115	116		0.855
	Cadmium	104		109	112	107	5.13
	Cadmium	103		101	103		2.36
	Chromium	103		102	104	104	0.223
	Chromium	101		92.0	90.8		1.30
	Copper	106		98.8	102	102	0.365
	Copper	102		102	103		0.545
	Lead	99.9		101	103	104	0.601
	Lead	106		106	107		0.638
	Nickel	105		101	102	102	0.318
	Nickel	103		106	106		0.191
	Silver	105		107	106	107	0.959
	Silver	104		96.2	99.6		3.53
EPA 300.0 Rev. 2.1	Chloride	101		99.6	99.1		0.353
	Sulfate	99.9		100	100		0.131
EPA 350.1 Rev. 2.0	Ammonia-N	94.8		102	96.9		3.53
	Ammonia-N	97.6		99.4	101		0.933
	Ammonia-N	96.9		105	103		1.04
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		98.8	97.7		0.804
	Kjeldahl Nitrogen	106		98.9	102		2.30
EPA 353.2 Rev. 2.0	NO2NO3-N	101		100	101		0.349
	NO2NO3-N	100		101	102		0.944
EPA 365.1 Rev. 2.0	Total-P	102		104	102		1.83
	Total-P	103		96.0	101		4.88
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		97.3	99.0		1.73
	O-Phosphate-P	99.3		96.5	98.5		1.81
EPA 8321B	2,4-D	95.0		92.1	104		10.7
	Acesulfame K	102		99.8	100		0.180
	Acetaminophen	105		115	114		0.693
	Bentazon	113		73.3	75.9		3.50
	Carbamazepine	92.0		82.0	86.1		4.83
	Diuron	74.8		61.3	65.9		7.10
	Fenuron	95.9		98.7	104		5.25
	Fluridone	102		109	119		8.56
	Hydrocodone	91.1		65.4	79.8		19.8
	Ibuprofen	72.7		67.7	71.1		4.94
	Imazapyr	105		99.9	103		2.92
	Imidacloprid	101		168	180		6.95
	Linuron	71.7		67.5	73.0		7.89
	MCPD	111		110	128		14.8
	Naproxen	88.0		68.0	69.0		1.41
	Primidone	95.6		94.1	101		6.64
	Pyraclostrobin	56.6		61.4	69.3		12.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Sucralose	114	114	113		1.25
	Triclopyr	69.9	51.7	68.6		28.1
SM 2120 B	Color (true)	101			0.463	
SM 2320 B-97	Total Alkalinity	101			0.394	
	Total Alkalinity	100			0.211	
	Total Alkalinity	99.2			0.129	
SM 2540 C-97	TDS				2.18	
SM 4500 F-C-97	Fluoride	97.2	98.3	99.0		0.470
	Fluoride	97.4	99.0	99.7		0.470
	Fluoride	97.0				0.0
SM 5310 B-00	Organic Carbon	94.4	97.0			0.771
	Organic Carbon	94.4	93.7	95.1		1.12

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2043877, 2043878, 2043883, 2043884, 2043889, 2043892
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2043929, 2043930, 2043931
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2043929, 2043930, 2043931
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2043892
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2043892
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2043879, 2043880, 2043885, 2043886, 2043890, 2043893
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2043879, 2043880, 2043885, 2043886, 2043890, 2043893
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2043879, 2043880, 2043885, 2043886, 2043890, 2043893
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2043879, 2043880, 2043885, 2043886, 2043890, 2043893
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2043881, 2043882, 2043887, 2043888, 2043891, 2043894
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2043926, 2043927, 2043928
SM 2120 B / E31780	True Color measured at 450 nm	2043892
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2043877, 2043878, 2043883, 2043884, 2043889, 2043892
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2043892
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2043877, 2043878, 2043883, 2043884, 2043889, 2043892
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2043877, 2043878, 2043883, 2043884, 2043889, 2043892
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2043879, 2043880, 2043885, 2043886, 2043890, 2043893

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	11/28/2018			11/28/2018 15:24	Megan Treadwell	2043877, 2043878, 2043883, 2043884, 2043889, 2043892
EPA 200.7 Rev. 4.4	11/28/2018	11/29/2018 13:35	Elliott D. Healy	12/04/2018 13:14	Betina Topolski	2043929
	11/28/2018	11/29/2018 13:35	Elliott D. Healy	12/04/2018 13:28	Betina Topolski	2043931
	11/28/2018	12/04/2018 15:00	Elliott D. Healy	12/05/2018 19:17	Betina Topolski	2043930
EPA 200.8 Rev. 5.4	11/28/2018	11/29/2018 13:35	Elliott D. Healy	12/07/2018 01:08	Robert K Palmer	2043929
	11/28/2018	11/29/2018 13:35	Elliott D. Healy	12/18/2018 23:34	Allison Taylor	2043931
	11/28/2018	12/04/2018 15:00	Elliott D. Healy	12/13/2018 01:23	Allison Taylor	2043930
EPA 300.0 Rev. 2.1	11/28/2018			12/04/2018 16:33	Lipi Saha	2043892
EPA 350.1 Rev. 2.0	11/28/2018			11/30/2018 11:18	Ping Hua	2043880
	11/28/2018			11/30/2018 11:19	Ping Hua	2043885
	11/28/2018			11/30/2018 11:21	Ping Hua	2043886
	11/28/2018			11/30/2018 11:58	Ping Hua	2043879
	11/28/2018			11/30/2018 12:12	Ping Hua	2043893
	11/28/2018			12/04/2018 11:24	Ping Hua	2043890
EPA 351.2 Rev. 2.0	11/28/2018	11/29/2018 13:00	Adrian Shelby	11/30/2018 10:42	Joseph Suarez	2043880
	11/28/2018	11/29/2018 13:00	Adrian Shelby	11/30/2018 10:44	Joseph Suarez	2043885
	11/28/2018	11/29/2018 13:00	Adrian Shelby	11/30/2018 10:45	Joseph Suarez	2043886
	11/28/2018	11/29/2018 13:00	Adrian Shelby	11/30/2018 10:47	Joseph Suarez	2043890
	11/28/2018	11/29/2018 13:00	Adrian Shelby	11/30/2018 14:17	Joseph Suarez	2043879
	11/28/2018	11/29/2018 13:00	Adrian Shelby	11/30/2018 14:25	Joseph Suarez	2043893
EPA 353.2 Rev. 2.0	11/28/2018			11/29/2018 13:36	Lauren Bottorf	2043879
	11/28/2018			11/29/2018 13:37	Lauren Bottorf	2043893
	11/28/2018			12/03/2018 11:12	Lauren Bottorf	2043880
	11/28/2018			12/03/2018 11:18	Lauren Bottorf	2043885
	11/28/2018			12/03/2018 11:19	Lauren Bottorf	2043886
	11/28/2018			12/03/2018 11:20	Lauren Bottorf	2043890
EPA 365.1 Rev. 2.0	11/28/2018	11/29/2018 11:45	Sima Feizi	12/03/2018 09:32	Beverly Y. Sanders	2043879
	11/28/2018	11/29/2018 11:45	Sima Feizi	12/03/2018 09:34	Beverly Y. Sanders	2043893
	11/28/2018	11/29/2018 11:45	Sima Feizi	12/03/2018 10:20	Beverly Y. Sanders	2043880
	11/28/2018	11/29/2018 11:45	Sima Feizi	12/03/2018 13:58	Beverly Y. Sanders	2043885
	11/28/2018	11/29/2018 11:45	Sima Feizi	12/03/2018 13:59	Beverly Y. Sanders	2043886
	11/28/2018	11/29/2018 11:45	Sima Feizi	12/03/2018 14:06	Beverly Y. Sanders	2043890
EPA 365.1 Rev. 2.0 dissolved	11/28/2018			11/28/2018 17:03	Jhamieka S. Greenwood	2043891
	11/28/2018			11/28/2018 17:06	Jhamieka S. Greenwood	2043894
	11/28/2018			11/28/2018 17:18	Jhamieka S. Greenwood	2043888
	11/28/2018			11/28/2018 17:19	Jhamieka S. Greenwood	2043887
	11/28/2018			11/28/2018 17:20	Jhamieka S. Greenwood	2043882
	11/28/2018			11/28/2018 18:05	Jhamieka S. Greenwood	2043881
EPA 8321B	11/28/2018	11/29/2018 10:00	Hoor Shaik	12/01/2018 17:14	Juyoung Kim	2043926

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	11/28/2018	11/29/2018 10:00	Hoor Shaik	12/01/2018 17:49	Juyoung Kim	2043927
	11/28/2018	11/29/2018 10:00	Hoor Shaik	12/01/2018 18:58	Juyoung Kim	2043928
	11/28/2018	11/29/2018 11:00	Rebecca Ware	11/29/2018 17:33	Rebecca Ware	2043926
	11/28/2018	11/29/2018 11:00	Rebecca Ware	11/29/2018 18:01	Rebecca Ware	2043927
	11/28/2018	11/29/2018 11:00	Rebecca Ware	11/29/2018 18:14	Rebecca Ware	2043928
	11/28/2018	11/29/2018 11:00	Rebecca Ware	11/30/2018 14:33	Rebecca Ware	2043926
	11/28/2018	11/29/2018 11:00	Rebecca Ware	11/30/2018 14:47	Rebecca Ware	2043927
	11/28/2018	11/29/2018 11:00	Rebecca Ware	11/30/2018 15:01	Rebecca Ware	2043928
	11/28/2018			11/28/2018 14:10	Chelsea Hernandez	2043892
SM 2120 B	11/28/2018			12/04/2018 02:58	Dale L. Simmons	2043892
SM 2320 B-97	11/28/2018			12/05/2018 09:49	Dale L. Simmons	2043878
	11/28/2018			12/05/2018 12:35	Dale L. Simmons	2043883
	11/28/2018			12/05/2018 12:47	Dale L. Simmons	2043884
	11/28/2018			12/05/2018 12:58	Dale L. Simmons	2043889
	11/28/2018			12/10/2018 17:33	Lauren Bottorf	2043877
SM 2540 C-97	11/28/2018			11/30/2018 16:02	Yijie Li	2043892
SM 2540 D-97	11/28/2018			11/30/2018 16:02	Yijie Li	2043877, 2043878, 2043883, 2043884, 2043889, 2043892
SM 4500 F-C-97	11/28/2018			12/04/2018 02:58	Dale L. Simmons	2043892
	11/28/2018			12/05/2018 06:48	Dale L. Simmons	2043878
	11/28/2018			12/05/2018 08:13	Dale L. Simmons	2043883
	11/28/2018			12/05/2018 08:17	Dale L. Simmons	2043884
	11/28/2018			12/05/2018 08:20	Dale L. Simmons	2043889
	11/28/2018			12/10/2018 17:33	Lauren Bottorf	2043877
SM 5310 B-00	11/28/2018			11/30/2018 06:40	Megan Treadwell	2043879
	11/28/2018			11/30/2018 06:53	Megan Treadwell	2043893
	11/28/2018			11/30/2018 12:19	Megan Treadwell	2043880
	11/28/2018			11/30/2018 13:00	Megan Treadwell	2043885
	11/28/2018			11/30/2018 13:13	Megan Treadwell	2043886
	11/28/2018			11/30/2018 13:39	Megan Treadwell	2043890