

Chemical Analysis Report

SO-DIST-2019-09-05-01

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

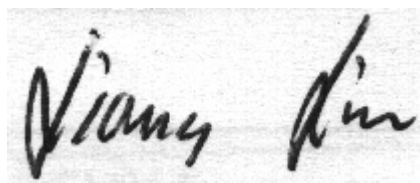
Event Description: **2019 SMP : Myakka Streams + Phillippe**
Request ID: **RQ-2019-09-02-72**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
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Fort Myers, FL 33901-3381
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 30-SEP-2019 15:47

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 by the Florida Department of Health Environmental Laboratory Certification Program 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: Myakka(Tidal) @US41

Collection Date/Time: 09/04/2019 09:50

Field ID: G3SD0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116592	EPA 8321B	2,4-D	0.073		ug/L	P370131	
		Acesulfame K**	0.10	U	ug/L	P370242	
		AMPA**	0.60		ug/L	P370242	
		Sucralose**	0.044		ug/L	P370242	
		Acetaminophen**	0.0080	U	ug/L	P370131	
		Endothall**	0.25	U	ug/L	P370242	
		Acetamiprid**	0.0020	U	ug/L	P370131	
		Glufosinate**	0.10	U	ug/L	P370242	
		Glyphosate**	0.52		ug/L	P370242	
		Afidopyropen**	0.0020	UJ	ug/L	P370131	
		Bentazon	0.0042		ug/L	P370131	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370131	
		Carbamazepine**	8.0E-04	U	ug/L	P370131	
		Clothianidin**	0.0020	U	ug/L	P370131	
		Dinotefuran**	0.0056	I	ug/L	P370131	
		Diuron	0.0047	I	ug/L	P370131	
		Fenuron	0.016	U	ug/L	P370131	
		Fluridone**	0.0018	I	ug/L	P370131	
		Imazapyr**	0.047		ug/L	P370131	
		Hydrocodone**	0.0020	U	ug/L	P370131	
		Ibuprofen**	0.020	U	ug/L	P370131	
		Imidacloprid	0.020		ug/L	P370131	MS
		Linuron	0.0040	U	ug/L	P370131	
		Mandestrobin**	0.0020	UJ	ug/L	P370131	
		MCPP	0.0020	UJ	ug/L	P370131	LCS, MS
		Naproxen**	0.0080	U	ug/L	P370131	RPD
		Primidone**	0.0040	U	ug/L	P370131	
		Pyraclostrobin**	0.0020	U	ug/L	P370131	
		Thiamethoxam**	0.0054	I	ug/L	P370131	
		Tolfenpyrad**	0.0020	U	ug/L	P370131	
		Triclopyr**	0.0040	U	ug/L	P370131	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for 2,4-D and imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

Sample Location: RockCreek@EisenhowerDr

Collection Date/Time: 09/04/2019 10:20

Field ID: G3SD0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116560	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P370230	
	EPA 300.0	Bromide	1.4		mg Br/L	P370340	
	SM 2320 B-97	Total Alkalinity	88		mg CaCO3/L	P370392	
	SM 2540 D-97	TSS	3	I	mg/L	P370358	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P370395	
2116561	EPA 350.1 Rev. 2.0	Ammonia-N	0.065		mg N/L	P370448	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P370460	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.089		mg N/L	P370267	
	EPA 365.1 Rev. 2.0	Total-P	0.38		mg P/L	P370418	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P370305	
2116562	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.31		mg P/L	P370271	
2116593	EPA 200.7 Rev. 4.4	Iron	800		ug/L	P370341	
		Manganese	17.5		ug/L	P370341	
		Zinc	5.0	U	ug/L	P370341	
	EPA 200.8 Rev. 5.4	Aluminum	103		ug/L	P370341	
		Antimony	0.10	I	ug/L	P370341	
		Arsenic	1.93		ug/L	P370341	
		Boron**	112		ug/L	P370341	
		Cadmium	0.020	U	ug/L	P370341	
		Chromium	0.69	I	ug/L	P370341	
		Copper	0.67	I	ug/L	P370341	
		Lead	0.20	U	ug/L	P370341	
		Nickel	0.50	U	ug/L	P370341	
		Selenium	0.28	I	ug/L	P370341	
		Silver	0.010	U	ug/L	P370341	
		Thallium	0.10	U	ug/L	P370341	

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: Apollo Waterway @ Bend

Collection Date/Time: 09/04/2019 10:45

Field ID: G3SD0069

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116563	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P370230	
	EPA 300.0	Bromide	3.0		mg Br/L	P370340	
	SM 2320 B-97	Total Alkalinity	89		mg CaCO3/L	P370392	
	SM 2540 D-97	TSS	6	I	mg/L	P370358	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P370395	
2116564	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P370448	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P370366	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P370268	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P370418	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P370305	
2116565	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.31		mg P/L	P370271	

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: LittleAlligator@Midway

Collection Date/Time: 09/04/2019 11:50

Field ID: G3SD0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116566	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P370232	
	EPA 300.0	Bromide	16		mg Br/L	P370340	
	SM 2320 B-97	Total Alkalinity	181	A	mg CaCO3/L	P370393	
	SM 2540 D-97	TSS	4	I	mg/L	P370358	
	SM 4500 F-C-97	Fluoride	0.61		mg F/L	P370396	
2116569	EPA 350.1 Rev. 2.0	Ammonia-N	0.083		mg N/L	P370325	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P370344	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.043		mg N/L	P370708	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P370487	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P370305	
2116572	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P370272	
2116594	EPA 200.7 Rev. 4.4	Boron	1.06E+03		ug/L	P370337	
		Iron	190	I	ug/L	P370337	
		Manganese	23		ug/L	P370337	
		Zinc	15	U	ug/L	P370337	
	EPA 200.8 Rev. 5.4	Aluminum	49	I	ug/L	P370337	
		Antimony	0.30	I	ug/L	P370337	
		Arsenic	2.41		ug/L	P370337	
		Cadmium	0.080	U	ug/L	P370337	
		Chromium	4.0	U	ug/L	P370337	
		Copper	1.6	U	ug/L	P370337	
		Lead	0.80	U	ug/L	P370337	
		Nickel	2.0	U	ug/L	P370337	
		Selenium	0.80	U	ug/L	P370337	
		Silver	0.040	U	ug/L	P370337	
		Thallium	0.40	U	ug/L	P370337	

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: LittleAlligator@Midway

Collection Date/Time: 09/04/2019 11:55

Field ID: G3SD0071_DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116567	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P370232	
	EPA 300.0	Bromide	16		mg Br/L	P370340	
	SM 2320 B-97	Total Alkalinity	179		mg CaCO3/L	P370393	
	SM 2540 D-97	TSS	4	I	mg/L	P370358	
	SM 4500 F-C-97	Fluoride	0.60		mg F/L	P370396	
2116570	EPA 350.1 Rev. 2.0	Ammonia-N	0.089		mg N/L	P370325	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P370344	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P370708	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P370487	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P370305	
2116573	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.17		mg P/L	P370272	
2116595	EPA 200.7 Rev. 4.4	Boron	1.04E+03		ug/L	P370337	
		Iron	170	I	ug/L	P370337	
		Manganese	23		ug/L	P370337	
		Zinc	15	U	ug/L	P370337	
	EPA 200.8 Rev. 5.4	Aluminum	47	I	ug/L	P370337	
		Antimony	0.32	I	ug/L	P370337	
		Arsenic	2.53		ug/L	P370337	
		Cadmium	0.080	U	ug/L	P370337	
		Chromium	4.0	U	ug/L	P370337	
		Copper	1.6	U	ug/L	P370337	
		Lead	0.80	U	ug/L	P370337	
		Nickel	2.0	U	ug/L	P370337	
		Selenium	0.80	U	ug/L	P370337	
		Silver	0.040	U	ug/L	P370337	
		Thallium	0.40	U	ug/L	P370337	

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: LittleAlligator@Midway

Collection Date/Time: 09/04/2019 12:00

Field ID: FB_09042019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116568	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P370231	
	EPA 300.0	Bromide	0.013	U	mg Br/L	P370340	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P370392	
	SM 2540 D-97	TSS	2	U	mg/L	P370358	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P370395	
2116571	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P370448	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P370366	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370268	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P370419	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P370305	
2116574	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P370271	
2116596	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P370341	
		Manganese	1.0	U	ug/L	P370341	
		Zinc	5.0	U	ug/L	P370341	
		Aluminum	5.0	U	ug/L	P370341	
	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P370341	
		Arsenic	0.050	U	ug/L	P370341	
		Boron**	5.9	I	ug/L	P370341	
		Cadmium	0.020	U	ug/L	P370341	
		Chromium	0.40	U	ug/L	P370341	
		Copper	0.40	U	ug/L	P370341	
		Lead	0.20	U	ug/L	P370341	
		Nickel	0.50	U	ug/L	P370341	
		Selenium	0.20	U	ug/L	P370341	
		Silver	0.010	U	ug/L	P370341	
		Thallium	0.10	U	ug/L	P370341	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: The boron result was confirmed in the undigested sample on 09/24/2019.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370230

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370231

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370232

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370337

Component	Result	Code	Units
Boron	15	U	ug/L
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370341

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370337

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370341

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370341

Component	Result	Code	Units
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0
Batch ID: P370340

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370325

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370448

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370344

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370366

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370460

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370267

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370267

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370268

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370708

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370418

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370419

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370487

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370271

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370272

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

Reference Method: EPA 8321B
Batch ID: P370131

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P370131

Component	Result	Code	Units
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	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
Mandestrobin	0.0020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P370242

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 2320 B-97
Batch ID: P370392

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

Reference Method: SM 2320 B-97
Batch ID: P370393

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

Reference Method: SM 2540 D-97
Batch ID: P370358

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P370395

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P370396

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P370305

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: P370337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Boron	106		P	85 - 115
Iron	106		P	85 - 115
Manganese	101		P	85 - 115
Zinc	98.7		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115
Manganese	101		P	85 - 115
Zinc	99.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	99.5		P	85 - 115
Arsenic	105		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	94.1		P	85 - 115
Copper	101		P	85 - 115
Lead	101		P	85 - 115
Nickel	101		P	85 - 115
Selenium	105		P	85 - 115
Silver	101		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.4		P	85 - 115
Antimony	97.0		P	85 - 115
Arsenic	98.5		P	85 - 115
Boron	102		P	85 - 115
Cadmium	97.9		P	85 - 115
Chromium	90.8		P	85 - 115
Copper	95.7		P	85 - 115
Lead	94.4		P	85 - 115
Nickel	96.2		P	85 - 115
Selenium	103		P	85 - 115
Silver	98.8		P	85 - 115
Thallium	97.5		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P370340

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	97.8		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370325

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370448

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370366

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370460

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: P370267

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370268

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370708

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: P370418

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P370419

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P370487

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P370271

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P370272

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

Reference Method: EPA 8321B
 Batch ID: P370131

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	145		P	40 - 160
Acetaminophen	81.4		P	30 - 160
Acetamiprid	86.3		P	40 - 160
Afidopyropen	95.6		P	40 - 160
Bentazon	89.3		P	30 - 160
Benzovindiflupyr	95.5		P	40 - 160
Carbamazepine	100		P	40 - 160
Clothianidin	98.5		P	40 - 160
Dinotefuran	93.9		P	40 - 160
Diuron	100		P	40 - 160
Fenuron	106		P	40 - 160
Fluridone	106		P	40 - 160
Hydrocodone	92.2		P	40 - 160
Ibuprofen	117		P	30 - 160
Imazapyr	84.2		P	40 - 160
Imidacloprid	104		P	40 - 160
Linuron	72.6		P	40 - 160
Mandestrobin	102		P	40 - 160
MCPP	178		F	40 - 160
Naproxen	124		P	40 - 160
Primidone	94.9		P	40 - 160
Pyraclostrobin	99.1		P	30 - 160
Thiamethoxam	106		P	40 - 160
Tolfenpyrad	78.8		P	40 - 160
Triclopyr	105		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P370242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	91.8		P	40 - 150
AMPA	58.2		P	40 - 150
Endothall	107		P	40 - 150
Glufosinate	113		P	40 - 150
Glyphosate	109		P	40 - 140
Sucralose	125		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P370392

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P370393

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P370395

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P370396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P370305

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	103		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P370337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116595	Boron	94.9	103	P/P	70 - 130
2116595	Iron	98.8	101	P/P	70 - 130
2116595	Manganese	92.9	92.9	P/P	70 - 130
2116595	Zinc	96.8	97.5	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P370341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116676	Iron	106	107	P/P	80 - 120
2116676	Manganese	99.5	101	P/P	80 - 120
2116676	Zinc	100	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P370337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116595	Aluminum	123	122	P/P	70 - 130
2116595	Antimony	103	103	P/P	70 - 130
2116595	Arsenic	111	111	P/P	70 - 130
2116595	Cadmium	97.8	98.4	P/P	70 - 130
2116595	Chromium	91.3	91.3	P/P	70 - 130
2116595	Copper	99.4	100	P/P	70 - 130
2116595	Lead	106	105	P/P	70 - 130
2116595	Nickel	94.6	96.1	P/P	70 - 130
2116595	Selenium	107	108	P/P	70 - 130
2116595	Silver	93.0	94.3	P/P	70 - 130
2116595	Thallium	109	108	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P370341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116676	Aluminum	94.8	95.4	P/P	80 - 120
2116676	Antimony	93.4	94.8	P/P	80 - 120
2116676	Arsenic	96.6	97.5	P/P	80 - 120
2116676	Boron	98.3	101	P/P	80 - 120
2116676	Cadmium	94.7	96.5	P/P	80 - 120
2116676	Chromium	94.0	95.7	P/P	80 - 120
2116676	Copper	96.3	97.0	P/P	80 - 120
2116676	Lead	91.0	92.7	P/P	80 - 120
2116676	Nickel	93.9	94.8	P/P	80 - 120
2116676	Selenium	101	98.0	P/P	80 - 120
2116676	Silver	96.5	97.7	P/P	80 - 120
2116676	Thallium	97.6	98.9	P/P	80 - 120

Reference Method: EPA 300.0
 Batch ID: P370340

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116013	Bromide	93.8	94.7	P/P	90 - 110
2116078	Bromide	94.6		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116075	Ammonia-N	95.5	93.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116548	Ammonia-N	91.8	93.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116569	Kjeldahl Nitrogen	94.9	96.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116548	Kjeldahl Nitrogen	94.4	95.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370267

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116480	NO2NO3-N	97.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116622	NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117376	NO2NO3-N	101	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370418

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116480	Total-P	101	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370419

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116604	Total-P	96.8	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116569	Total-P	96.1	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116552	O-Phosphate-P	96.1	96.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116745	O-Phosphate-P	93.9	95.0	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P370131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116166	Acetaminophen	78.5	81.5	P/P	30 - 160
2116166	Acetamiprid	106	88.4	P/P	40 - 160
2116166	Afidopyropen	142	133	P/P	40 - 160
2116166	Bentazon	65.4	53.2	P/P	30 - 160
2116166	Benzovindiflupyr	117	102	P/P	40 - 160
2116166	Carbamazepine	95.6	91.7	P/P	40 - 160
2116166	Clothianidin	102	101	P/P	40 - 160
2116166	Dinotefuran	107	105	P/P	40 - 160
2116166	Diuron	86.8	88.1	P/P	40 - 160
2116166	Fenuron	85.5	81.7	P/P	40 - 160
2116166	Fluridone	103	107	P/P	40 - 160
2116166	Hydrocodone	92.1	91.2	P/P	40 - 160
2116166	Ibuprofen	125	132	P/P	30 - 160
2116166	Imidacloprid	200	194	F/F	40 - 160
2116166	Linuron	64.8	68.1	P/P	40 - 160
2116166	Mandestrobin	109	99.9	P/P	40 - 160
2116166	MCP	231	224	F/F	40 - 160
2116166	Naproxen	97.7	153	P/P	40 - 160
2116166	Primidone	103	97.3	P/P	40 - 160
2116166	Pyraclostrobin	122	107	P/P	30 - 160
2116166	Thiamethoxam	150	138	P/P	40 - 160
2116166	Tolfenpyrad	88.9	85.2	P/P	40 - 160
2116166	Triclopyr	126	157	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P370242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116330	Acesulfame K	116	110	P/P	40 - 150
2116330	AMPA	55.2	58.3	P/P	40 - 150
2116330	Endothall	79.7	92.8	P/P	40 - 150
2116330	Glufosinate	84.8	77.0	P/P	40 - 150
2116330	Glyphosate	75.3	77.9	P/P	40 - 140
2116330	Sucralose	115	129	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P370395

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116478	Fluoride	101	99.9	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P370396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116566	Fluoride	97.7	98.6	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P370305

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116466	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116553	Turbidity	1.14	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116610	Turbidity	2.66	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116621	Turbidity	6.60	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116595	Boron	2.69	Spike	P	0 - 20
2116595	Iron	1.64	Spike	P	0 - 20
2116595	Manganese	0.0288	Spike	P	0 - 20
2116595	Zinc	0.648	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116676	Iron	0.698	Spike	P	0 - 20
2116676	Manganese	1.37	Spike	P	0 - 20
2116676	Zinc	1.84	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116595	Aluminum	0.704	Spike	P	0 - 20
2116595	Antimony	0.570	Spike	P	0 - 20
2116595	Arsenic	0.0963	Spike	P	0 - 20
2116595	Cadmium	0.609	Spike	P	0 - 20
2116595	Chromium	0.0224	Spike	P	0 - 20
2116595	Copper	0.918	Spike	P	0 - 20
2116595	Lead	0.855	Spike	P	0 - 20
2116595	Nickel	1.51	Spike	P	0 - 20
2116595	Selenium	0.902	Spike	P	0 - 20
2116595	Silver	1.41	Spike	P	0 - 20
2116595	Thallium	0.512	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116676	Aluminum	0.663	Spike	P	0 - 20
2116676	Antimony	1.49	Spike	P	0 - 20
2116676	Arsenic	0.926	Spike	P	0 - 20
2116676	Boron	1.94	Spike	P	0 - 20
2116676	Cadmium	1.92	Spike	P	0 - 20
2116676	Chromium	1.78	Spike	P	0 - 20
2116676	Copper	0.663	Spike	P	0 - 20
2116676	Lead	1.75	Spike	P	0 - 20
2116676	Nickel	0.921	Spike	P	0 - 20
2116676	Selenium	3.19	Spike	P	0 - 20
2116676	Silver	1.15	Spike	P	0 - 20
2116676	Thallium	1.25	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P370340

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116013	Bromide	0.722	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116075	Ammonia-N	1.71	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116548	Ammonia-N	1.36	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116569	Kjeldahl Nitrogen	1.11	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116548	Kjeldahl Nitrogen	0.506	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117153	Kjeldahl Nitrogen	2.38	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370267

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116480	NO2NO3-N	0.611	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116622	NO2NO3-N	0.171	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117376	NO2NO3-N	2.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370418

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116480	Total-P	3.45	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116604	Total-P	3.31	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116569	Total-P	1.17	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116552	O-Phosphate-P	0.519	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116745	O-Phosphate-P	1.04	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P370131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116166	2,4-D	3.50	Spike	P	0 - 30
2116166	Acetaminophen	3.75	Spike	P	0 - 30
2116166	Acetamiprid	17.9	Spike	P	0 - 30
2116166	Afidopyropen	6.87	Spike	P	0 - 30
2116166	Bentazon	8.98	Spike	P	0 - 30
2116166	Benzovindiflupyr	13.4	Spike	P	0 - 30
2116166	Carbamazepine	3.91	Spike	P	0 - 30
2116166	Clothianidin	1.49	Spike	P	0 - 30
2116166	Dinotefuran	2.05	Spike	P	0 - 30
2116166	Diuron	1.42	Spike	P	0 - 30
2116166	Fenuron	4.52	Spike	P	0 - 30
2116166	Fluridone	2.58	Spike	P	0 - 30
2116166	Hydrocodone	1.07	Spike	P	0 - 30
2116166	Ibuprofen	5.56	Spike	P	0 - 30
2116166	Imazapyr	8.34	Spike	P	0 - 30
2116166	Imidacloprid	2.89	Spike	P	0 - 30
2116166	Linuron	4.99	Spike	P	0 - 30
2116166	Mandestrobin	8.27	Spike	P	0 - 30
2116166	MCPP	3.30	Spike	P	0 - 30
2116166	Naproxen	44.1	Spike	F	0 - 30
2116166	Primidone	5.46	Spike	P	0 - 30
2116166	Pyraclostrobin	13.0	Spike	P	0 - 30
2116166	Thiamethoxam	8.32	Spike	P	0 - 30
2116166	Tolfenpyrad	4.23	Spike	P	0 - 30
2116166	Triclopyr	21.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116330	Acesulfame K	4.94	Spike	P	0 - 30
2116330	AMPA	4.46	Spike	P	0 - 30
2116330	Endothall	15.2	Spike	P	0 - 30
2116330	Glufosinate	9.59	Spike	P	0 - 30
2116330	Glyphosate	2.98	Spike	P	0 - 30
2116330	Sucralose	11.0	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P370392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116478	Total Alkalinity	0.294	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P370393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116566	Total Alkalinity	0.284	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-97
Batch ID: P370395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116478	Fluoride	0.513	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P370396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116566	Fluoride	0.513	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P370305

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116466	Organic Carbon	0.0666	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: 2116592
Field Sample ID: G3SD0068

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	154	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	79.3	P	30 - 160
EPA 8321B	Diuron-d6	82.2	P	30 - 160
EPA 8321B	Endothall-d6	114	P	30 - 160
EPA 8321B	Endothall-d6	114	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	112	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	112	P	30 - 160
EPA 8321B	Ibuprofen-d3	95.5	P	30 - 160
EPA 8321B	Primidone-d5	99.8	P	30 - 160
EPA 8321B	Sucralose-d6	150	P	30 - 160
EPA 8321B	Sucralose-d6	150	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94017

Included Lab Sample IDs: 2116560, 2116563, 2116566, 2116567, 2116568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105
Turbidity	102	101	P/P	95 - 105
Turbidity	98.5	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94033

Included Lab Sample IDs: 2116561, 2116564, 2116571

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A94035

Included Lab Sample IDs: 2116562, 2116565, 2116572, 2116573, 2116574

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.4	P/P	90 - 110
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	99.4	98.2	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A94054

Included Lab Sample IDs: 2116561, 2116564, 2116569, 2116570, 2116571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94059

Included Lab Sample IDs: 2116569, 2116570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	93.6	P/P	90 - 110

Reference Method: EPA 300.0

Run ID: A94066

Included Lab Sample IDs: 2116560, 2116563, 2116566, 2116567, 2116568

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

Reference Method: EPA 8321B

Run ID: A94082

Included Lab Sample IDs: 2116592

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	83.9	85.1	P/P	60 - 160
Glufosinate	116	121	P/P	60 - 160
Glyphosate	115	130	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94086

Included Lab Sample IDs: 2116592

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	132	128	P/P	60 - 160
Endothall	113	117	P/P	60 - 160

Reference Method: SM 2320 B-97

Run ID: A94091

Included Lab Sample IDs: 2116560, 2116563, 2116566, 2116567, 2116568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110
Total Alkalinity	103	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94091

Included Lab Sample IDs: 2116560, 2116563, 2116566, 2116567, 2116568

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94108

Included Lab Sample IDs: 2116593, 2116594, 2116595, 2116596

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	101	101	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Iron	104	103	P/P	90 - 110
Iron	104	104	P/P	95 - 105
Manganese	102	102	P/P	90 - 110
Manganese	102	103	P/P	95 - 105
Manganese	103	102	P/P	90 - 110
Zinc	100	101	P/P	95 - 105
Zinc	101	99.1	P/P	90 - 110
Zinc	99.1	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94110

Included Lab Sample IDs: 2116561, 2116564, 2116571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.7	P/P	90 - 110
Ammonia-N	99.7	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94122

Included Lab Sample IDs: 2116564, 2116569, 2116570, 2116571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.7	98.5	P/P	90 - 110
Kjeldahl Nitrogen	97.3	96.7	P/P	90 - 110
Kjeldahl Nitrogen	98.5	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94123

Included Lab Sample IDs: 2116561, 2116564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.1	99.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94124

Included Lab Sample IDs: 2116592

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	119	120	P/P	50 - 150
Acetaminophen	93.1	94.1	P/P	60 - 160
Acetamiprid	105	107	P/P	50 - 150
Afidopyropen	105	106	P/P	50 - 150
Bentazon	91.8	90.2	P/P	50 - 160
Benzovindiflupyr	120	113	P/P	50 - 150
Carbamazepine	114	113	P/P	60 - 150
Clothianidin	100	115	P/P	60 - 150
Dinotefuran	100	103	P/P	50 - 150
Diuron	109	107	P/P	60 - 150
Fenuron	106	107	P/P	60 - 150
Fluridone	127	125	P/P	60 - 160
Hydrocodone	98.7	107	P/P	60 - 150
Ibuprofen	131	132	P/P	50 - 160
Imazapyr	75.5	74.1	P/P	50 - 150
Imidacloprid	91.6	95.3	P/P	60 - 150
Linuron	98.7	94.4	P/P	60 - 150
Mandestrobin	127	125	P/P	50 - 150
MCPP	125	127	P/P	50 - 150
Naproxen	126	157	P/P	50 - 160
Primidone	97.1	87.3	P/P	60 - 150
Pyraclostrobin	136	127	P/P	60 - 150
Thiamethoxam	100	104	P/P	50 - 150
Tolfenpyrad	137	137	P/P	60 - 150
Triclopyr	134	127	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A94127

Included Lab Sample IDs: 2116592

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	125	121	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94132

Included Lab Sample IDs: 2116571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94158

Included Lab Sample IDs: 2116569, 2116570

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94203

Included Lab Sample IDs: 2116561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	109	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94206

Included Lab Sample IDs: 2116593, 2116596

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	97.2	P/P	90 - 110
Antimony	95.3	95.6	P/P	90 - 110
Arsenic	100	99.6	P/P	90 - 110
Boron	102	102	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Copper	99.7	99.0	P/P	90 - 110
Lead	95.8	95.3	P/P	90 - 110
Nickel	98.9	98.3	P/P	90 - 110
Silver	98.3	98.1	P/P	90 - 110
Thallium	93.1	93.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94208

Included Lab Sample IDs: 2116593, 2116596

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94209

Included Lab Sample IDs: 2116593, 2116596

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94233

Included Lab Sample IDs: 2116569, 2116570

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94403

Included Lab Sample IDs: 2116594, 2116595

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94403

Included Lab Sample IDs: 2116594, 2116595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	108	109	P/P	90 - 110
Antimony	97.5	97.0	P/P	90 - 110
Arsenic	105	103	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Copper	104	103	P/P	90 - 110
Lead	100	101	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Selenium	103	103	P/P	90 - 110
Silver	97.8	97.6	P/P	90 - 110
Thallium	95.7	96.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94545

Included Lab Sample IDs: 2116594, 2116595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.9	93.6	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.14	
	Turbidity						2.66	
	Turbidity						6.60	
EPA 200.7 Rev. 4.4	Boron	106		94.9	103			2.69
	Iron	106		98.8	101			1.64
	Iron	104		106	107			0.698
	Manganese	101		92.9	92.9			0.0288
	Manganese	101		99.5	101			1.37
	Zinc	98.7		96.8	97.5			0.648
	Zinc	99.9		100	102			1.84
EPA 200.8 Rev. 5.4	Aluminum	105		123	122			0.704
	Aluminum	96.4		94.8	95.4			0.663
	Antimony	99.5		103	103			0.570
	Antimony	97.0		93.4	94.8			1.49
	Arsenic	105		111	111			0.0963
	Arsenic	98.5		96.6	97.5			0.926
	Boron	102		98.3	101			1.94
	Cadmium	100		97.8	98.4			0.609
	Cadmium	97.9		94.7	96.5			1.92
	Chromium	94.1		91.3	91.3			0.0224
	Chromium	90.8		94.0	95.7			1.78
	Copper	101		99.4	100			0.918
	Copper	95.7		96.3	97.0			0.663
	Lead	101		106	105			0.855
	Lead	94.4		91.0	92.7			1.75
	Nickel	101		94.6	96.1			1.51
	Nickel	96.2		93.9	94.8			0.921
	Selenium	105		107	108			0.902
	Selenium	103		101	98.0			3.19
	Silver	101		93.0	94.3			1.41
	Silver	98.8		96.5	97.7			1.15
	Thallium	105		109	108			0.512
	Thallium	97.5		97.6	98.9			1.25
EPA 300.0	Bromide	97.8		93.8	94.7	94.6		0.722
EPA 350.1 Rev. 2.0	Ammonia-N	101		95.5	93.8			1.71
	Ammonia-N	97.2		91.8	93.3			1.36
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.0		94.9	96.3			1.11
	Kjeldahl Nitrogen	97.8		94.4	95.0			0.506
	Kjeldahl Nitrogen	104						2.38
EPA 353.2 Rev. 2.0	NO2NO3-N	100		97.8				0.611
	NO2NO3-N	100		98.5				0.171
	NO2NO3-N	100		101	99.0			2.00
EPA 365.1 Rev. 2.0	Total-P	97.2		101	96.4			3.45
	Total-P	98.9		96.8	100			3.31
	Total-P	99.4		96.1	97.6			1.17
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9		96.1	96.6			0.519
	O-Phosphate-P	99.9		93.9	95.0			1.04
EPA 8321B	2,4-D	145						3.50
	Acesulfame K	91.8		116	110			4.94
	Acetaminophen	81.4		78.5	81.5			3.75
	Acetamiprid	86.3		106	88.4			17.9
	Afidopyropen	95.6		142	133			6.87
	AMPA	58.2		55.2	58.3			4.46
	Bentazon	89.3		65.4	53.2			8.98

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Benzovindiflupyr	95.5	117	102		13.4
	Carbamazepine	100	95.6	91.7		3.91
	Clothianidin	98.5	102	101		1.49
	Dinotefuran	93.9	107	105		2.05
	Diuron	100	86.8	88.1		1.42
	Endothall	107	79.7	92.8		15.2
	Fenuron	106	85.5	81.7		4.52
	Fluridone	106	103	107		2.58
	Glufosinate	113	84.8	77.0		9.59
	Glyphosate	109	75.3	77.9		2.98
	Hydrocodone	92.2	92.1	91.2		1.07
	Ibuprofen	117	125	132		5.56
	Imazapyr	84.2				8.34
	Imidacloprid	104	200	194		2.89
	Linuron	72.6	64.8	68.1		4.99
	Mandestrobin	102	109	99.9		8.27
	MCPP	178	231	224		3.30
	Naproxen	124	97.7	153		44.1
	Primidone	94.9	103	97.3		5.46
	Pyraclostrobin	99.1	122	107		13.0
	Sucralose	125	115	129		11.0
	Thiamethoxam	106	150	138		8.32
	Tolfenpyrad	78.8	88.9	85.2		4.23
	Triclopyr	105	126	157		21.3
SM 2320 B-97	Total Alkalinity	103			0.294	
	Total Alkalinity	103			0.284	
SM 4500 F-C-97	Fluoride	99.4	101	99.9		0.513
	Fluoride	99.4	97.7	98.6		0.513
SM 5310 B-00	Organic Carbon	103	102	102		0.0666

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2116560, 2116563, 2116566, 2116567, 2116568
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2116593, 2116594, 2116595, 2116596
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2116593, 2116594, 2116595, 2116596
EPA 300.0 / E31780	Bromide in aqueous matrices	2116560, 2116563, 2116566, 2116567, 2116568
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2116561, 2116564, 2116569, 2116570, 2116571
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2116561, 2116564, 2116569, 2116570, 2116571
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2116561, 2116564, 2116569, 2116570, 2116571
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2116561, 2116564, 2116569, 2116570, 2116571
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2116562, 2116565, 2116572, 2116573, 2116574
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2116592
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2116592
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2116560, 2116563, 2116566, 2116567, 2116568

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2116560, 2116563, 2116566, 2116567, 2116568
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2116560, 2116563, 2116566, 2116567, 2116568
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2116561, 2116564, 2116569, 2116570, 2116571

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	09/05/2019			09/05/2019 17:19	Rosalyn Ballman	2116560, 2116563, 2116566, 2116567, 2116568
EPA 200.7 Rev. 4.4	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/10/2019 12:26	Alexander Thompson	2116596
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/10/2019 13:41	Alexander Thompson	2116593
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/10/2019 15:26	Alexander Thompson	2116594
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/10/2019 15:34	Alexander Thompson	2116595
EPA 200.8 Rev. 5.4	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/13/2019 06:48	Robert K Palmer	2116596
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/13/2019 07:27	Robert K Palmer	2116593
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/14/2019 08:07	Robert K Palmer	2116596
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/14/2019 08:30	Robert K Palmer	2116593
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/15/2019 06:12	Robert K Palmer	2116596
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/15/2019 06:31	Robert K Palmer	2116593
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/20/2019 17:53	Justin Cutchin	2116594
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/20/2019 18:03	Justin Cutchin	2116595
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/26/2019 14:40	Robert K Palmer	2116594
	09/05/2019	09/09/2019 13:25	Elliott D. Healy	09/26/2019 14:46	Robert K Palmer	2116595
EPA 300.0	09/05/2019			09/06/2019 21:59	Jhamieka S. Greenwood	2116560
	09/05/2019			09/06/2019 22:16	Jhamieka S. Greenwood	2116563
	09/05/2019			09/06/2019 22:33	Jhamieka S. Greenwood	2116566
	09/05/2019			09/06/2019 22:50	Jhamieka S. Greenwood	2116567
	09/05/2019			09/06/2019 23:41	Jhamieka S. Greenwood	2116568
EPA 350.1 Rev. 2.0	09/05/2019			09/06/2019 14:06	Ping Hua	2116569
	09/05/2019			09/06/2019 14:07	Ping Hua	2116570
	09/05/2019			09/10/2019 13:05	Ping Hua	2116561
	09/05/2019			09/10/2019 13:12	Ping Hua	2116564
	09/05/2019			09/10/2019 13:18	Ping Hua	2116571
EPA 351.2 Rev. 2.0	09/05/2019	09/09/2019 11:56	Sima Feizi	09/10/2019 14:51	Julia Storbeck	2116564
	09/05/2019	09/09/2019 11:56	Sima Feizi	09/10/2019 14:52	Julia Storbeck	2116571
	09/05/2019	09/09/2019 13:25	Sima Feizi	09/10/2019 15:09	Julia Storbeck	2116569
	09/05/2019	09/09/2019 13:25	Sima Feizi	09/10/2019 15:17	Julia Storbeck	2116570
	09/05/2019	09/11/2019 12:55	Sima Feizi	09/12/2019 15:11	Julia Storbeck	2116561
EPA 353.2 Rev. 2.0	09/05/2019			09/06/2019 10:40	Beverly Y. Sanders	2116561
	09/05/2019			09/06/2019 10:53	Beverly Y. Sanders	2116564
	09/05/2019			09/06/2019 10:55	Beverly Y. Sanders	2116571
	09/05/2019			09/16/2019 10:33	Beverly Y. Sanders	2116569
	09/05/2019			09/16/2019 10:34	Beverly Y. Sanders	2116570
EPA 365.1 Rev. 2.0	09/05/2019	09/10/2019 09:48	Lipi Saha	09/11/2019 11:46	Rosalyn Ballman	2116561
	09/05/2019	09/10/2019 09:48	Lipi Saha	09/11/2019 11:47	Rosalyn Ballman	2116564
	09/05/2019	09/10/2019 09:48	Lipi Saha	09/11/2019 13:05	Rosalyn Ballman	2116571
	09/05/2019	09/11/2019 10:25	Lipi Saha	09/12/2019 08:31	Rosalyn Ballman	2116569

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	09/05/2019	09/11/2019 10:25	Lipi Saha	09/12/2019 08:34	Rosalyn Ballman	2116570
EPA 365.1 Rev. 2.0 dissolved	09/05/2019			09/05/2019 15:54	Jhamieka S. Greenwood	2116574
	09/05/2019			09/05/2019 15:57	Jhamieka S. Greenwood	2116572
	09/05/2019			09/05/2019 15:58	Jhamieka S. Greenwood	2116573
	09/05/2019			09/05/2019 16:14	Jhamieka S. Greenwood	2116562
	09/05/2019			09/05/2019 16:19	Jhamieka S. Greenwood	2116565
EPA 8321B	09/05/2019	09/05/2019 12:00	Fe-Val Siddell	09/06/2019 16:10	Juyoung Kim	2116592
	09/05/2019	09/06/2019 10:30	Rebecca Ware	09/06/2019 16:45	Rebecca Ware	2116592
	09/05/2019	09/06/2019 10:30	Rebecca Ware	09/09/2019 14:06	Rebecca Ware	2116592
	09/05/2019	09/06/2019 10:30	Rebecca Ware	09/10/2019 16:44	Rebecca Ware	2116592
SM 2320 B-97	09/05/2019			09/06/2019 20:09	Dale L. Simmons	2116568
	09/05/2019			09/06/2019 20:47	Dale L. Simmons	2116560
	09/05/2019			09/06/2019 22:12	Dale L. Simmons	2116563
	09/05/2019			09/07/2019 00:14	Dale L. Simmons	2116566
	09/05/2019			09/07/2019 00:28	Dale L. Simmons	2116567
SM 2540 D-97	09/05/2019			09/06/2019 17:30	Rosalyn Ballman	2116560, 2116563, 2116566, 2116567, 2116568
SM 4500 F-C-97	09/05/2019			09/06/2019 20:09	Dale L. Simmons	2116568
	09/05/2019			09/06/2019 20:47	Dale L. Simmons	2116560
	09/05/2019			09/06/2019 22:12	Dale L. Simmons	2116563
	09/05/2019			09/06/2019 23:37	Dale L. Simmons	2116566
	09/05/2019			09/06/2019 23:49	Dale L. Simmons	2116567
SM 5310 B-00	09/05/2019			09/06/2019 19:30	Madeline Funaro	2116561
	09/05/2019			09/06/2019 19:42	Madeline Funaro	2116564
	09/05/2019			09/06/2019 19:56	Madeline Funaro	2116569
	09/05/2019			09/06/2019 20:10	Madeline Funaro	2116570
	09/05/2019			09/06/2019 20:24	Madeline Funaro	2116571