

Chemical Analysis Report

WAS-SECT-2020-06-29-01

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

Event Description: **NWQI - Alligator Creek**

Request ID: **RQ-2020-06-29-16**

Customer: **WAS-SECT**

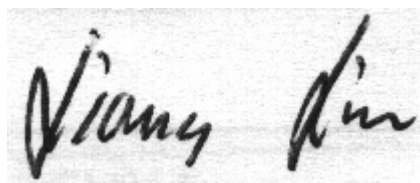
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 17-JUL-2020 13:34

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: Alligator Creek Upstream of Sr 273

Collection Date/Time: 06/29/2020 10:40

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179307	EPA 180.1 Rev. 2.0	Turbidity	8.1	A	NTU	P383891	
	EPA 300.0 Rev. 2.1	Chloride	4.8		mg Cl/L	P384003	
		Sulfate	0.46	I	mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	93		PCU	P383894	
	SM 2320 B-2011	Total Alkalinity	18		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	63		mg/L	P384364	
	SM 2540 D-2011	TSS	12		mg/L	P384355	
2179309	SM 4500 F-C-2011	Fluoride	0.056	I	mg F/L	P384048	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.078		mg N/L	P383915	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P383927	
2179311	SM 5310 B-2011	Organic Carbon	13		mg C/L	P383904	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P383896	
2179337	EPA 8321B	2,4-D	0.0020	U	ug/L	P383924	
		Acesulfame K**	0.10	U	ug/L	P383676	
		AMPA**	0.10	U	ug/L	P383676	
		Sucralose**	0.010	U	ug/L	P383676	
		Acetaminophen**	0.0080	U	ug/L	P383924	
		Acetamiprid**	0.0020	U	ug/L	P383924	
		Endothall**	0.25	U	ug/L	P383676	
		Glufosinate**	0.10	U	ug/L	P383676	
		Glyphosate**	0.10	U	ug/L	P383676	
		Afidopyropen**	0.0020	U	ug/L	P383924	
		Bentazon	8.0E-04	U	ug/L	P383924	
		Benzovindiflupyr**	0.0020	U	ug/L	P383924	
		Carbamazepine**	8.0E-04	U	ug/L	P383924	
		Clothianidin**	0.0020	U	ug/L	P383924	
		Dinotefuran**	0.0020	U	ug/L	P383924	
		Diuron	0.0020	U	ug/L	P383924	
		Fenuron	0.016	U	ug/L	P383924	
		Fluridone**	8.0E-04	U	ug/L	P383924	
		Imazapyr**	0.013	I	ug/L	P383924	
		Hydrocodone**	0.0020	U	ug/L	P383924	
		Ibuprofen**	0.020	U	ug/L	P383924	
		Imidacloprid	0.020		ug/L	P383924	
		Linuron	0.0040	U	ug/L	P383924	
		Mandestrobin**	0.0020	U	ug/L	P383924	
		MCPP	0.0020	U	ug/L	P383924	
		Naproxen**	0.0080	U	ug/L	P383924	
		Primidone**	0.0040	U	ug/L	P383924	
		Pyraclostrobin**	0.0020	UJ	ug/L	P383924	RPD
		Thiamethoxam**	0.0020	U	ug/L	P383924	

Field ID: G3WA0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179337	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P383924	
		Triclopyr**	0.0040	U	ug/L	P383924	
2179339	EPA 200.7 Rev. 4.4	Barium	17.9		ug/L	P383939	
		Calcium	7.07		mg/L	P383939	
		Iron	1.56E+03		ug/L	P383939	
		Magnesium	1.75		mg/L	P383939	
		Potassium	1.9		mg/L	P383939	
		Sodium	1.9	I	mg/L	P383939	
		Strontium	15.6		ug/L	P383939	
		Tin	3.0	U	ug/L	P383939	
		Titanium	6.2		ug/L	P383939	
		Vanadium	2.0	U	ug/L	P383939	
		Zinc	5.0	U	ug/L	P383939	
	EPA 200.8 Rev. 5.4	Aluminum	354		ug/L	P383939	
		Antimony	0.063	I	ug/L	P383939	
		Arsenic	1.11		ug/L	P383939	
		Beryllium	0.016	I	ug/L	P383939	
		Boron**	15.7		ug/L	P383939	
		Cadmium	0.020	U	ug/L	P383939	
		Chromium	0.45	I	ug/L	P383939	
		Cobalt	0.364		ug/L	P383939	
		Copper	0.73	I	ug/L	P383939	
		Lead	0.76		ug/L	P383939	
		Manganese	265		ug/L	P383939	
		Molybdenum	0.15	U	ug/L	P383939	
		Nickel	0.50	U	ug/L	P383939	
		Selenium	0.20	U	ug/L	P383939	
		Silver	0.010	U	ug/L	P383939	
		Thallium	0.10	U	ug/L	P383939	
	SM 2340B	Hardness	24.8		mg/L	P383939	

Ref. Method and Comment:

SM 2540 D-2011: 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.

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 07/08/2020.

Sample Location: Minnow Creek At Lovewood Rd

Collection Date/Time: 06/29/2020 09:45

Field ID: G3WA0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179308	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P383891	
	EPA 300.0 Rev. 2.1	Chloride	5.7		mg Cl/L	P384003	
		Sulfate	1.0		mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	94		PCU	P383894	
	SM 2320 B-2011	Total Alkalinity	9.3		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	62		mg/L	P384364	
	SM 2540 D-2011	TSS	14		mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.038	I	mg F/L	P384048	
2179310	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P383915	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	9.4		mg C/L	P383961	
2179312	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P383896	
2179338	EPA 8321B	2,4-D	0.0020	U	ug/L	P383924	
		Acesulfame K**	0.10	U	ug/L	P383676	
		AMPA**	0.10	U	ug/L	P383676	
		Sucralose**	0.013	I	ug/L	P383676	
		Acetaminophen**	0.0080	U	ug/L	P383924	
		Acetamiprid**	0.0020	U	ug/L	P383924	
		Endothall**	0.25	U	ug/L	P383676	
		Glufosinate**	0.10	U	ug/L	P383676	
		Glyphosate**	0.10	U	ug/L	P383676	
		Afidopypropan**	0.0020	U	ug/L	P383924	
		Bentazon	0.0011	I	ug/L	P383924	
		Benzovindiflupyr**	0.0020	U	ug/L	P383924	
		Carbamazepine**	8.0E-04	U	ug/L	P383924	
		Clothianidin**	0.0020	U	ug/L	P383924	
		Dinotefuran**	0.0020	U	ug/L	P383924	
		Diuron	0.0040	I	ug/L	P383924	
		Fenuron	0.016	U	ug/L	P383924	
		Fluridone**	8.0E-04	U	ug/L	P383924	
		Imazapyr**	0.0040	U	ug/L	P383924	
		Hydrocodone**	0.0020	U	ug/L	P383924	
		Ibuprofen**	0.020	U	ug/L	P383924	
		Imidacloprid	0.022		ug/L	P383924	
		Linuron	0.0040	U	ug/L	P383924	
		Mandestrobin**	0.0020	U	ug/L	P383924	
		MCPP	0.0020	U	ug/L	P383924	
		Naproxen**	0.0080	U	ug/L	P383924	
		Primidone**	0.0040	U	ug/L	P383924	
		Pyraclostrobin**	0.0020	U	ug/L	P383924	RPD
		Thiamethoxam**	0.0020	U	ug/L	P383924	

Field ID: G3WA0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179338	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P383924	
		Triclopyr**	0.0040	U	ug/L	P383924	
2179340	EPA 200.7 Rev. 4.4	Barium	24.0		ug/L	P383939	
		Calcium	5.03		mg/L	P383939	
		Iron	2.14E+03		ug/L	P383939	
		Magnesium	1.61		mg/L	P383939	
		Potassium	1.6		mg/L	P383939	
		Sodium	1.7	I	mg/L	P383939	
		Strontium	13.8		ug/L	P383939	
		Tin	3.0	U	ug/L	P383939	
		Titanium	34.3		ug/L	P383939	
		Vanadium	3.0	I	ug/L	P383939	
		Zinc	5.0	U	ug/L	P383939	
	EPA 200.8 Rev. 5.4	Aluminum	993		ug/L	P383939	
		Antimony	0.076	I	ug/L	P383939	
		Arsenic	1.17		ug/L	P383939	
		Beryllium	0.018	I	ug/L	P383939	
		Boron**	19.3		ug/L	P383939	
		Cadmium	0.020	U	ug/L	P383939	
		Chromium	0.92	I	ug/L	P383939	
		Cobalt	0.371		ug/L	P383939	
		Copper	0.99		ug/L	P383939	
		Lead	1.12		ug/L	P383939	
		Manganese	266		ug/L	P383939	
		Molybdenum	0.15	U	ug/L	P383939	
		Nickel	0.50	U	ug/L	P383939	
		Selenium	0.20	U	ug/L	P383939	
		Silver	0.010	U	ug/L	P383939	
		Thallium	0.10	U	ug/L	P383939	
	SM 2340B	Hardness	19.2		mg/L	P383939	

Ref. Method and Comment:

SM 2540 D-2011: 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.

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 07/09/2020.

Sample Location: Scurlock Creek At Pilgrim Rd

Collection Date/Time: 06/29/2020 11:20

Field ID: G3WA0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179313	EPA 180.1 Rev. 2.0	Turbidity	7.2		NTU	P383891	
	EPA 300.0 Rev. 2.1	Chloride	4.4		mg Cl/L	P384003	
		Sulfate	0.54		mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	70		PCU	P383894	
	SM 2320 B-2011	Total Alkalinity	63		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	99		mg/L	P384364	
	SM 2540 D-2011	TSS	5	I	mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.043	I	mg F/L	P384048	
2179317	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P383915	
	EPA 365.1 Rev. 2.0	Total-P	0.068		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	9.7		mg C/L	P383961	
2179321	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P383896	

Ref. Method and Comment:

SM 2540 D-2011: 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: Pine Barn Creek at Woodest Rd

Collection Date/Time: 06/29/2020 11:45

Field ID: G3WA0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179314	EPA 180.1 Rev. 2.0	Turbidity	40		NTU	P383891	
	EPA 300.0 Rev. 2.1	Chloride	2.9		mg Cl/L	P384003	
		Sulfate	5.6		mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	34		PCU	P383895	
	SM 2320 B-2011	Total Alkalinity	49		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	101		mg/L	P384364	
	SM 2540 D-2011	TSS	21		mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.23		mg F/L	P384048	
2179318	EPA 350.1 Rev. 2.0	Ammonia-N	1.7		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.8		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P383915	
	EPA 365.1 Rev. 2.0	Total-P	0.69		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	9.0		mg C/L	P383961	
2179322	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.26		mg P/L	P383896	

Ref. Method and Comment:

SM 2540 D-2011: 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: Unnamed Creek at Woodrest Rd

Collection Date/Time: 06/29/2020 12:15

Field ID: G3WA0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179315	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P383891	
	EPA 300.0 Rev. 2.1	Chloride	6.1		mg Cl/L	P384003	
		Sulfate	1.0		mg SO4/L	P384005	
	SM 2120 B-2011	Color (true)	78	A	PCU	P383895	
	SM 2320 B-2011	Total Alkalinity	17		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	62		mg/L	P384364	
	SM 2540 D-2011	TSS	20		mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.060	I	mg F/L	P384048	
2179319	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P383915	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P383961	
2179323	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P383896	

Ref. Method and Comment:

SM 2540 D-2011: 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: Unnamed Creek At Palmview Rd

Collection Date/Time: 06/29/2020 12:45

Field ID: G3WA0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2179316	EPA 180.1 Rev. 2.0	Turbidity	38		NTU	P383891	
	EPA 300.0 Rev. 2.1	Chloride	4.5		mg Cl/L	P384003	
		Sulfate	1.9		mg SO4/L	P384005	
		Color (true)	36		PCU	P383895	
	SM 2320 B-2011	Total Alkalinity	24		mg CaCO3/L	P384044	
	SM 2540 C-2011	TDS	60		mg/L	P384364	
	SM 2540 D-2011	TSS	61		mg/L	P384355	
	SM 4500 F-C-2011	Fluoride	0.054	I	mg F/L	P384048	
2179320	EPA 350.1 Rev. 2.0	Ammonia-N	0.096		mg N/L	P384023	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P383910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P383915	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P383927	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P383961	
2179324	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P383896	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P383891

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P383939

Component	Result	Code	Units
Barium	1.0	U	ug/L
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
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P383939

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	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 Rev. 2.1

Batch ID: P384003

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P384005

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384023

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383910

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383915

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383927

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383896

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

Reference Method: EPA 8321B
Batch ID: P383676

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: EPA 8321B
Batch ID: P383924

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P383924

Component	Result	Code	Units
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: SM 2120 B-2011
Batch ID: P383894

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P383895

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P384044

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

Reference Method: SM 2540 C-2011
Batch ID: P384364

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P384355

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P384048

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P383904

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

Reference Method: SM 5310 B-2011
Batch ID: P383961

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: P383939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	104		P	85 - 115
Iron	106		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	98.8		P	85 - 115
Sodium	101		P	85 - 115
Strontium	103		P	85 - 115
Tin	103		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P383939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	103		P	85 - 115
Beryllium	94.2		P	85 - 115
Boron	106		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	104		P	85 - 115
Cobalt	102		P	85 - 115
Copper	100		P	85 - 115
Lead	104		P	85 - 115
Manganese	104		P	85 - 115
Molybdenum	103		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	100		P	85 - 115
Silver	103		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P384003

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P384005

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P384023

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P383910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P383915

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: P383927

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P383896

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

Reference Method: EPA 8321B

Batch ID: P383676

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	113		P	40 - 150
Endothall	79.9		P	40 - 150
Glufosinate	115		P	40 - 150
Glyphosate	90.6		P	40 - 140
Sucralose	75.9		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P383924

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	111		P	30 - 160
Acetaminophen	80.0		P	30 - 160
Acetamiprid	90.5		P	30 - 160
Afidopyropen	82.0		P	30 - 160
Bentazon	103		P	30 - 160
Benzovindiflupyr	82.9		P	30 - 160
Carbamazepine	80.2		P	30 - 160
Clothianidin	82.6		P	30 - 160
Dinotefuran	90.4		P	30 - 160
Diuron	69.8		P	30 - 160
Fenuron	96.4		P	30 - 160
Fluridone	86.9		P	30 - 160
Hydrocodone	85.0		P	30 - 160
Ibuprofen	72.7		P	30 - 160
Imazapyr	79.8		P	30 - 160
Imidacloprid	105		P	30 - 160
Linuron	70.3		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B**Batch ID: P383924**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mandestrobin	83.8		P	30 - 160
MCP	123		P	30 - 160
Naproxen	101		P	30 - 160
Primidone	84.3		P	30 - 160
Pyraclostrobin	82.1		P	30 - 160
Thiamethoxam	85.4		P	30 - 160
Tolfenpyrad	58.7		P	30 - 160
Triclopyr	86.1		P	30 - 160

Reference Method: SM 2120 B-2011**Batch ID: P383894**

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

Reference Method: SM 2120 B-2011**Batch ID: P383895**

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

Reference Method: SM 2320 B-2011**Batch ID: P384044**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	93 - 104

Reference Method: SM 4500 F-C-2011**Batch ID: P384048**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	90 - 106

Reference Method: SM 5310 B-2011**Batch ID: P383904**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	107		P	85 - 115

Reference Method: SM 5310 B-2011**Batch ID: P383961**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P383939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179737	Barium	104		P	80 - 120
2179737	Calcium	105		P	80 - 120
2179737	Iron	107		P	80 - 120
2179737	Magnesium	105		P	80 - 120
2179737	Potassium	101		P	80 - 120
2179737	Sodium	102		P	80 - 120
2179737	Strontium	104		P	80 - 120
2179737	Tin	105		P	80 - 120
2179737	Titanium	106		P	80 - 120
2179737	Vanadium	106		P	80 - 120
2179737	Zinc	107		P	80 - 120
2179830	Barium	103	106	P/P	80 - 120
2179830	Calcium	104		P	80 - 120
2179830	Iron	104	108	P/P	80 - 120
2179830	Magnesium	104	108	P/P	80 - 120
2179830	Potassium	99.2	100	P/P	80 - 120
2179830	Sodium	100		P	80 - 120
2179830	Strontium	103	105	P/P	80 - 120
2179830	Tin	103	107	P/P	80 - 120
2179830	Titanium	104	106	P/P	80 - 120
2179830	Vanadium	104	107	P/P	80 - 120
2179830	Zinc	106	109	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P383939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179737	Aluminum	96.6		P	80 - 120
2179737	Antimony	100		P	80 - 120
2179737	Arsenic	102		P	80 - 120
2179737	Beryllium	93.8		P	80 - 120
2179737	Boron	103		P	80 - 120
2179737	Cadmium	104		P	80 - 120
2179737	Chromium	104		P	80 - 120
2179737	Cobalt	99.8		P	80 - 120
2179737	Copper	99.0		P	80 - 120
2179737	Lead	102		P	80 - 120
2179737	Manganese	102		P	80 - 120
2179737	Molybdenum	103		P	80 - 120
2179737	Nickel	98.7		P	80 - 120
2179737	Selenium	98.1		P	80 - 120
2179737	Silver	100		P	80 - 120
2179737	Thallium	107		P	80 - 120
2179830	Aluminum	99.7	99.4	P/P	80 - 120
2179830	Antimony	102	100	P/P	80 - 120
2179830	Arsenic	103	103	P/P	80 - 120
2179830	Beryllium	91.3	93.7	P/P	80 - 120
2179830	Boron	105	103	P/P	80 - 120
2179830	Cadmium	103	104	P/P	80 - 120
2179830	Chromium	103	103	P/P	80 - 120
2179830	Cobalt	100	100	P/P	80 - 120
2179830	Copper	99.6	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P383939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179830	Lead	105	104	P/P	80 - 120
2179830	Manganese	103	103	P/P	80 - 120
2179830	Molybdenum	103	103	P/P	80 - 120
2179830	Nickel	99.6	99.9	P/P	80 - 120
2179830	Selenium	99.3	99.3	P/P	80 - 120
2179830	Silver	101	101	P/P	80 - 120
2179830	Thallium	107	108	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179031	Chloride	97.0		P	90 - 110
2179313	Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179031	Sulfate	98.7		P	90 - 110
2179313	Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179177	Ammonia-N	99.7	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383915

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179309	NO2NO3-N	97.8	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179177	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179312	O-Phosphate-P	96.2	98.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P383676

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2178566	Acesulfame K	41.7	43.4	P/P	40 - 150
2178566	AMPA	116	120	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P383676

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2178566	Endothall	79.9	83.2	P/P	40 - 150
2178566	Glufosinate	95.9	90.4	P/P	40 - 150
2178566	Glyphosate	81.8	88.6	P/P	40 - 140
2178566	Sucralose	75.8	78.4	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P383924

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179337	2,4-D	109	124	P/P	30 - 160
2179337	Acetaminophen	69.5	69.0	P/P	30 - 160
2179337	Acetamiprid	53.7	65.5	P/P	30 - 160
2179337	Afidopyropen	59.1	79.2	P/P	30 - 160
2179337	Bentazon	82.4	91.2	P/P	30 - 160
2179337	Benzovindiflupyr	70.2	86.7	P/P	30 - 160
2179337	Carbamazepine	51.2	53.7	P/P	30 - 160
2179337	Clothianidin	58.8	63.8	P/P	30 - 160
2179337	Dinotefuran	73.0	78.8	P/P	30 - 160
2179337	Diuron	44.2	45.3	P/P	30 - 160
2179337	Fenuron	58.9	62.4	P/P	30 - 160
2179337	Fluridone	73.3	84.8	P/P	30 - 160
2179337	Hydrocodone	53.2	59.2	P/P	30 - 160
2179337	Ibuprofen	60.7	64.8	P/P	30 - 160
2179337	Imazapyr	77.1	82.5	P/P	30 - 160
2179337	Imidacloprid	96.2	102	P/P	30 - 160
2179337	Linuron	50.4	53.8	P/P	30 - 160
2179337	Mandestrobin	69.7	80.9	P/P	30 - 160
2179337	MCP	106	120	P/P	30 - 160
2179337	Naproxen	74.8	77.6	P/P	30 - 160
2179337	Primidone	67.5	66.8	P/P	30 - 160
2179337	Pyraclostrobin	66.8	93.3	P/P	30 - 160
2179337	Thiamethoxam	65.5	69.4	P/P	30 - 160
2179337	Tolfenpyrad	42.4	56.3	P/P	30 - 160
2179337	Triclopyr	80.5	95.4	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P384048

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179702	Fluoride	101	101	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P383904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2178964	Organic Carbon	108	111	P/P	85 - 115

Reference Method: SM 5310 B-2011

Batch ID: P383961

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2179320	Organic Carbon	99.8	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P383891

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179307	Turbidity	3.21	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P383939

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179830	Barium	2.89	Spike	P	0 - 20
2179830	Calcium	0.380	Spike	P	0 - 20
2179830	Iron	3.09	Spike	P	0 - 20
2179830	Magnesium	2.86	Spike	P	0 - 20
2179830	Potassium	0.770	Spike	P	0 - 20
2179830	Sodium	0.569	Spike	P	0 - 20
2179830	Strontium	1.36	Spike	P	0 - 20
2179830	Tin	3.08	Spike	P	0 - 20
2179830	Titanium	1.73	Spike	P	0 - 20
2179830	Vanadium	2.63	Spike	P	0 - 20
2179830	Zinc	2.73	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P383939

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179830	Aluminum	0.274	Spike	P	0 - 20
2179830	Antimony	1.42	Spike	P	0 - 20
2179830	Arsenic	0.506	Spike	P	0 - 20
2179830	Beryllium	2.50	Spike	P	0 - 20
2179830	Boron	0.751	Spike	P	0 - 20
2179830	Cadmium	0.786	Spike	P	0 - 20
2179830	Chromium	0.175	Spike	P	0 - 20
2179830	Cobalt	0.0226	Spike	P	0 - 20
2179830	Copper	1.33	Spike	P	0 - 20
2179830	Lead	0.930	Spike	P	0 - 20
2179830	Manganese	0.105	Spike	P	0 - 20
2179830	Molybdenum	0.157	Spike	P	0 - 20
2179830	Nickel	0.274	Spike	P	0 - 20
2179830	Selenium	0.0171	Spike	P	0 - 20
2179830	Silver	0.226	Spike	P	0 - 20
2179830	Thallium	0.888	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P384003

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179031	Chloride	0.386	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179031	Sulfate	0.735	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179177	Ammonia-N	0.443	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P383910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179320	Kjeldahl Nitrogen	4.13	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P383915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179309	NO2NO3-N	0.367	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P383927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179177	Total-P	0.701	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P383896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179312	O-Phosphate-P	1.81	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P383676

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2178566	Acesulfame K	3.82	Spike	P	0 - 30
2178566	AMPA	2.57	Spike	P	0 - 30
2178566	Endothall	4.01	Spike	P	0 - 30
2178566	Glufosinate	5.99	Spike	P	0 - 30
2178566	Glyphosate	6.00	Spike	P	0 - 30
2178566	Sucralose	2.98	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P383924

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179337	2,4-D	12.8	Spike	P	0 - 30
2179337	Acetaminophen	0.729	Spike	P	0 - 30
2179337	Acetamiprid	19.7	Spike	P	0 - 30
2179337	Afidopyropen	29.1	Spike	P	0 - 30
2179337	Bentazon	10.1	Spike	P	0 - 30
2179337	Benzovindiflupyr	21.1	Spike	P	0 - 30
2179337	Carbamazepine	4.83	Spike	P	0 - 30
2179337	Clothianidin	8.27	Spike	P	0 - 30
2179337	Dinotefuran	7.73	Spike	P	0 - 30
2179337	Diuron	2.37	Spike	P	0 - 30
2179337	Fenuron	5.81	Spike	P	0 - 30
2179337	Fluridone	14.6	Spike	P	0 - 30
2179337	Hydrocodone	10.7	Spike	P	0 - 30
2179337	Ibuprofen	6.56	Spike	P	0 - 30
2179337	Imazapyr	5.63	Spike	P	0 - 30
2179337	Imidacloprid	4.37	Spike	P	0 - 30
2179337	Linuron	6.50	Spike	P	0 - 30
2179337	Mandestrobin	14.8	Spike	P	0 - 30
2179337	MCPP	12.1	Spike	P	0 - 30
2179337	Naproxen	3.59	Spike	P	0 - 30
2179337	Primidone	1.11	Spike	P	0 - 30
2179337	Pyraclostrobin	33.1	Spike	F	0 - 30
2179337	Thiamethoxam	5.83	Spike	P	0 - 30
2179337	Tolfenpyrad	28.2	Spike	P	0 - 30
2179337	Triclopyr	16.9	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P383894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179176	Color (true)	0.524	Sample	P	0 - 20

Reference Method: SM 2120 B-2011

Batch ID: P383895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179315	Color (true)	0.302	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P384044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179702	Total Alkalinity	1.21	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P384364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179550	TDS	7.09	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P384048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179702	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P383904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2178964	Organic Carbon	1.72	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P383961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2179320	Organic Carbon	0.620	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2179337

Field Sample ID: G3WA0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	84.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	45.3	P	30 - 160
EPA 8321B	Diuron-d6	40.9	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.9	P	30 - 160
EPA 8321B	Primidone-d5	70.1	P	30 - 160
EPA 8321B	Sucralose-d6	90.8	P	30 - 160
EPA 8321B	Sucralose-d6	90.8	P	30 - 160

Lab Sample ID: 2179338

Field Sample ID: G3WA0008

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	56.6	P	30 - 160
EPA 8321B	Diuron-d6	58.5	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.4	P	30 - 160
EPA 8321B	Primidone-d5	90.6	P	30 - 160
EPA 8321B	Sucralose-d6	91.0	P	30 - 160
EPA 8321B	Sucralose-d6	91.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A99594

Included Lab Sample IDs: 2179337, 2179338

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	91.1	93.4	P/P	60 - 160
Endothall	83.0	83.8	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A99606

Included Lab Sample IDs: 2179337, 2179338

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	111	109	P/P	60 - 160
Glufosinate	104	108	P/P	60 - 160
Glyphosate	95.2	99.6	P/P	60 - 160

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99608

Included Lab Sample IDs: 2179307, 2179308, 2179313, 2179314, 2179315, 2179316

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99611

Included Lab Sample IDs: 2179311, 2179312, 2179321, 2179322, 2179323, 2179324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.8	99.5	P/P	90 - 110
O-Phosphate-P	99.5	99.1	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A99612

Included Lab Sample IDs: 2179307, 2179308, 2179313, 2179314, 2179315, 2179316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.6	P/P	90 - 115
Color (true)	99.0	101	P/P	90 - 115

Reference Method: SM 5310 B-2011

Run ID: A99616

Included Lab Sample IDs: 2179309

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99621

Included Lab Sample IDs: 2179309, 2179310, 2179317, 2179318, 2179319, 2179320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A99638

Included Lab Sample IDs: 2179310, 2179317, 2179318, 2179319, 2179320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	98.1	P/P	90 - 110
Organic Carbon	98.1	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99648

Included Lab Sample IDs: 2179309, 2179310, 2179317, 2179318, 2179319, 2179320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	100	P/P	90 - 110
Kjeldahl Nitrogen	104	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99659

Included Lab Sample IDs: 2179307, 2179308, 2179313, 2179314, 2179315, 2179316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.8	P/P	90 - 110
Chloride	100	100	P/P	90 - 110
Sulfate	99.6	99.9	P/P	90 - 110
Sulfate	99.9	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99664

Included Lab Sample IDs: 2179309, 2179310, 2179317, 2179318, 2179319, 2179320

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

Reference Method: SM 2320 B-2011

Run ID: A99669

Included Lab Sample IDs: 2179307, 2179308, 2179313, 2179314, 2179315, 2179316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.9	98.9	P/P	90 - 110
Total Alkalinity	98.9	96.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A99669

Included Lab Sample IDs: 2179307, 2179308, 2179313, 2179314, 2179315, 2179316

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A99673

Included Lab Sample IDs: 2179339, 2179340

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A99673

Included Lab Sample IDs: 2179339, 2179340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	102	P/P	90 - 110
Barium	102	103	P/P	90 - 110
Calcium	106	106	P/P	90 - 110
Calcium	106	106	P/P	90 - 110
Iron	106	107	P/P	90 - 110
Iron	107	107	P/P	90 - 110
Magnesium	104	106	P/P	90 - 110
Magnesium	106	105	P/P	90 - 110
Potassium	101	98.2	P/P	90 - 110
Potassium	98.2	99.5	P/P	90 - 110
Sodium	102	103	P/P	90 - 110
Sodium	103	102	P/P	90 - 110
Strontium	102	104	P/P	90 - 110
Strontium	104	105	P/P	90 - 110
Tin	101	101	P/P	90 - 110
Tin	101	101	P/P	90 - 110
Titanium	101	101	P/P	90 - 110
Titanium	101	102	P/P	90 - 110
Vanadium	100	101	P/P	90 - 110
Vanadium	101	102	P/P	90 - 110
Zinc	101	102	P/P	90 - 110
Zinc	102	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A99681

Included Lab Sample IDs: 2179337, 2179338

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	72.2	72.9	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99697

Included Lab Sample IDs: 2179309, 2179310, 2179317, 2179318, 2179319, 2179320

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99728

Included Lab Sample IDs: 2179339, 2179340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	101	102	P/P	90 - 110
Arsenic	103	104	P/P	90 - 110
Cadmium	104	105	P/P	90 - 110
Chromium	101	102	P/P	90 - 110
Cobalt	99.2	99.5	P/P	90 - 110
Copper	99.0	99.8	P/P	90 - 110
Lead	104	104	P/P	90 - 110
Manganese	102	103	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99728

Included Lab Sample IDs: 2179339, 2179340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Molybdenum	102	103	P/P	90 - 110
Nickel	99.8	99.6	P/P	90 - 110
Selenium	103	104	P/P	90 - 110
Silver	103	104	P/P	90 - 110
Thallium	103	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99751

Included Lab Sample IDs: 2179339, 2179340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	94.0	95.1	P/P	90 - 110
Beryllium	97.3	94.0	P/P	90 - 110
Boron	106	108	P/P	90 - 110
Boron	108	108	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A99755

Included Lab Sample IDs: 2179337, 2179338

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.1	77.9	P/P	50 - 150
Acetaminophen	110	110	P/P	60 - 160
Acetamiprid	108	107	P/P	50 - 150
Afidopyropen	103	120	P/P	50 - 150
Bentazon	108	122	P/P	50 - 160
Benzovindiflupyr	108	118	P/P	50 - 150
Carbamazepine	105	117	P/P	60 - 150
Clothianidin	116	111	P/P	60 - 150
Dinotefuran	103	106	P/P	50 - 150
Diuron	95.9	107	P/P	60 - 160
Fenuron	109	106	P/P	60 - 150
Fluridone	117	115	P/P	60 - 160
Hydrocodone	116	111	P/P	60 - 150
Ibuprofen	83.6	85.0	P/P	50 - 160
Imazapyr	88.0	82.7	P/P	50 - 150
Imidacloprid	103	104	P/P	60 - 150
Linuron	95.3	118	P/P	60 - 150
Mandestrobin	116	120	P/P	50 - 150
MCPP	102	101	P/P	50 - 150
Naproxen	103	117	P/P	50 - 160
Primidone	95.4	101	P/P	60 - 150
Pyraclostrobin	118	131	P/P	60 - 150
Thiamethoxam	111	108	P/P	50 - 150
Tolfenpyrad	110	112	P/P	60 - 150
Triclopyr	90.0	90.3	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A99778

Included Lab Sample IDs: 2179339, 2179340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.0	97.6	P/P	90 - 110
Aluminum	99.9	98.0	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						3.21	
EPA 200.7 Rev. 4.4	Barium	102	104	103	106			2.89
	Calcium	104	105	104				0.380
	Iron	106	107	104	108			3.09
	Magnesium	106	105	104	108			2.86
	Potassium	98.8	101	99.2	100			0.770
	Sodium	101	102	100				0.569
	Strontium	103	104	103	105			1.36
	Tin	103	105	103	107			3.08
	Titanium	103	106	104	106			1.73
	Vanadium	100	106	104	107			2.63
	Zinc	102	107	106	109			2.73
EPA 200.8 Rev. 5.4	Aluminum	100	99.7	99.4	96.6			0.274
	Antimony	101	102	100	100			1.42
	Arsenic	103	103	103	102			0.506
	Beryllium	94.2	91.3	93.7	93.8			2.50
	Boron	106	105	103	103			0.751
	Cadmium	104	103	104	104			0.786
	Chromium	104	103	103	104			0.175
	Cobalt	102	100	100	99.8			0.0226
	Copper	100	99.6	101	99.0			1.33
	Lead	104	105	104	102			0.930
	Manganese	104	103	103	102			0.105
	Molybdenum	103	103	103	103			0.157
	Nickel	99.9	99.6	99.9	98.7			0.274
	Selenium	100	99.3	99.3	98.1			0.0171
	Silver	103	101	101	100			0.226
	Thallium	105	107	108	107			0.888
EPA 300.0 Rev. 2.1	Chloride	97.4	97.0	98.4			0.386	
	Sulfate	95.8	98.7	97.3			0.735	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	99.7	99.2				0.443
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108						4.13
EPA 353.2 Rev. 2.0	NO2NO3-N	100	97.8	97.2				0.367
EPA 365.1 Rev. 2.0	Total-P	104	105	106				0.701
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1	96.2	98.2				1.81
EPA 8321B	2,4-D	111	109	124				12.8
	Acesulfame K	107	41.7	43.4				3.82
	Acetaminophen	80.0	69.5	69.0				0.729
	Acetamiprid	90.5	53.7	65.5				19.7
	Afidopyropen	82.0	59.1	79.2				29.1
	AMPA	113	116	120				2.57
	Bentazon	103	82.4	91.2				10.1
	Benzovindiflupyr	82.9	70.2	86.7				21.1
	Carbamazepine	80.2	51.2	53.7				4.83
	Clothianidin	82.6	58.8	63.8				8.27
	Dinotefuran	90.4	73.0	78.8				7.73
	Diuron	69.8	44.2	45.3				2.37
	Endothall	79.9	79.9	83.2				4.01
	Fenuron	96.4	58.9	62.4				5.81
	Fluridone	86.9	73.3	84.8				14.6
	Glufosinate	115	95.9	90.4				5.99
	Glyphosate	90.6	81.8	88.6				6.00
	Hydrocodone	85.0	53.2	59.2				10.7
	Ibuprofen	72.7	60.7	64.8				6.56

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imazapyr	79.8	77.1	82.5		5.63
	Imidacloprid	105	96.2	102		4.37
	Linuron	70.3	50.4	53.8		6.50
	Mandestrobin	83.8	69.7	80.9		14.8
	MCCP	123	106	120		12.1
	Naproxen	101	74.8	77.6		3.59
	Primidone	84.3	67.5	66.8		1.11
	Pyraclostrobin	82.1	66.8	93.3		33.1
	Sucralose	75.9	75.8	78.4		2.98
	Thiamethoxam	85.4	65.5	69.4		5.83
	Tolfenpyrad	58.7	42.4	56.3		28.2
	Triclopyr	86.1	80.5	95.4		16.9
SM 2120 B-2011	Color (true)	100			0.524	
	Color (true)	100			0.302	
SM 2320 B-2011	Total Alkalinity	99.4			1.21	
SM 2540 C-2011	TDS				7.09	
SM 4500 F-C-2011	Fluoride	99.3	101	101		0.0
SM 5310 B-2011	Organic Carbon	107	108	111		1.72
	Organic Carbon	101	99.8	101		0.620

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2179339, 2179340
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2179339, 2179340
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2179309, 2179310, 2179317, 2179318, 2179319, 2179320
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2179309, 2179310, 2179317, 2179318, 2179319, 2179320
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2179309, 2179310, 2179317, 2179318, 2179319, 2179320
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2179309, 2179310, 2179317, 2179318, 2179319, 2179320
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2179311, 2179312, 2179321, 2179322, 2179323, 2179324
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2179337, 2179338
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2179337, 2179338
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2179339, 2179340
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2179307, 2179308, 2179313, 2179314, 2179315, 2179316

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2179309, 2179310, 2179317, 2179318, 2179319, 2179320

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	06/29/2020			06/30/2020 15:18	Yen Ta	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
EPA 200.7 Rev. 4.4	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/02/2020 13:26	Betina Topolski	2179339
	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/02/2020 14:01	Betina Topolski	2179340
EPA 200.8 Rev. 5.4	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/07/2020 19:42	Alexander Thompson	2179339
	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/07/2020 19:50	Alexander Thompson	2179340
	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/08/2020 17:23	Alexander Thompson	2179339
	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/08/2020 17:59	Alexander Thompson	2179340
	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/09/2020 11:47	Alexander Thompson	2179339
	06/29/2020	07/01/2020 16:10	Elliott D. Healy	07/09/2020 12:17	Alexander Thompson	2179340
EPA 300.0 Rev. 2.1	06/29/2020			07/02/2020 07:14	Elliott Rodriguez	2179313
	06/29/2020			07/02/2020 09:15	Elliott Rodriguez	2179307
	06/29/2020			07/02/2020 09:27	Elliott Rodriguez	2179308
	06/29/2020			07/02/2020 09:39	Elliott Rodriguez	2179314
	06/29/2020			07/02/2020 09:51	Elliott Rodriguez	2179315
	06/29/2020			07/02/2020 10:03	Elliott Rodriguez	2179316
EPA 350.1 Rev. 2.0	06/29/2020			07/04/2020 10:52	Ping Hua	2179309
	06/29/2020			07/04/2020 11:00	Ping Hua	2179310
	06/29/2020			07/04/2020 11:02	Ping Hua	2179317
	06/29/2020			07/04/2020 11:06	Ping Hua	2179320
	06/29/2020			07/04/2020 14:15	Ping Hua	2179318
	06/29/2020			07/04/2020 14:17	Ping Hua	2179319
EPA 351.2 Rev. 2.0	06/29/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:14	Jhamieka S. Greenwood	2179320
	06/29/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:26	Jhamieka S. Greenwood	2179309
	06/29/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:27	Jhamieka S. Greenwood	2179310
	06/29/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:29	Jhamieka S. Greenwood	2179317
	06/29/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:31	Jhamieka S. Greenwood	2179318
	06/29/2020	07/01/2020 09:40	Elliott Rodriguez	07/02/2020 09:32	Jhamieka S. Greenwood	2179319
EPA 353.2 Rev. 2.0	06/29/2020			07/01/2020 09:33	Beverly Y. Sanders	2179309
	06/29/2020			07/01/2020 09:41	Beverly Y. Sanders	2179310
	06/29/2020			07/01/2020 09:42	Beverly Y. Sanders	2179317
	06/29/2020			07/01/2020 09:43	Beverly Y. Sanders	2179318
	06/29/2020			07/01/2020 09:45	Beverly Y. Sanders	2179319
	06/29/2020			07/01/2020 09:46	Beverly Y. Sanders	2179320
EPA 365.1 Rev. 2.0	06/29/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:33	Lipi Saha	2179309
	06/29/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:34	Lipi Saha	2179310
	06/29/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:37	Lipi Saha	2179317
	06/29/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:38	Lipi Saha	2179318
	06/29/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:39	Lipi Saha	2179319
	06/29/2020	07/01/2020 12:11	Yen Ta	07/06/2020 08:40	Lipi Saha	2179320

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 dissolved	06/29/2020			06/30/2020 15:54	Jhamieka S. Greenwood	2179312
	06/29/2020			06/30/2020 15:57	Jhamieka S. Greenwood	2179322
	06/29/2020			06/30/2020 16:00	Jhamieka S. Greenwood	2179324
	06/29/2020			06/30/2020 16:05	Jhamieka S. Greenwood	2179323
	06/29/2020			06/30/2020 16:06	Jhamieka S. Greenwood	2179321
	06/29/2020			06/30/2020 16:07	Jhamieka S. Greenwood	2179311
	06/29/2020			06/30/2020 16:07	Jhamieka S. Greenwood	2179311
EPA 8321B	06/29/2020	06/29/2020 15:50	Rebecca Ware	06/29/2020 15:54	Rebecca Ware	2179337
	06/29/2020	06/29/2020 15:50	Rebecca Ware	06/29/2020 16:08	Rebecca Ware	2179338
	06/29/2020	06/29/2020 15:50	Rebecca Ware	06/30/2020 12:40	Rebecca Ware	2179337
	06/29/2020	06/29/2020 15:50	Rebecca Ware	06/30/2020 12:51	Rebecca Ware	2179338
	06/29/2020	06/29/2020 15:50	Rebecca Ware	07/02/2020 17:13	Rebecca Ware	2179337
	06/29/2020	06/29/2020 15:50	Rebecca Ware	07/02/2020 17:24	Rebecca Ware	2179338
	06/29/2020	07/02/2020 13:30	Hoor Shaik	07/08/2020 06:49	Juyoung Kim	2179337
SM 2120 B-2011	06/29/2020	07/02/2020 13:30	Hoor Shaik	07/08/2020 07:58	Juyoung Kim	2179338
	06/29/2020			06/30/2020 16:41	Blanca Fach	2179307
	06/29/2020			06/30/2020 16:42	Blanca Fach	2179308
	06/29/2020			06/30/2020 16:43	Blanca Fach	2179313
	06/29/2020			06/30/2020 16:51	Blanca Fach	2179315
	06/29/2020			06/30/2020 16:52	Blanca Fach	2179314
	06/29/2020			06/30/2020 16:53	Blanca Fach	2179316
SM 2320 B-2011	06/29/2020			07/03/2020 02:38	Lauren Lees	2179307
	06/29/2020			07/03/2020 02:50	Lauren Lees	2179308
	06/29/2020			07/03/2020 03:03	Lauren Lees	2179313
	06/29/2020			07/03/2020 03:15	Lauren Lees	2179314
	06/29/2020			07/03/2020 04:02	Lauren Lees	2179315
	06/29/2020			07/03/2020 04:14	Lauren Lees	2179316
	06/29/2020			07/02/2020 13:26	Betina Topolski	2179339
SM 2340B	06/29/2020			07/02/2020 14:01	Betina Topolski	2179340
SM 2540 C-2011	06/29/2020			07/01/2020 13:59	Yijie Li	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
SM 2540 D-2011	06/29/2020			07/01/2020 13:59	Yijie Li	2179307, 2179308, 2179313, 2179314, 2179315, 2179316
SM 4500 F-C-2011	06/29/2020			07/03/2020 02:38	Lauren Lees	2179307
	06/29/2020			07/03/2020 02:50	Lauren Lees	2179308
	06/29/2020			07/03/2020 03:03	Lauren Lees	2179313
	06/29/2020			07/03/2020 03:15	Lauren Lees	2179314
	06/29/2020			07/03/2020 04:02	Lauren Lees	2179315
	06/29/2020			07/03/2020 04:14	Lauren Lees	2179316
	06/29/2020			07/01/2020 04:14	David Boose	2179309
SM 5310 B-2011	06/29/2020			07/01/2020 14:23	David Boose	2179320

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	06/29/2020			07/01/2020 15:36	David Boose	2179310
	06/29/2020			07/01/2020 15:48	David Boose	2179317
	06/29/2020			07/01/2020 16:27	David Boose	2179318
	06/29/2020			07/01/2020 16:41	David Boose	2179319