

Chemical Analysis Report

NE-DIST-2021-03-24-01

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

Event Description: **Nassau Lakes**
Request ID: **RQ-2021-03-22-21**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 15-APR-2021 11:43

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: PALESTINE LAKE CENTER

Collection Date/Time: 03/23/2021 10:35

Field ID: 19010044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233328	EPA 180.1 Rev. 2.0	Turbidity	7.2		NTU	P395458	
	EPA 300.0 Rev. 2.1	Chloride	8.6		mg Cl/L	P395585	
		Sulfate	3.7		mg SO4/L	P395587	
	SM 2120 B-2011	Color (true)	110		PCU	P395440	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P395527	
	SM 2540 C-2011	TDS	53		mg/L	P395816	
	SM 2540 D-2011	TSS	2	I	mg/L	P395853	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P395529	
2233329	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P395909	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P395720	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.027		mg N/L	P395463	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P395543	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P395711	
2233330	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P395435	
2233336	EPA 8321B	2,4-D	0.0020	U	ug/L	P395318	
		Acesulfame K	0.10	UJ	ug/L	P395510	MS
		2,4,5-T	0.0040	U	ug/L	P395318	
		AMPA	0.10	U	ug/L	P395510	
		Sucralose	0.010	U	ug/L	P395510	
		Acetaminophen	0.0080	UJ	ug/L	P395318	LCS
		Acetamiprid	0.0020	U	ug/L	P395318	
		Endothall	0.25	U	ug/L	P395510	
		Glufosinate	0.10	U	ug/L	P395510	
		Glyphosate	0.10	U	ug/L	P395510	
		Afidopyropen	0.0020	U	ug/L	P395318	
		Bentazon	8.0E-04	U	ug/L	P395318	
		Benzovindiflupyr	0.0020	U	ug/L	P395318	
		Carbamazepine	8.0E-04	U	ug/L	P395318	
		Clothianidin	0.0020	U	ug/L	P395318	
		Dinotefuran	0.0020	U	ug/L	P395318	
		Diuron	0.0020	U	ug/L	P395318	
		Fenuron	0.016	U	ug/L	P395318	
		Fluridone	8.0E-04	U	ug/L	P395318	
		Imazapyr	0.0040	U	ug/L	P395318	
		Hydrocodone	0.0020	U	ug/L	P395318	
		Ibuprofen	0.020	U	ug/L	P395318	
		Imidacloprid	0.0020	U	ug/L	P395318	
		Linuron	0.0040	U	ug/L	P395318	
		Mandestrobin	0.0020	U	ug/L	P395318	
		MCPP	0.0020	U	ug/L	P395318	
		Naproxen	0.0080	U	ug/L	P395318	
		Primidone	0.0040	U	ug/L	P395318	
		Pyraclostrobin	0.0020	U	ug/L	P395318	

Field ID: 19010044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233336	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P395318	
		Tolfenpyrad	0.0020	U	ug/L	P395318	
		Triclopyr	0.0040	U	ug/L	P395318	
2233337	EPA 200.7 Rev. 4.4	Barium	10.6		ug/L	P395438	
		Calcium	1.94		mg/L	P395438	
		Iron	250		ug/L	P395438	
		Magnesium	1.26		mg/L	P395438	
		Manganese	19.7		ug/L	P395438	
		Potassium	0.40	I	mg/L	P395438	
		Sodium	4.9		mg/L	P395438	
		Zinc	5.0	U	ug/L	P395438	
	EPA 200.8 Rev. 5.4	Aluminum	188		ug/L	P395438	
		Antimony	0.10	I	ug/L	P395438	
		Arsenic	0.29		ug/L	P395438	
		Beryllium	0.010	U	ug/L	P395438	
		Boron**	22.5		ug/L	P395438	
		Cadmium	0.020	U	ug/L	P395438	
		Chromium	0.40	U	ug/L	P395438	
		Copper	1.00		ug/L	P395438	
		Lead	0.63		ug/L	P395438	
		Nickel	0.50	U	ug/L	P395438	
	SM 2340B	Selenium	0.20	U	ug/L	P395438	
		Silver	0.010	U	ug/L	P395438	
		Thallium	0.10	U	ug/L	P395438	
		Hardness	10.0		mg/L	P395438	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low 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 03/30/2021.

Sample Location: OCEAN POND CENTER

Collection Date/Time: 03/23/2021 12:00

Field ID: 21010011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233331	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P395458	
	EPA 300.0 Rev. 2.1	Chloride	7.6		mg Cl/L	P395585	
		Sulfate	1.4		mg SO4/L	P395587	
		Color (true)	160		PCU	P395441	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P395527	
	SM 2540 C-2011	TDS	45		mg/L	P395816	
	SM 2540 D-2011	TSS	2	I	mg/L	P395853	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P395529	
2233332	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P395910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P395720	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P395463	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P395544	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P395711	
2233333	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P395435	
2233338	EPA 200.7 Rev. 4.4	Barium	9.3		ug/L	P395438	
		Calcium	1.50		mg/L	P395438	
		Iron	580		ug/L	P395438	
		Magnesium	0.74		mg/L	P395438	
		Manganese	23.3		ug/L	P395438	
		Potassium	0.30	U	mg/L	P395438	
		Sodium	4.1		mg/L	P395438	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P395438	
		Aluminum	344		ug/L	P395438	
		Antimony	0.063	I	ug/L	P395438	
		Arsenic	0.46		ug/L	P395438	
		Beryllium	0.032	I	ug/L	P395438	
		Boron**	16.2		ug/L	P395438	
		Cadmium	0.020	U	ug/L	P395438	
		Chromium	0.40	U	ug/L	P395438	
		Copper	0.40	U	ug/L	P395438	
		Lead	0.62		ug/L	P395438	
		Nickel	0.50	U	ug/L	P395438	
		Selenium	0.20	U	ug/L	P395438	
		Silver	0.010	U	ug/L	P395438	
		Thallium	0.10	U	ug/L	P395438	
		Hardness	6.8		mg/L	P395438	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 03/30/2021.

Sample Location: Palestine Lake Center

Collection Date/Time: 03/23/2021 10:45

Field ID: FB03232021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233523	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P395459	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P395723	
		Sulfate	0.20	U	mg SO4/L	P395724	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P395441	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P395527	
	SM 2540 C-2011	TDS	15	U	mg/L	P395815	
	SM 2540 D-2011	TSS	2	U	mg/L	P395852	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P395529	
2233524	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P395910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P395789	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P395464	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P395545	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P395711	
2233525	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P395436	
2233526	EPA 8321B	2,4-D	0.0020	U	ug/L	P395359	
		Acesulfame K	0.10	U	ug/L	P395510	MS
		2,4,5-T	0.0040	U	ug/L	P395359	
		AMPA	0.10	U	ug/L	P395510	
		Sucralose	0.010	U	ug/L	P395510	
		Acetaminophen	0.0080	U	ug/L	P395359	
		Acetamiprid	0.0020	U	ug/L	P395359	
		Endothall	0.25	U	ug/L	P395510	
		Glufosinate	0.10	U	ug/L	P395510	
		Glyphosate	0.10	U	ug/L	P395510	
		Afidopyropen	0.0020	U	ug/L	P395359	
		Bentazon	8.0E-04	U	ug/L	P395359	
		Benzovindiflupyr	0.0020	U	ug/L	P395359	
		Carbamazepine	8.0E-04	U	ug/L	P395359	
		Clothianidin	0.0020	U	ug/L	P395359	
		Dinotefuran	0.0020	U	ug/L	P395359	
		Diuron	0.0020	U	ug/L	P395359	
		Fenuron	0.016	U	ug/L	P395359	
		Fluridone	8.0E-04	U	ug/L	P395359	
		Imazapyr	0.0040	U	ug/L	P395359	
		Hydrocodone	0.0020	U	ug/L	P395359	
		Ibuprofen	0.020	U	ug/L	P395359	
		Imidacloprid	0.0020	U	ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCP	0.0020	U	ug/L	P395359	
		Naproxen	0.0080	U	ug/L	P395359	
		Primidone	0.0040	U	ug/L	P395359	
		Pyraclostrobin	0.0020	U	ug/L	P395359	

Field ID: FB03232021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233526	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	
2233527	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P395438	
		Calcium	0.075	U	mg/L	P395438	
		Iron	30	U	ug/L	P395438	
		Magnesium	0.040	U	mg/L	P395438	
		Manganese	1.0	U	ug/L	P395438	
		Potassium	0.30	U	mg/L	P395438	
		Sodium	0.50	U	mg/L	P395438	
		Zinc	5.0	U	ug/L	P395438	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P395438	
		Antimony	0.050	U	ug/L	P395438	
		Arsenic	0.050	U	ug/L	P395438	
		Beryllium	0.010	U	ug/L	P395438	
		Boron**	2.0	U	ug/L	P395438	
		Cadmium	0.020	U	ug/L	P395438	
		Chromium	0.40	U	ug/L	P395438	
		Copper	0.40	U	ug/L	P395438	
		Lead	0.20	U	ug/L	P395438	
		Nickel	0.50	U	ug/L	P395438	
	SM 2340B	Selenium	0.20	U	ug/L	P395438	
		Silver	0.010	U	ug/L	P395438	
		Thallium	0.10	U	ug/L	P395438	
		Hardness	0.35	U	mg/L	P395438	

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: P395458

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395459

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P395438

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
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P395438

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
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 Rev. 2.1
Batch ID: P395585

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395587

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395723

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395724

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395909

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395910

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395720

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395789

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395463

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395464

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395543

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395544

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395545

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395435

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395436

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

Reference Method: EPA 8321B
Batch ID: P395318

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.030	I	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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P395359

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	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
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: P395510

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

Reference Method: SM 2120 B-2011

Batch ID: P395440

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011

Batch ID: P395441

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P395527

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

Reference Method: SM 2540 C-2011
Batch ID: P395815

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P395816

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P395852

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P395853

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P395529

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395711

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: P395438

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	103		P	80 - 120
Calcium	106		P	80 - 120
Iron	106		P	80 - 120
Magnesium	106		P	80 - 120
Manganese	100		P	80 - 120
Potassium	99.2		P	80 - 120
Sodium	101		P	80 - 120
Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P395438

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.3		P	85 - 115
Antimony	97.1		P	85 - 115
Arsenic	95.6		P	85 - 115
Beryllium	88.5		P	85 - 115
Boron	94.0		P	85 - 115
Cadmium	97.0		P	85 - 115
Chromium	93.6		P	85 - 115
Copper	95.6		P	85 - 115
Lead	96.9		P	85 - 115
Nickel	93.1		P	85 - 115
Selenium	94.3		P	85 - 115
Silver	97.8		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395585

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395587

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395723

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395724

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395909

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395910

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395720

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395789

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395464

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395543

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395544

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395545

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395435

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395436

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.5		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P395318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	126		P	30 - 160
2,4,5-T	96.7		P	30 - 160
Acetaminophen	203		F	30 - 160
Acetamiprid	83.0		P	30 - 160
Afidopyropen	70.3		P	30 - 160
Bentazon	62.6		P	30 - 160
Benzovindiflupyr	86.8		P	30 - 160
Carbamazepine	91.1		P	30 - 160
Clothianidin	93.6		P	30 - 160
Dinotefuran	82.0		P	30 - 160
Diuron	68.1		P	30 - 160
Fenuron	87.9		P	30 - 160
Fluridone	79.5		P	30 - 160
Hydrocodone	91.3		P	30 - 160
Ibuprofen	80.2		P	30 - 160
Imazapyr	78.9		P	30 - 160
Imidacloprid	103		P	30 - 160
Linuron	67.1		P	30 - 160
Mandestrobin	85.2		P	30 - 160
MCPP	110		P	30 - 160
Naproxen	62.8		P	30 - 160
Primidone	91.1		P	30 - 160
Pyraclostrobin	78.8		P	30 - 160
Thiamethoxam	99.4		P	30 - 160
Tolfenpyrad	44.4		P	30 - 160
Triclopyr	111		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P395359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	122		P	30 - 160
2,4,5-T	92.4		P	30 - 160
Acetaminophen	87.9		P	30 - 160
Acetamiprid	108		P	30 - 160
Afidopyropen	81.9		P	30 - 160
Bentazon	59.0		P	30 - 160
Benzovindiflupyr	103		P	30 - 160
Carbamazepine	106		P	30 - 160
Clothianidin	121		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P395359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dinotefuran	96.3		P	30 - 160
Diuron	80.6		P	30 - 160
Fenuron	102		P	30 - 160
Fluridone	97.4		P	30 - 160
Hydrocodone	114		P	30 - 160
Ibuprofen	77.5		P	30 - 160
Imazapyr	87.4		P	30 - 160
Imidacloprid	118		P	30 - 160
Linuron	80.4		P	30 - 160
Mandestrobin	102		P	30 - 160
MCPP	113		P	30 - 160
Naproxen	68.8		P	30 - 160
Primidone	103		P	30 - 160
Pyraclostrobin	83.7		P	30 - 160
Thiamethoxam	125		P	30 - 160
Tolfenpyrad	52.6		P	30 - 160
Triclopyr	103		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P395510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	139		P	40 - 150
AMPA	115		P	40 - 150
Endothall	89.0		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	80.1		P	40 - 140
Sucralose	101		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P395440

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.9		P	85 - 115

Reference Method: SM 2120 B-2011

Batch ID: P395441

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.2		P	85 - 115

Reference Method: SM 2320 B-2011

Batch ID: P395527

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P395529

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	90 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P395711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P395438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233519	Barium	104	104	P/P	80 - 120
2233519	Calcium	107	106	P/P	80 - 120
2233519	Iron	107	105	P/P	80 - 120
2233519	Magnesium	107	105	P/P	80 - 120
2233519	Manganese	102	103	P/P	80 - 120
2233519	Potassium	101	98.8	P/P	80 - 120
2233519	Sodium	103	99.0	P/P	80 - 120
2233519	Zinc	105	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P395438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233519	Aluminum	90.9	93.1	P/P	80 - 120
2233519	Antimony	94.8	95.8	P/P	80 - 120
2233519	Arsenic	93.1	93.3	P/P	80 - 120
2233519	Beryllium	87.2	88.6	P/P	80 - 120
2233519	Boron	95.0	95.8	P/P	80 - 120
2233519	Cadmium	95.2	95.4	P/P	80 - 120
2233519	Chromium	92.9	94.3	P/P	80 - 120
2233519	Copper	93.5	95.9	P/P	80 - 120
2233519	Lead	96.1	96.6	P/P	80 - 120
2233519	Nickel	91.4	92.0	P/P	80 - 120
2233519	Selenium	91.8	91.9	P/P	80 - 120
2233519	Silver	95.4	95.2	P/P	80 - 120
2233519	Thallium	103	103	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395585

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233312	Chloride	101	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233312	Sulfate	99.7	98.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233513	Chloride	102		P	90 - 110
2233707	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395724

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233513	Sulfate	102		P	90 - 110
2233707	Sulfate	98.4		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395909

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233281	Ammonia-N	96.0	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233385	Ammonia-N	98.8	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233263	Kjeldahl Nitrogen	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233314	NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395464

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233514	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233262	Total-P	106	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233332	Total-P	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233514	Total-P	106	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395435

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233237	O-Phosphate-P	97.6	97.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233387	O-Phosphate-P	100	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P395318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232693	2,4-D	112	98.8	P/P	30 - 160
2232693	2,4,5-T	104	97.7	P/P	30 - 160
2232693	Acetaminophen	108	98.9	P/P	30 - 160
2232693	Acetamiprid	93.9	75.5	P/P	30 - 160
2232693	Afidopyropen	80.5	64.6	P/P	30 - 160
2232693	Bentazon	36.4	37.6	P/P	30 - 160
2232693	Benzovindiflupyr	91.8	81.8	P/P	30 - 160
2232693	Carbamazepine	75.9	74.6	P/P	30 - 160
2232693	Clothianidin	83.2	96.8	P/P	30 - 160
2232693	Dinotefuran	120	113	P/P	30 - 160
2232693	Diuron	53.1	48.9	P/P	30 - 160
2232693	Fenuron	67.5	65.6	P/P	30 - 160
2232693	Fluridone	84.5	68.2	P/P	30 - 160
2232693	Hydrocodone	99.5	96.2	P/P	30 - 160
2232693	Ibuprofen	82.8	71.7	P/P	30 - 160
2232693	Imazapyr	93.7	83.8	P/P	30 - 160
2232693	Imidacloprid	152	142	P/P	30 - 160
2232693	Linuron	61.9	56.1	P/P	30 - 160
2232693	Mandestrobin	91.4	82.9	P/P	30 - 160
2232693	MCPP	103	94.5	P/P	30 - 160
2232693	Naproxen	58.5	48.2	P/P	30 - 160
2232693	Primidone	102	97.6	P/P	30 - 160
2232693	Pyraclostrobin	86.9	76.6	P/P	30 - 160
2232693	Thiamethoxam	135	127	P/P	30 - 160
2232693	Tolfenpyrad	55.5	55.3	P/P	30 - 160
2232693	Triclopyr	117	107	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P395359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233518	2,4-D	97.3	97.2	P/P	30 - 160
2233518	2,4,5-T	70.7	69.6	P/P	30 - 160
2233518	Acetaminophen	83.0	94.8	P/P	30 - 160
2233518	Acetamiprid	114	93.5	P/P	30 - 160
2233518	Afidopyropen	76.1	60.5	P/P	30 - 160
2233518	Bentazon	32.3	37.3	P/P	30 - 160
2233518	Benzovindiflupyr	94.4	93.3	P/P	30 - 160
2233518	Carbamazepine	87.3	90.1	P/P	30 - 160
2233518	Clothianidin	123	116	P/P	30 - 160
2233518	Dinotefuran	112	99.9	P/P	30 - 160
2233518	Diuron	53.8	59.2	P/P	30 - 160
2233518	Fenuron	81.8	86.5	P/P	30 - 160
2233518	Fluridone	83.7	82.1	P/P	30 - 160
2233518	Hydrocodone	121	116	P/P	30 - 160
2233518	Ibuprofen	68.8	70.6	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P395359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233518	Imazapyr	82.4	83.7	P/P	30 - 160
2233518	Imidacloprid	169	160	F/F	30 - 160
2233518	Linuron	65.7	65.5	P/P	30 - 160
2233518	Mandestrobin	90.7	89.2	P/P	30 - 160
2233518	MCPP	91.9	92.0	P/P	30 - 160
2233518	Naproxen	55.5	65.4	P/P	30 - 160
2233518	Primidone	95.7	102	P/P	30 - 160
2233518	Pyraclostrobin	87.0	87.9	P/P	30 - 160
2233518	Thiamethoxam	163	153	F/P	30 - 160
2233518	Tolfenpyrad	55.4	63.0	P/P	30 - 160
2233518	Triclopyr	75.5	80.6	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P395510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233336	Acesulfame K	198	211	F/F	40 - 150
2233336	AMPA	114	136	P/P	40 - 150
2233336	Endothall	80.8	77.0	P/P	40 - 150
2233336	Glufosinate	104	103	P/P	40 - 150
2233336	Glyphosate	63.7	67.4	P/P	40 - 140
2233336	Sucralose	97.9	99.4	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P395529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233261	Fluoride	98.5	98.5	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P395711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233314	Organic Carbon	99.2	99.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233312	Turbidity	5.24	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233383	Turbidity	2.29	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P395438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233519	Barium	0.0173	Spike	P	0 - 20
2233519	Calcium	0.940	Spike	P	0 - 20
2233519	Iron	1.70	Spike	P	0 - 20
2233519	Magnesium	1.70	Spike	P	0 - 20
2233519	Manganese	0.312	Spike	P	0 - 20
2233519	Potassium	1.62	Spike	P	0 - 20
2233519	Sodium	2.43	Spike	P	0 - 20
2233519	Zinc	0.296	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P395438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233519	Aluminum	1.85	Spike	P	0 - 20
2233519	Antimony	1.03	Spike	P	0 - 20
2233519	Arsenic	0.230	Spike	P	0 - 20
2233519	Beryllium	1.57	Spike	P	0 - 20
2233519	Boron	0.704	Spike	P	0 - 20
2233519	Cadmium	0.228	Spike	P	0 - 20
2233519	Chromium	1.58	Spike	P	0 - 20
2233519	Copper	2.61	Spike	P	0 - 20
2233519	Lead	0.507	Spike	P	0 - 20
2233519	Nickel	0.638	Spike	P	0 - 20
2233519	Selenium	0.0975	Spike	P	0 - 20
2233519	Silver	0.279	Spike	P	0 - 20
2233519	Thallium	0.482	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395585

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233312	Chloride	0.249	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233312	Sulfate	0.862	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233707	Chloride	0.237	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395724

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233707	Sulfate	0.109	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233281	Ammonia-N	2.13	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233385	Ammonia-N	0.601	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233263	Kjeldahl Nitrogen	1.73	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233384	Kjeldahl Nitrogen	18.5	Sample	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233314	NO2NO3-N	0.496	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P395464

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233514	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395543

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233262	Total-P	2.55	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395544

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233332	Total-P	0.0226	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395545

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233514	Total-P	0.435	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P395435

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233237	O-Phosphate-P	0.0956	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P395436

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233387	O-Phosphate-P	1.20	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P395318

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232693	2,4-D	12.1	Spike	P	0 - 30
2232693	2,4,5-T	5.77	Spike	P	0 - 30
2232693	Acetaminophen	8.43	Spike	P	0 - 30
2232693	Acetamiprid	21.7	Spike	P	0 - 30
2232693	Afidopyropen	21.8	Spike	P	0 - 30
2232693	Bentazon	3.25	Spike	P	0 - 30
2232693	Benzovindiflupyr	11.5	Spike	P	0 - 30
2232693	Carbamazepine	1.75	Spike	P	0 - 30
2232693	Clothianidin	15.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P395318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232693	Dinotefuran	5.98	Spike	P	0 - 30
2232693	Diuron	8.12	Spike	P	0 - 30
2232693	Fenuron	2.80	Spike	P	0 - 30
2232693	Fluridone	21.4	Spike	P	0 - 30
2232693	Hydrocodone	3.36	Spike	P	0 - 30
2232693	Ibuprofen	14.4	Spike	P	0 - 30
2232693	Imazapyr	5.74	Spike	P	0 - 30
2232693	Imidacloprid	7.06	Spike	P	0 - 30
2232693	Linuron	9.67	Spike	P	0 - 30
2232693	Mandestrobin	9.80	Spike	P	0 - 30
2232693	MCPP	8.54	Spike	P	0 - 30
2232693	Naproxen	19.3	Spike	P	0 - 30
2232693	Primidone	4.40	Spike	P	0 - 30
2232693	Pyraclostrobin	12.6	Spike	P	0 - 30
2232693	Thiamethoxam	5.64	Spike	P	0 - 30
2232693	Tolfenpyrad	0.337	Spike	P	0 - 30
2232693	Triclopyr	8.82	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233518	2,4-D	0.191	Spike	P	0 - 30
2233518	2,4,5-T	1.64	Spike	P	0 - 30
2233518	Acetaminophen	11.5	Spike	P	0 - 30
2233518	Acetamiprid	19.4	Spike	P	0 - 30
2233518	Afidopyropen	22.8	Spike	P	0 - 30
2233518	Bentazon	14.3	Spike	P	0 - 30
2233518	Benzovindiflupyr	1.16	Spike	P	0 - 30
2233518	Carbamazepine	3.20	Spike	P	0 - 30
2233518	Clothianidin	5.50	Spike	P	0 - 30
2233518	Dinotefuran	11.6	Spike	P	0 - 30
2233518	Diuron	9.59	Spike	P	0 - 30
2233518	Fenuron	5.63	Spike	P	0 - 30
2233518	Fluridone	1.94	Spike	P	0 - 30
2233518	Hydrocodone	4.41	Spike	P	0 - 30
2233518	Ibuprofen	2.54	Spike	P	0 - 30
2233518	Imazapyr	1.53	Spike	P	0 - 30
2233518	Imidacloprid	5.22	Spike	P	0 - 30
2233518	Linuron	0.364	Spike	P	0 - 30
2233518	Mandestrobin	1.66	Spike	P	0 - 30
2233518	MCPP	0.161	Spike	P	0 - 30
2233518	Naproxen	16.4	Spike	P	0 - 30
2233518	Primidone	6.09	Spike	P	0 - 30
2233518	Pyraclostrobin	0.979	Spike	P	0 - 30
2233518	Thiamethoxam	6.43	Spike	P	0 - 30
2233518	Tolfenpyrad	12.8	Spike	P	0 - 30
2233518	Triclopyr	6.59	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P395510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233336	Acesulfame K	6.12	Spike	P	0 - 30
2233336	AMPA	17.4	Spike	P	0 - 30
2233336	Endothall	4.83	Spike	P	0 - 30
2233336	Glufosinate	0.584	Spike	P	0 - 30
2233336	Glyphosate	5.70	Spike	P	0 - 30
2233336	Sucralose	1.49	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P395440

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233235	Color (true)	0.00787	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P395441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233369	Color (true)	1.06	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P395527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233261	Total Alkalinity	1.33	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P395815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233100	TDS	5.83	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P395816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233280	TDS	4.29	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P395529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233261	Fluoride	0.0	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P395711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233314	Organic Carbon	0.0271	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2233336

Field Sample ID: 19010044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	115	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.6	P	30 - 160
EPA 8321B	Diuron-d6	70.7	P	30 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	134	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	134	P	40 - 160
EPA 8321B	Ibuprofen-d3	81.5	P	30 - 160
EPA 8321B	Primidone-d5	94.6	P	30 - 160
EPA 8321B	Sucralose-d6	95.9	P	30 - 160
EPA 8321B	Sucralose-d6	95.9	P	30 - 160

Lab Sample ID: 2233526

Field Sample ID: FB03232021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	92.4	P	30 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Endothall-d6	120	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	117	P	40 - 160
EPA 8321B	Ibuprofen-d3	80.5	P	30 - 160
EPA 8321B	Primidone-d5	99.9	P	30 - 160
EPA 8321B	Sucralose-d6	93.4	P	30 - 160
EPA 8321B	Sucralose-d6	93.4	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104216

Included Lab Sample IDs: 2233328, 2233331

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	99.4	P/P	90 - 110
Sulfate	98.9	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104252

Included Lab Sample IDs: 2233330, 2233333, 2233525

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	97.8	P/P	90 - 110
O-Phosphate-P	98.7	98.7	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A104253

Included Lab Sample IDs: 2233328, 2233331, 2233523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	101	101	P/P	90 - 115
Color (true)	99.4	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104266

Included Lab Sample IDs: 2233328, 2233331, 2233523

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104267

Included Lab Sample IDs: 2233329, 2233332, 2233524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110
NO2NO3-N	104	105	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A104294

Included Lab Sample IDs: 2233328, 2233331, 2233523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.1	P/P	90 - 110
Total Alkalinity	98.1	98.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104294

Included Lab Sample IDs: 2233328, 2233331, 2233523

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A104297

Included Lab Sample IDs: 2233336, 2233526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	112	P/P	50 - 150
2,4-D	93.0	89.2	P/P	50 - 150
2,4,5-T	88.6	71.3	P/P	50 - 150
2,4,5-T	99.0	98.4	P/P	50 - 150
Acetaminophen	102	101	P/P	60 - 160
Acetaminophen	87.9	93.0	P/P	60 - 160
Acetamiprid	104	107	P/P	50 - 150
Acetamiprid	107	108	P/P	50 - 150
Afidopyropen	105	93.3	P/P	50 - 150
Afidopyropen	94.9	96.6	P/P	50 - 150
Bentazon	71.9	67.2	P/P	50 - 160
Bentazon	81.3	82.8	P/P	50 - 160
Benzovindiflupyr	112	117	P/P	50 - 160
Benzovindiflupyr	118	118	P/P	50 - 160
Carbamazepine	104	107	P/P	60 - 150
Carbamazepine	107	110	P/P	60 - 150
Clothianidin	105	109	P/P	60 - 150
Clothianidin	112	113	P/P	60 - 150
Dinotefuran	102	111	P/P	50 - 150
Dinotefuran	93.4	99.6	P/P	50 - 150
Diuron	106	103	P/P	60 - 160
Diuron	107	115	P/P	60 - 160
Fenuron	96.8	98.1	P/P	60 - 150
Fenuron	98.8	103	P/P	60 - 150
Fluridone	111	112	P/P	60 - 160
Fluridone	114	115	P/P	60 - 160
Hydrocodone	109	124	P/P	60 - 150
Hydrocodone	111	108	P/P	60 - 150
Ibuprofen	105	100	P/P	50 - 160
Ibuprofen	71.5	92.9	P/P	50 - 160
Imazapyr	66.5	73.8	P/P	50 - 160
Imazapyr	84.2	75.7	P/P	50 - 160
Imidacloprid	104	107	P/P	60 - 150
Imidacloprid	99.9	105	P/P	60 - 150
Linuron	106	106	P/P	60 - 150
Linuron	95.8	99.5	P/P	60 - 150
Mandestrobin	105	115	P/P	50 - 150
Mandestrobin	110	109	P/P	50 - 150
MCPP	112	103	P/P	50 - 150
MCPP	92.8	91.2	P/P	50 - 150
Naproxen	114	75.6	P/P	50 - 160
Naproxen	124	73.0	P/P	50 - 160
Primidone	97.0	99.5	P/P	60 - 150
Primidone	99.5	95.8	P/P	60 - 150
Pyraclostrobin	108	112	P/P	60 - 150
Pyraclostrobin	110	111	P/P	60 - 150
Thiamethoxam	109	120	P/P	50 - 150
Thiamethoxam	111	119	P/P	50 - 150
Tolfenpyrad	109	114	P/P	60 - 150
Tolfenpyrad	112	110	P/P	60 - 150
Triclopyr	108	103	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A104297

Included Lab Sample IDs: 2233336, 2233526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	81.6	88.0	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A104310

Included Lab Sample IDs: 2233337, 2233338, 2233527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	98.2	P/P	90 - 110
Aluminum	98.2	97.4	P/P	90 - 110
Antimony	94.8	95.2	P/P	90 - 110
Antimony	95.1	94.8	P/P	90 - 110
Arsenic	96.2	95.8	P/P	90 - 110
Arsenic	98.5	96.2	P/P	90 - 110
Beryllium	94.5	95.0	P/P	90 - 110
Beryllium	95.0	94.7	P/P	90 - 110
Boron	93.7	94.4	P/P	90 - 110
Boron	94.4	97.4	P/P	90 - 110
Cadmium	96.2	96.4	P/P	90 - 110
Cadmium	96.4	96.9	P/P	90 - 110
Chromium	95.4	95.5	P/P	90 - 110
Chromium	95.5	95.3	P/P	90 - 110
Copper	95.0	94.1	P/P	90 - 110
Copper	96.8	95.0	P/P	90 - 110
Lead	97.6	97.8	P/P	90 - 110
Lead	97.8	97.7	P/P	90 - 110
Nickel	96.0	93.6	P/P	90 - 110
Nickel	97.9	96.0	P/P	90 - 110
Selenium	95.7	95.5	P/P	90 - 110
Selenium	96.4	95.7	P/P	90 - 110
Silver	94.3	95.1	P/P	90 - 110
Silver	94.8	94.3	P/P	90 - 110
Thallium	103	103	P/P	90 - 110
Thallium	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104334

Included Lab Sample IDs: 2233329, 2233524

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104344

Included Lab Sample IDs: 2233337, 2233338, 2233527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	104	101	P/P	90 - 110
Barium	106	104	P/P	90 - 110
Calcium	101	102	P/P	90 - 110
Calcium	99.7	101	P/P	90 - 110
Iron	101	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104344

Included Lab Sample IDs: 2233337, 2233338, 2233527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	102	103	P/P	90 - 110
Magnesium	100	101	P/P	90 - 110
Magnesium	99.6	100	P/P	90 - 110
Manganese	102	99.7	P/P	90 - 110
Manganese	104	102	P/P	90 - 110
Potassium	98.1	98.3	P/P	90 - 110
Potassium	98.3	101	P/P	90 - 110
Sodium	95.6	95.8	P/P	90 - 110
Sodium	95.8	98.0	P/P	90 - 110
Zinc	107	104	P/P	90 - 110
Zinc	110	107	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A104352

Included Lab Sample IDs: 2233336, 2233526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	122	155	P/P	40 - 160
Acesulfame K	155	144	P/P	40 - 160
AMPA	114	115	P/P	40 - 160
AMPA	118	114	P/P	40 - 160
Endothall	125	99.6	P/P	40 - 160
Endothall	99.6	89.7	P/P	40 - 160
Glufosinate	123	129	P/P	40 - 160
Glufosinate	129	120	P/P	40 - 160
Glyphosate	152	158	P/P	40 - 160
Glyphosate	156	152	P/P	40 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104363

Included Lab Sample IDs: 2233332

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

Reference Method: SM 5310 B-2011

Run ID: A104385

Included Lab Sample IDs: 2233329, 2233332, 2233524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.1	98.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104389

Included Lab Sample IDs: 2233523

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.9	101	P/P	90 - 110
Sulfate	99.7	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104425

Included Lab Sample IDs: 2233329, 2233332

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104453

Included Lab Sample IDs: 2233524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.3	97.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A104465

Included Lab Sample IDs: 2233329, 2233332, 2233524

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	99.3	P/P	90 - 110
Ammonia-N	99.3	98.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A104508

Included Lab Sample IDs: 2233336, 2233526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	93.3	95.4	P/P	60 - 160
Sucralose	95.4	96.5	P/P	60 - 160

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					5.24	
	Turbidity					2.29	
EPA 200.7 Rev. 4.4	Barium	103	104	104			0.0173
	Calcium	106	107	106			0.940
	Iron	106	107	105			1.70
	Magnesium	106	107	105			1.70
	Manganese	100	102	103			0.312
	Potassium	99.2	101	98.8			1.62
	Sodium	101	103	99.0			2.43
	Zinc	102	105	105			0.296
EPA 200.8 Rev. 5.4	Aluminum	93.3	90.9	93.1			1.85
	Antimony	97.1	94.8	95.8			1.03
	Arsenic	95.6	93.1	93.3			0.230
	Beryllium	88.5	87.2	88.6			1.57
	Boron	94.0	95.0	95.8			0.704
	Cadmium	97.0	95.2	95.4			0.228
	Chromium	93.6	92.9	94.3			1.58
	Copper	95.6	93.5	95.9			2.61
	Lead	96.9	96.1	96.6			0.507
	Nickel	93.1	91.4	92.0			0.638
	Selenium	94.3	91.8	91.9			0.0975
	Silver	97.8	95.4	95.2			0.279
	Thallium	102	103	103			0.482
EPA 300.0 Rev. 2.1	Chloride	101	101	100			0.249
	Chloride	102	101	102		0.237	
	Sulfate	100	99.7	98.7			0.862
	Sulfate	101	98.4	102		0.109	
EPA 350.1 Rev. 2.0	Ammonia-N	95.6	96.0	99.0			2.13
	Ammonia-N	97.8	98.8	99.8			0.601
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	104	102			1.73
	Kjeldahl Nitrogen	103				18.5	
EPA 353.2 Rev. 2.0	NO2NO3-N	103	100	101			0.496
	NO2NO3-N	104	102	102			0.0
EPA 365.1 Rev. 2.0	Total-P	106	106	100			2.55
	Total-P	107	105	105			0.0226
	Total-P	105	106	107			0.435
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.2	97.6	97.5			0.0956
	O-Phosphate-P	97.5	100	102			1.20
EPA 8321B	2,4-D	126	112	98.8			12.1
	2,4-D	122	97.3	97.2			0.191
	2,4,5-T	96.7	104	97.7			5.77
	2,4,5-T	92.4	70.7	69.6			1.64
	Acesulfame K	139	198	211			6.12
	Acetaminophen	203	108	98.9			8.43
	Acetaminophen	87.9	83.0	94.8			11.5
	Acetamiprid	83.0	93.9	75.5			21.7
	Acetamiprid	108	114	93.5			19.4
	Afidopyropen	70.3	80.5	64.6			21.8
	Afidopyropen	81.9	76.1	60.5			22.8
	AMPA	115	114	136			17.4
	Bentazon	62.6	36.4	37.6			3.25
	Bentazon	59.0	32.3	37.3			14.3
	Benzovindiflupyr	86.8	91.8	81.8			11.5
	Benzovindiflupyr	103	94.4	93.3			1.16

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Carbamazepine	91.1	75.9	74.6			1.75
	Carbamazepine	106	87.3	90.1			3.20
	Clothianidin	93.6	83.2	96.8			15.1
	Clothianidin	121	123	116			5.50
	Dinotefuran	82.0	120	113			5.98
	Dinotefuran	96.3	112	99.9			11.6
	Diuron	68.1	53.1	48.9			8.12
	Diuron	80.6	53.8	59.2			9.59
	Endothall	89.0	80.8	77.0			4.83
	Fenuron	87.9	67.5	65.6			2.80
	Fenuron	102	81.8	86.5			5.63
	Fluridone	79.5	84.5	68.2			21.4
	Fluridone	97.4	83.7	82.1			1.94
	Glufosinate	101	104	103			0.584
	Glyphosate	80.1	63.7	67.4			5.70
	Hydrocodone	91.3	99.5	96.2			3.36
	Hydrocodone	114	121	116			4.41
	Ibuprofen	80.2	82.8	71.7			14.4
	Ibuprofen	77.5	68.8	70.6			2.54
	Imazapyr	78.9	93.7	83.8			5.74
	Imazapyr	87.4	82.4	83.7			1.53
	Imidacloprid	103	152	142			7.06
	Imidacloprid	118	169	160			5.22
	Linuron	67.1	61.9	56.1			9.67
	Linuron	80.4	65.7	65.5			0.364
	Mandestrobin	85.2	91.4	82.9			9.80
	Mandestrobin	102	90.7	89.2			1.66
	MCPP	110	103	94.5			8.54
	MCPP	113	91.9	92.0			0.161
	Naproxen	62.8	58.5	48.2			19.3
	Naproxen	68.8	55.5	65.4			16.4
	Primidone	91.1	102	97.6			4.40
	Primidone	103	95.7	102			6.09
	Pyraclostrobin	78.8	86.9	76.6			12.6
	Pyraclostrobin	83.7	87.0	87.9			0.979
	Sucralose	101	97.9	99.4			1.49
	Thiamethoxam	99.4	135	127			5.64
	Thiamethoxam	125	163	153			6.43
	Tolfenpyrad	44.4	55.5	55.3			0.337
	Tolfenpyrad	52.6	55.4	63.0			12.8
	Triclopyr	111	117	107			8.82
	Triclopyr	103	75.5	80.6			6.59
SM 2120 B-2011	Color (true)	98.9				0.0078	
	Color (true)	99.2				1.06	
SM 2320 B-2011	Total Alkalinity	101				1.33	
SM 2540 C-2011	TDS					5.83	
	TDS					4.29	
SM 4500 F-C-2011	Fluoride	98.3	98.5	98.5			0.0
SM 5310 B-2011	Organic Carbon	94.5	99.2	99.2			0.0271

Reference Method Descriptions

Method

Description

Associated Samples

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2233328, 2233331, 2233523
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2233337, 2233338, 2233527
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2233337, 2233338, 2233527
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2233328, 2233331, 2233523
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2233328, 2233331, 2233523
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2233329, 2233332, 2233524
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2233329, 2233332, 2233524
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2233329, 2233332, 2233524
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2233329, 2233332, 2233524
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2233330, 2233333, 2233525
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2233336, 2233526
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2233336, 2233526
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2233328, 2233331, 2233523
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2233328, 2233331, 2233523
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2233337, 2233338, 2233527
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2233328, 2233331, 2233523
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2233328, 2233331, 2233523
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2233328, 2233331, 2233523
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2233329, 2233332, 2233524

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	03/24/2021			03/24/2021 15:19	Blanca Fach	2233328, 2233331, 2233523
EPA 200.7 Rev. 4.4	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/29/2021 20:07	Josef B Mick	2233527
	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/29/2021 21:30	Josef B Mick	2233337
	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/29/2021 21:37	Josef B Mick	2233338
EPA 200.8 Rev. 5.4	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/26/2021 16:03	Alexander Thompson	2233527
	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/26/2021 18:07	Alexander Thompson	2233337
	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/26/2021 18:16	Alexander Thompson	2233338
EPA 300.0 Rev. 2.1	03/24/2021			03/25/2021 21:17	Lipi Saha	2233328
	03/24/2021			03/25/2021 21:29	Lipi Saha	2233331
	03/24/2021			03/29/2021 20:35	Lipi Saha	2233523
EPA 350.1 Rev. 2.0	03/24/2021			04/03/2021 10:05	Ping Hua	2233329
	03/24/2021			04/03/2021 10:22	Ping Hua	2233332
	03/24/2021			04/03/2021 10:33	Ping Hua	2233524
EPA 351.2 Rev. 2.0	03/24/2021	03/31/2021 13:16	Benjamin T. Nordmann	04/01/2021 13:48	Virginia P. Brown	2233329
	03/24/2021	03/31/2021 13:16	Benjamin T. Nordmann	04/01/2021 13:49	Virginia P. Brown	2233332
	03/24/2021	04/01/2021 12:36	Benjamin T. Nordmann	04/02/2021 11:29	Virginia P. Brown	2233524
EPA 353.2 Rev. 2.0	03/24/2021			03/25/2021 09:53	Beverly Y. Sanders	2233329
	03/24/2021			03/25/2021 09:54	Beverly Y. Sanders	2233332
	03/24/2021			03/25/2021 10:20	Beverly Y. Sanders	2233524
EPA 365.1 Rev. 2.0	03/24/2021	03/26/2021 12:49	Yen Ta	03/29/2021 14:02	Shengyu Ding	2233329
	03/24/2021	03/26/2021 12:49	Yen Ta	03/29/2021 14:08	Shengyu Ding	2233524
	03/24/2021	03/26/2021 12:49	Yen Ta	03/30/2021 11:07	Shengyu Ding	2233332
EPA 365.1 Rev. 2.0 dissolved	03/24/2021			03/24/2021 14:39	Patrick M. Roche	2233330
	03/24/2021			03/24/2021 14:40	Patrick M. Roche	2233333
	03/24/2021			03/24/2021 14:56	Patrick M. Roche	2233525
EPA 8321B	03/24/2021	03/25/2021 09:00	Hoor Shaik	03/27/2021 02:10	Juyoung Kim	2233336
	03/24/2021	03/26/2021 10:30	Rebecca Ware	03/26/2021 13:02	Rebecca Ware	2233336
	03/24/2021	03/26/2021 10:30	Rebecca Ware	03/26/2021 16:08	Rebecca Ware	2233526
	03/24/2021	03/26/2021 10:30	Rebecca Ware	04/05/2021 14:18	Rebecca Ware	2233336
	03/24/2021	03/26/2021 10:30	Rebecca Ware	04/05/2021 16:51	Rebecca Ware	2233526
	03/24/2021	03/29/2021 10:00	Hoor Shaik	03/29/2021 23:57	Juyoung Kim	2233526
SM 2120 B-2011	03/24/2021			03/24/2021 15:46	Benjamin T. Nordmann	2233328
	03/24/2021			03/24/2021 15:56	Benjamin T. Nordmann	2233523
	03/24/2021			03/24/2021 16:05	Benjamin T. Nordmann	2233331
SM 2320 B-2011	03/24/2021			03/25/2021 20:18	Dale L. Simmons	2233328
	03/24/2021			03/25/2021 20:26	Dale L. Simmons	2233331
	03/24/2021			03/25/2021 22:41	Dale L. Simmons	2233523
SM 2340B	03/24/2021			03/29/2021 20:07	Josef B Mick	2233527
	03/24/2021			03/29/2021 21:30	Josef B Mick	2233337
	03/24/2021			03/29/2021 21:37	Josef B Mick	2233338

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 C-2011	03/24/2021			03/26/2021 15:08	Yijie Li	2233328, 2233331, 2233523
SM 2540 D-2011	03/24/2021			03/26/2021 15:08	Yijie Li	2233328, 2233331, 2233523
SM 4500 F-C-2011	03/24/2021			03/25/2021 20:18	Dale L. Simmons	2233328
	03/24/2021			03/25/2021 20:26	Dale L. Simmons	2233331
	03/24/2021			03/25/2021 22:41	Dale L. Simmons	2233523
SM 5310 B-2011	03/24/2021			03/30/2021 23:15	Madeline Gruver	2233329
	03/24/2021			03/30/2021 23:25	Madeline Gruver	2233332
	03/24/2021			03/31/2021 00:46	Madeline Gruver	2233524