

Chemical Analysis Report

NW-DIST-2021-03-24-02

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

Event Description: **SMP Bioassessment**
Request ID: **RQ-2021-01-25-57**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
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Date Certified: 15-APR-2021 10:40



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: Jacks Branch

Collection Date/Time: 03/23/2021 11:40

Field ID: G5NW0164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233513	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P395459	
	EPA 300.0 Rev. 2.1	Chloride	5.2		mg Cl/L	P395723	
		Sulfate	0.80		mg SO4/L	P395724	
	SM 2120 B-2011	Color (true)	61		PCU	P395441	
	SM 2320 B-2011	Total Alkalinity	4.6		mg CaCO3/L	P395527	
	SM 2540 C-2011	TDS	32		mg/L	P395817	
	SM 2540 D-2011	TSS	2	I	mg/L	P395854	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P395529	
2233514	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P395910	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35		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	0.014		mg P/L	P395545	
	SM 5310 B-2011	Organic Carbon	5.4		mg C/L	P395711	
2233515	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P395436	
2233518	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	0.036	I	ug/L	P395510	
		Acetaminophen	0.011	I	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	UJ	ug/L	P395359	MS
		Linuron	0.0040	U	ug/L	P395359	
		Mandestrobin	0.0020	U	ug/L	P395359	
		MCPP	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: G5NW0164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233518	EPA 8321B	Thiamethoxam	0.0020	UJ	ug/L	P395359	MS
		Tolfenpyrad	0.0020	U	ug/L	P395359	
		Triclopyr	0.0040	U	ug/L	P395359	
2233519	EPA 200.7 Rev. 4.4	Barium	10.3		ug/L	P395438	
		Calcium	1.90		mg/L	P395438	
		Iron	1.04E+03		ug/L	P395438	
		Magnesium	0.85		mg/L	P395438	
		Potassium	0.94	I	mg/L	P395438	
		Sodium	2.5		mg/L	P395438	
		Zinc	5.0	U	ug/L	P395438	
	EPA 200.8 Rev. 5.4	Aluminum	217		ug/L	P395438	
		Antimony	0.050	U	ug/L	P395438	
		Arsenic	0.37		ug/L	P395438	
		Boron**	12.6		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	0.22	I	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	
2233520	EPA 8270E	Acetochlor	0.24	U	ng/L	P395643	
		Alachlor	0.24	U	ng/L	P395643	
		Ametryn	0.59	U	ng/L	P395643	
		Atrazine	0.43	I	ng/L	P395643	
		Atrazine Desethyl	1.5	U	ng/L	P395643	
		Azinphos Methyl	2.0	U	ng/L	P395643	
		Azoxystrobin**	0.49	UJ	ng/L	P395643	RPD
		Bromacil	0.49	U	ng/L	P395643	
		Butylate	0.39	U	ng/L	P395643	
		Caffeine**	7.3	U	ng/L	P395643	
		Carbophenothion	0.49	U	ng/L	P395643	
		Carfentrazone Ethyl**	0.098	U	ng/L	P395643	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P395643	
		Chlorpyrifos Methyl	0.049	U	ng/L	P395643	
		Cyanazine	3.2	U	ng/L	P395643	
		Demeton	1.5	U	ng/L	P395643	
		Diazinon	0.12	U	ng/L	P395643	
		Difenoconazole**	0.59	UJ	ng/L	P395643	RPD
		Dimethenamid**	0.098	U	ng/L	P395643	
		Disulfoton	0.49	U	ng/L	P395643	
		Dithiopyr**	0.17	U	ng/L	P395643	
		EPTC	1.2	U	ng/L	P395643	
		Ethion	0.15	U	ng/L	P395643	

Field ID: G5NW0164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233520	EPA 8270E	Ethoprop	0.098	U	ng/L	P395643	
		Fenamiphos	0.49	U	ng/L	P395643	
		Fenbuconazole**	0.12	UJ	ng/L	P395643	LCS, MS
		Fipronil	0.24	U	ng/L	P395643	
		Fipronil Desulfinyl**	0.12	U	ng/L	P395643	
		Fipronil Sulfide	0.15	U	ng/L	P395643	
		Fipronil Sulfone	0.15	U	ng/L	P395643	
		Fluazifop-P-butyl**	0.098	U	ng/L	P395643	
		Fludioxonil**	0.12	U	ng/L	P395643	
		Flumioxazin**	1.7	UJ	ng/L	P395643	RPD
		Flutolanil**	0.19	I	ng/L	P395643	
		Fluxapyroxad**	0.60		ng/L	P395643	
		Fonofos	0.20	U	ng/L	P395643	
		Hexazinone	0.49	U	ng/L	P395643	
		Imazalil**	0.73	U	ng/L	P395643	
		Iprodione**	0.59	U	ng/L	P395643	
		Malathion	0.34	U	ng/L	P395643	
		Metalaxyl	0.73	U	ng/L	P395643	
		Metolachlor	0.34	U	ng/L	P395643	
		Metribuzin	3.2	U	ng/L	P395643	
		Mevinphos	1.0	U	ng/L	P395643	
		Molinate	0.29	U	ng/L	P395643	
		Myclobutanil**	0.24	U	ng/L	P395643	
		Naled**	1.5	U	ng/L	P395643	
		Norflurazon	0.49	U	ng/L	P395643	
		Oxadiazon	0.79	IV	ng/L	P395643	
		Oxyfluorfen**	0.15	U	ng/L	P395643	
		Parathion Ethyl	0.24	U	ng/L	P395643	
		Parathion Methyl	0.54	U	ng/L	P395643	
		Pendimethalin	0.98	U	ng/L	P395643	
		Phorate	0.51	U	ng/L	P395643	
		Prodiamine**	0.17	U	ng/L	P395643	
		Prometon	0.88	U	ng/L	P395643	
		Prometryn	0.20	U	ng/L	P395643	
		Pronamide**	0.15	U	ng/L	P395643	
		Propiconazole**	0.49	U	ng/L	P395643	
		Pyriproxyfen**	0.12	U	ng/L	P395643	
		Simazine	0.49	U	ng/L	P395643	
		Sulfentrazone**	0.49	U	ng/L	P395643	
		Tebuconazole**	0.49	U	ng/L	P395643	
		Terbufos	0.098	U	ng/L	P395643	
		Terbuthylazine	0.41	U	ng/L	P395643	

Field ID: G5NW0164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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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 8270E: V - Due to the presence of oxadiazon in both the Method Blank and the sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

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
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
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: 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: P395910

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

Quality Assurance Report

Method Blank Results

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: P395464

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

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

Component	Result	Code	Units
Total-P	0.002	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 8270E
Batch ID: P395643

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P395643

Component	Result	Code	Units
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.69	I	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P395359

Component	Result	Code	Units
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: P395441

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P395527

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

Reference Method: SM 2540 C-2011

Batch ID: P395817

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P395854

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

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
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
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: 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

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: P395789

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

Quality Assurance Report

Laboratory Control Sample Accuracy

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: P395545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	105		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 8270E

Batch ID: P395643

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	90.1	92.5	P/P	70 - 121
Alachlor	87.9	93.5	P/P	70 - 119
Ametryn	70.2	82.4	P/P	61 - 135
Atrazine	89.4	91.2	P/P	76 - 123
Atrazine Desethyl	90.7	91.8	P/P	35 - 140
Azinphos Methyl	94.8	118	P/P	57 - 163
Azoxystrobin	104	157	P/P	43 - 231
Bromacil	80.3	89.3	P/P	42 - 123
Butylate	51.4	50.7	P/P	34 - 92.0
Caffeine	87.9	98.7	P/P	70 - 130
Carbophenothion	84.5	94.6	P/P	61 - 121
Carfentrazone Ethyl	81.6	94.4	P/P	62 - 139
Chlorpyrifos Ethyl	96.9	88.8	P/P	67 - 121
Chlorpyrifos Methyl	90.2	91.7	P/P	67 - 120
Cyanazine	103	113	P/P	20 - 226
Demeton	80.5	81.0	P/P	35 - 125
Diazinon	85.7	89.3	P/P	70 - 122
Difenoconazole	94.2	135	P/P	56 - 186
Dimethenamid	85.3	85.9	P/P	67 - 119
Disulfoton	88.0	85.5	P/P	47 - 120
Dithiopyr	78.4	84.0	P/P	67 - 118
EPTC	59.6	51.4	P/P	33 - 90.0
Ethion	83.7	91.1	P/P	40 - 133
Ethoprop	81.1	80.9	P/P	61 - 121
Fenamiphos	84.3	99.9	P/P	31 - 139
Fenbuconazole	47.6	59.5	F/F	66 - 141
Fipronil	82.2	93.1	P/P	62 - 129
Fipronil Desulfinyl	80.1	86.5	P/P	59 - 126
Fipronil Sulfide	93.2	85.6	P/P	63 - 117
Fipronil Sulfone	89.3	92.5	P/P	57 - 117
Fluazifop-P-butyl	84.8	91.3	P/P	63 - 124
Fludioxonil	99.4	104	P/P	63 - 123
Flumioxazin	112	159	P/P	34 - 245
Flutolanil	73.6	87.9	P/P	56 - 131

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P395643

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluxapyroxad	70.7	87.7	P/P	57 - 117
Fonofos	83.2	82.1	P/P	61 - 116
Hexazinone	97.5	103	P/P	55 - 138
Imazalil	113	105	P/P	33 - 143
Iprodione	86.7	101	P/P	59 - 118
Malathion	103	113	P/P	62 - 138
Metalaxyl	88.7	90.8	P/P	24 - 147
Metolachlor	91.0	90.5	P/P	68 - 118
Metribuzin	90.4	90.0	P/P	20 - 239
Mevinphos	82.9	85.4	P/P	46 - 124
Molinate	66.5	61.1	P/P	46 - 100
Myclobutanil	81.6	85.6	P/P	32 - 149
Naled	53.2	52.9	P/P	32 - 95.0
Norflurazon	85.1	102	P/P	57 - 127
Oxadiazon	107	98.8	P/P	63 - 118
Oxyfluorfen	102	109	P/P	69 - 137
Parathion Ethyl	84.9	91.4	P/P	70 - 113
Parathion Methyl	96.5	99.5	P/P	71 - 130
Pendimethalin	86.0	84.9	P/P	55 - 118
Phorate	75.1	80.9	P/P	46 - 125
Prodiamine	62.0	59.9	P/P	20 - 141
Prometon	78.8	85.1	P/P	54 - 122
Prometryn	79.7	90.4	P/P	66 - 124
Pronamide	90.0	96.6	P/P	79 - 122
Propiconazole	75.1	88.7	P/P	61 - 126
Pyriproxyfen	78.2	90.1	P/P	52 - 131
Simazine	97.4	92.4	P/P	75 - 128
Sulfentrazone	71.8	90.4	P/P	20 - 132
Tebuconazole	64.4	69.0	P/P	20 - 116
Terbufos	86.9	84.0	P/P	61 - 117
Terbutylazine	91.1	94.4	P/P	74 - 116

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
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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P395359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	118		P	30 - 160
Linuron	80.4		P	30 - 160
Mandestrobin	102		P	30 - 160
MCPD	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: 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

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	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	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: 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

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 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

Quality Assurance Report Matrix Spike Accuracy

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: 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 8270E

Batch ID: P395643

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233520	Acetochlor	80.7	88.0	P/P	66 - 122
2233520	Alachlor	80.5	81.4	P/P	65 - 122
2233520	Ametryn	78.0	77.3	P/P	45 - 173
2233520	Atrazine	81.0	85.6	P/P	70 - 134
2233520	Atrazine Desethyl	77.8	83.2	P/P	25 - 150
2233520	Azinphos Methyl	94.0	105	P/P	44 - 174
2233520	Azoxystrobin	126	125	P/P	10 - 268
2233520	Bromacil	76.7	76.0	P/P	31 - 145
2233520	Butylate	37.4	35.0	P/P	15 - 97.0
2233520	Caffeine	107	103	P/P	70 - 130
2233520	Carbophenothion	75.3	75.8	P/P	42 - 129
2233520	Carfentrazone Ethyl	76.3	77.8	P/P	62 - 145
2233520	Chlorpyrifos Ethyl	75.5	73.7	P/P	60 - 124
2233520	Chlorpyrifos Methyl	76.8	79.5	P/P	66 - 119
2233520	Cyanazine	102	109	P/P	17 - 225
2233520	Demeton	71.0	75.3	P/P	36 - 142
2233520	Diazinon	83.4	87.2	P/P	70 - 128
2233520	Difenoconazole	117	113	P/P	33 - 222
2233520	Dimethenamid	79.2	81.7	P/P	54 - 125
2233520	Disulfoton	70.0	70.4	P/P	49 - 133
2233520	Dithiopyr	70.9	74.6	P/P	55 - 123
2233520	EPTC	34.7	33.3	P/P	19 - 91.0
2233520	Ethion	72.6	69.1	P/P	13 - 143
2233520	Ethoprop	74.8	80.2	P/P	49 - 144
2233520	Fenamiphos	45.8	49.7	P/P	32 - 136
2233520	Fenbuconazole	58.4	53.6	F/F	73 - 148
2233520	Fipronil	75.9	76.6	P/P	57 - 129
2233520	Fipronil Desulfinyl	66.7	67.6	P/P	49 - 127
2233520	Fipronil Sulfide	64.9	77.6	P/P	44 - 127
2233520	Fipronil Sulfone	72.5	85.2	P/P	35 - 126
2233520	Fluazifop-P-butyl	79.6	79.2	P/P	67 - 129
2233520	Fludioxonil	92.7	96.5	P/P	61 - 126
2233520	Flumioxazin	141	141	P/P	38 - 279
2233520	Flutolanil	62.4	59.9	P/P	55 - 136
2233520	Fluxapyroxad	69.2	69.5	P/P	33 - 140
2233520	Fonofos	70.8	77.1	P/P	58 - 125
2233520	Hexazinone	97.1	92.8	P/P	57 - 148
2233520	Imazalil	100	111	P/P	10 - 221
2233520	Iprodione	80.1	85.3	P/P	32 - 140
2233520	Malathion	84.5	87.0	P/P	52 - 138

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P395643

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233520	Metalaxyl	80.7	81.3	P/P	46 - 134
2233520	Metolachlor	88.8	85.6	P/P	58 - 122
2233520	Metribuzin	87.2	84.3	P/P	16 - 272
2233520	Mevinphos	81.0	90.0	P/P	45 - 140
2233520	Molinate	55.6	58.5	P/P	41 - 103
2233520	Myclobutanil	73.9	76.8	P/P	60 - 134
2233520	Naled	46.1	53.4	P/P	20 - 113
2233520	Norflurazon	91.6	94.2	P/P	51 - 123
2233520	Oxadiazon	65.4	64.1	P/P	44 - 125
2233520	Oxyfluorfen	98.2	99.3	P/P	66 - 176
2233520	Parathion Ethyl	78.9	79.6	P/P	57 - 132
2233520	Parathion Methyl	83.0	86.2	P/P	59 - 156
2233520	Pendimethalin	79.3	79.3	P/P	59 - 129
2233520	Phorate	67.3	69.0	P/P	47 - 136
2233520	Prodiamine	60.5	61.5	P/P	10 - 159
2233520	Prometon	78.8	80.3	P/P	59 - 127
2233520	Prometryn	74.0	74.2	P/P	59 - 129
2233520	Pronamide	105	95.6	P/P	65 - 145
2233520	Propiconazole	79.4	77.9	P/P	28 - 165
2233520	Pyriproxyfen	78.9	83.1	P/P	21 - 180
2233520	Simazine	78.5	85.4	P/P	63 - 147
2233520	Sulfentrazone	79.5	79.9	P/P	32 - 136
2233520	Tebuconazole	59.3	47.6	P/P	10 - 117
2233520	Terbufos	73.1	80.1	P/P	61 - 131
2233520	Terbuthylazine	82.7	82.8	P/P	62 - 126

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
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	MCP	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

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	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: 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	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	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: 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

Quality Assurance Report Precision

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: 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: 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: 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: 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 8270E
 Batch ID: P395643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233520	Acetochlor	8.64	Spike	P	0 - 30
2233520	Alachlor	1.09	Spike	P	0 - 30
2233520	Ametryn	0.803	Spike	P	0 - 30
2233520	Atrazine	4.80	Spike	P	0 - 30
2233520	Atrazine Desethyl	6.72	Spike	P	0 - 30
2233520	Azinphos Methyl	11.4	Spike	P	0 - 30
2233520	Azoxystrobin	0.824	Spike	P	0 - 30
2233520	Bromacil	0.941	Spike	P	0 - 30
2233520	Butylate	6.66	Spike	P	0 - 30
2233520	Caffeine	3.59	Spike	P	0 - 30
2233520	Carbophenothion	0.724	Spike	P	0 - 30
2233520	Carfentrazone Ethyl	1.88	Spike	P	0 - 30
2233520	Chlorpyrifos Ethyl	2.41	Spike	P	0 - 30
2233520	Chlorpyrifos Methyl	3.50	Spike	P	0 - 30
2233520	Cyanazine	6.37	Spike	P	0 - 30
2233520	Demeton	5.89	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P395643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233520	Diazinon	4.54	Spike	P	0 - 30
2233520	Difenoconazole	3.50	Spike	P	0 - 30
2233520	Dimethenamid	3.07	Spike	P	0 - 30
2233520	Disulfoton	0.623	Spike	P	0 - 30
2233520	Dithiopyr	5.10	Spike	P	0 - 30
2233520	EPTC	4.09	Spike	P	0 - 30
2233520	Ethion	4.97	Spike	P	0 - 30
2233520	Ethoprop	6.95	Spike	P	0 - 30
2233520	Fenamiphos	8.19	Spike	P	0 - 30
2233520	Fenbuconazole	8.48	Spike	P	0 - 30
2233520	Fipronil	0.842	Spike	P	0 - 30
2233520	Fipronil Desulfinyl	1.27	Spike	P	0 - 30
2233520	Fipronil Sulfide	17.8	Spike	P	0 - 30
2233520	Fipronil Sulfone	16.2	Spike	P	0 - 30
2233520	Fluazifop-P-butyl	0.532	Spike	P	0 - 30
2233520	Fludioxonil	3.95	Spike	P	0 - 30
2233520	Flumioxazin	0.493	Spike	P	0 - 30
2233520	Flutolanil	3.82	Spike	P	0 - 30
2233520	Fluxapyroxad	0.324	Spike	P	0 - 30
2233520	Fonofos	8.54	Spike	P	0 - 30
2233520	Hexazinone	4.54	Spike	P	0 - 30
2233520	Imazalil	10.4	Spike	P	0 - 30
2233520	Iprodione	6.29	Spike	P	0 - 30
2233520	Malathion	2.88	Spike	P	0 - 30
2233520	Metalaxyl	0.710	Spike	P	0 - 30
2233520	Metolachlor	3.61	Spike	P	0 - 30
2233520	Metribuzin	3.36	Spike	P	0 - 30
2233520	Mevinphos	10.5	Spike	P	0 - 30
2233520	Molinate	5.06	Spike	P	0 - 30
2233520	Myclobutanil	3.81	Spike	P	0 - 30
2233520	Naled	14.6	Spike	P	0 - 30
2233520	Norflurazon	2.87	Spike	P	0 - 30
2233520	Oxadiazon	1.60	Spike	P	0 - 30
2233520	Oxyfluorfen	1.09	Spike	P	0 - 30
2233520	Parathion Ethyl	0.890	Spike	P	0 - 30
2233520	Parathion Methyl	3.80	Spike	P	0 - 30
2233520	Pendimethalin	0.0934	Spike	P	0 - 30
2233520	Phorate	2.43	Spike	P	0 - 30
2233520	Prodiamine	1.70	Spike	P	0 - 30
2233520	Prometon	1.87	Spike	P	0 - 30
2233520	Prometryn	0.245	Spike	P	0 - 30
2233520	Pronamide	8.97	Spike	P	0 - 30
2233520	Propiconazole	1.94	Spike	P	0 - 30
2233520	Pyriproxyfen	5.24	Spike	P	0 - 30
2233520	Simazine	8.40	Spike	P	0 - 30
2233520	Sulfentrazone	0.513	Spike	P	0 - 30
2233520	Tebuconazole	21.9	Spike	P	0 - 30
2233520	Terbufos	9.18	Spike	P	0 - 30
2233520	Terbuthylazine	0.134	Spike	P	0 - 30
LFB	Acetochlor	2.57	LCS	P	0 - 30
LFB	Alachlor	6.18	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P395643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Ametryn	16.0	LCS	P	0 - 30
LFB	Atrazine	2.02	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.18	LCS	P	0 - 30
LFB	Azinphos Methyl	22.2	LCS	P	0 - 30
LFB	Azoxystrobin	40.4	LCS	F	0 - 30
LFB	Bromacil	10.6	LCS	P	0 - 30
LFB	Butylate	1.26	LCS	P	0 - 30
LFB	Caffeine	11.6	LCS	P	0 - 30
LFB	Carbophenothion	11.3	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	14.6	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	8.73	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.62	LCS	P	0 - 30
LFB	Cyanazine	9.34	LCS	P	0 - 30
LFB	Demeton	0.635	LCS	P	0 - 30
LFB	Diazinon	4.11	LCS	P	0 - 30
LFB	Difenoconazole	35.7	LCS	F	0 - 30
LFB	Dimethenamid	0.780	LCS	P	0 - 30
LFB	Disulfoton	2.96	LCS	P	0 - 30
LFB	Dithiopyr	6.86	LCS	P	0 - 30
LFB	EPTC	14.7	LCS	P	0 - 30
LFB	Ethion	8.47	LCS	P	0 - 30
LFB	Ethoprop	0.264	LCS	P	0 - 30
LFB	Fenamiphos	16.9	LCS	P	0 - 30
LFB	Fenbuconazole	22.3	LCS	P	0 - 30
LFB	Fipronil	12.4	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	7.72	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.47	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.56	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	7.31	LCS	P	0 - 30
LFB	Fludioxonil	4.07	LCS	P	0 - 30
LFB	Flumioxazin	34.2	LCS	F	0 - 30
LFB	Flutolanil	17.7	LCS	P	0 - 30
LFB	Fluxapyroxad	21.4	LCS	P	0 - 30
LFB	Fonofos	1.35	LCS	P	0 - 30
LFB	Hexazinone	5.83	LCS	P	0 - 30
LFB	Imazalil	7.27	LCS	P	0 - 30
LFB	Iprodione	15.0	LCS	P	0 - 30
LFB	Malathion	8.67	LCS	P	0 - 30
LFB	Metalaxyl	2.44	LCS	P	0 - 30
LFB	Metolachlor	0.577	LCS	P	0 - 30
LFB	Metribuzin	0.463	LCS	P	0 - 30
LFB	Mevinphos	3.02	LCS	P	0 - 30
LFB	Molinate	8.53	LCS	P	0 - 30
LFB	Myclobutanil	4.81	LCS	P	0 - 30
LFB	Naled	0.481	LCS	P	0 - 30
LFB	Norflurazon	17.8	LCS	P	0 - 30
LFB	Oxadiazon	7.97	LCS	P	0 - 30
LFB	Oxyfluorfen	6.75	LCS	P	0 - 30
LFB	Parathion Ethyl	7.39	LCS	P	0 - 30
LFB	Parathion Methyl	3.04	LCS	P	0 - 30
LFB	Pendimethalin	1.33	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P395643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	7.44	LCS	P	0 - 30
LFB	Prodiamine	3.35	LCS	P	0 - 30
LFB	Prometon	7.76	LCS	P	0 - 30
LFB	Prometryn	12.6	LCS	P	0 - 30
LFB	Pronamide	7.03	LCS	P	0 - 30
LFB	Propiconazole	16.6	LCS	P	0 - 30
LFB	Pyriproxyfen	14.1	LCS	P	0 - 30
LFB	Simazine	5.29	LCS	P	0 - 30
LFB	Sulfentrazone	22.9	LCS	P	0 - 30
LFB	Tebuconazole	6.90	LCS	P	0 - 30
LFB	Terbufos	3.34	LCS	P	0 - 30
LFB	Terbutylazine	3.59	LCS	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	MCP	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

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

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	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: 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: P395817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233369	TDS	6.06	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

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: 2233518

Field Sample ID: G5NW0164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.1	P	30 - 160
EPA 8321B	Diuron-d6	65.0	P	30 - 160
EPA 8321B	Endothall-d6	113	P	40 - 160
EPA 8321B	Endothall-d6	113	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	115	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	115	P	40 - 160
EPA 8321B	Ibuprofen-d3	77.1	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160

Lab Sample ID: 2233520

Field Sample ID: G5NW0164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	85.5	P	20 - 200
EPA 8270E	Simazine-d10	103	P	73 - 135
EPA 8270E	Terbufos-d10	87.7	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104252

Included Lab Sample IDs: 2233515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	97.9	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A104253

Included Lab Sample IDs: 2233513

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104266

Included Lab Sample IDs: 2233513

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104267

Included Lab Sample IDs: 2233514

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

Reference Method: SM 2320 B-2011

Run ID: A104294

Included Lab Sample IDs: 2233513

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

Reference Method: SM 4500 F-C-2011

Run ID: A104294

Included Lab Sample IDs: 2233513

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

Reference Method: EPA 8321B

Run ID: A104297

Included Lab Sample IDs: 2233518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.9	93.0	P/P	50 - 150
2,4,5-T	86.6	88.6	P/P	50 - 150
Acetaminophen	89.5	87.9	P/P	60 - 160
Acetamiprid	110	104	P/P	50 - 150
Afidopyropen	93.9	94.9	P/P	50 - 150
Bentazon	60.4	71.9	P/P	50 - 160
Benzovindiflupyr	114	112	P/P	50 - 160
Carbamazepine	101	104	P/P	60 - 150
Clothianidin	114	105	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A104297
Included Lab Sample IDs: 2233518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dinotefuran	101	93.4	P/P	50 - 150
Diuron	107	106	P/P	60 - 160
Fenuron	97.5	96.8	P/P	60 - 150
Fluridone	103	111	P/P	60 - 160
Hydrocodone	108	109	P/P	60 - 150
Ibuprofen	94.6	71.5	P/P	50 - 160
Imazapyr	72.3	66.5	P/P	50 - 160
Imidacloprid	103	99.9	P/P	60 - 150
Linuron	104	95.8	P/P	60 - 150
Mandestrobin	110	105	P/P	50 - 150
MCPP	94.1	92.8	P/P	50 - 150
Naproxen	86.5	114	P/P	50 - 160
Primidone	88.6	99.5	P/P	60 - 150
Pyraclostrobin	112	110	P/P	60 - 150
Thiamethoxam	107	109	P/P	50 - 150
Tolfenpyrad	110	109	P/P	60 - 150
Triclopyr	89.8	81.6	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A104310
Included Lab Sample IDs: 2233519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	98.2	P/P	90 - 110
Antimony	95.1	94.8	P/P	90 - 110
Arsenic	98.5	96.2	P/P	90 - 110
Boron	93.7	94.4	P/P	90 - 110
Cadmium	96.2	96.4	P/P	90 - 110
Chromium	95.4	95.5	P/P	90 - 110
Copper	96.8	95.0	P/P	90 - 110
Lead	97.6	97.8	P/P	90 - 110
Nickel	97.9	96.0	P/P	90 - 110
Selenium	96.4	95.7	P/P	90 - 110
Silver	94.8	94.3	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: 2233514

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: 2233519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	104	101	P/P	90 - 110
Calcium	101	102	P/P	90 - 110
Iron	102	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104344

Included Lab Sample IDs: 2233519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	100	101	P/P	90 - 110
Potassium	98.3	101	P/P	90 - 110
Sodium	95.8	98.0	P/P	90 - 110
Zinc	107	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A104352

Included Lab Sample IDs: 2233518

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

Reference Method: SM 5310 B-2011

Run ID: A104385

Included Lab Sample IDs: 2233514

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: 2233513

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

Reference Method: EPA 8270E

Run ID: A104413

Included Lab Sample IDs: 2233520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	112		P	80 - 120
Atrazine	96.8		P	80 - 120
Atrazine Desethyl	102		P	80 - 120
Azinphos Methyl	91.9		P	80 - 120
Azoxystrobin	107		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	98.0		P	80 - 120
Caffeine	92.4		P	80 - 120
Carbophenothion	94.2		P	80 - 120
Carfentrazone Ethyl	94.9		P	80 - 120
Chlorpyrifos Ethyl	97.6		P	80 - 120
Chlorpyrifos Methyl	97.4		P	80 - 120
Cyanazine	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A104413
Included Lab Sample IDs: 2233520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Demeton	95.1		P	80 - 120
Diazinon	101		P	80 - 120
Difenoconazole	97.6		P	80 - 120
Dimethenamid	99.5		P	80 - 120
Disulfoton	95.3		P	80 - 120
Dithiopyr	100		P	80 - 120
EPTC	97.9		P	80 - 120
Ethion	96.0		P	80 - 120
Ethoprop	95.9		P	80 - 120
Fenamiphos	99.8		P	80 - 120
Fenbuconazole	105		P	80 - 120
Fipronil	96.0		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	99.9		P	80 - 120
Fipronil Sulfone	103		P	80 - 120
Fluazifop-P-butyl	98.1		P	80 - 120
Fludioxonil	99.5		P	80 - 120
Flumioxazin	98.9		P	80 - 120
Flutolanil	101		P	80 - 120
Fluxapyroxad	97.4		P	80 - 120
Fonofos	103		P	80 - 120
Hexazinone	116		P	80 - 120
Imazalil	104		P	80 - 120
Iprodione	100		P	80 - 120
Malathion	90.4		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	98.6		P	80 - 120
Mevinphos	100		P	80 - 120
Molinate	97.9		P	80 - 120
Myclobutanil	99.3		P	80 - 120
Naled	102		P	80 - 120
Norflurazon	113		P	80 - 120
Oxadiazon	102		P	80 - 120
Oxyfluorfen	97.1		P	80 - 120
Parathion Ethyl	99.0		P	80 - 120
Parathion Methyl	100		P	80 - 120
Pendimethalin	102		P	80 - 120
Phorate	96.3		P	80 - 120
Prodiamine	98.6		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	101		P	80 - 120
Pronamide	100		P	80 - 120
Propiconazole	103		P	80 - 120
Pyriproxyfen	103		P	80 - 120
Simazine	104		P	80 - 120
Sulfentrazone	104		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	98.4		P	80 - 120
Terbuthylazine	98.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104453

Included Lab Sample IDs: 2233514

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: 2233514

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

Reference Method: EPA 8321B

Run ID: A104508

Included Lab Sample IDs: 2233518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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						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
	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
	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	102		101	102		0.237	
	Sulfate	101		98.4	102		0.109	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8		98.8	99.8			0.601
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103					18.5	
EPA 353.2 Rev. 2.0	NO2NO3-N	104		102	102			0.0
EPA 365.1 Rev. 2.0	Total-P	105		106	107			0.435
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5		100	102			1.20
EPA 8270E	Acetochlor	90.1	92.5	80.7	88.0	2.57		8.64
	Alachlor	87.9	93.5	80.5	81.4	6.18		1.09
	Ametryn	70.2	82.4	78.0	77.3	16.0		0.803
	Atrazine	89.4	91.2	81.0	85.6	2.02		4.80
	Atrazine Desethyl	90.7	91.8	77.8	83.2	1.18		6.72
	Azinphos Methyl	94.8	118	94.0	105	22.2		11.4
	Azoxystrobin	104	157	126	125	40.4		0.824
	Bromacil	80.3	89.3	76.7	76.0	10.6		0.941
	Butylate	51.4	50.7	37.4	35.0	1.26		6.66
	Caffeine	87.9	98.7	107	103	11.6		3.59
	Carbophenothion	84.5	94.6	75.3	75.8	11.3		0.724
	Carfentrazone Ethyl	81.6	94.4	76.3	77.8	14.6		1.88
	Chlorpyrifos Ethyl	96.9	88.8	75.5	73.7	8.73		2.41
	Chlorpyrifos Methyl	90.2	91.7	76.8	79.5	1.62		3.50
	Cyanazine	103	113	102	109	9.34		6.37
	Demeton	80.5	81.0	71.0	75.3	0.635		5.89
	Diazinon	85.7	89.3	83.4	87.2	4.11		4.54
	Difenoconazole	94.2	135	117	113	35.7		3.50
	Dimethenamid	85.3	85.9	79.2	81.7	0.780		3.07
	Disulfoton	88.0	85.5	70.0	70.4	2.96		0.623
	Dithiopyr	78.4	84.0	70.9	74.6	6.86		5.10
	EPTC	59.6	51.4	34.7	33.3	14.7		4.09
	Ethion	83.7	91.1	72.6	69.1	8.47		4.97
	Ethoprop	81.1	80.9	74.8	80.2	0.264		6.95
	Fenamiphos	84.3	99.9	45.8	49.7	16.9		8.19
	Fenbuconazole	47.6	59.5	58.4	53.6	22.3		8.48
	Fipronil	82.2	93.1	75.9	76.6	12.4		0.842

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	SMP
EPA 8270E	Fipronil Desulfinyl	80.1	86.5	66.7	67.6	7.72	1.27
	Fipronil Sulfide	93.2	85.6	64.9	77.6	8.47	17.8
	Fipronil Sulfone	89.3	92.5	72.5	85.2	3.56	16.2
	Fluazifop-P-butyl	84.8	91.3	79.6	79.2	7.31	0.532
	Fludioxonil	99.4	104	92.7	96.5	4.07	3.95
	Flumioxazin	112	159	141	141	34.2	0.493
	Flutolanil	73.6	87.9	62.4	59.9	17.7	3.82
	Fluxapyroxad	70.7	87.7	69.2	69.5	21.4	0.324
	Fonofos	83.2	82.1	70.8	77.1	1.35	8.54
	Hexazinone	97.5	103	97.1	92.8	5.83	4.54
	Imazalil	113	105	100	111	7.27	10.4
	Iprodione	86.7	101	80.1	85.3	15.0	6.29
	Malathion	103	113	84.5	87.0	8.67	2.88
	Metalaxyl	88.7	90.8	80.7	81.3	2.44	0.710
	Metolachlor	91.0	90.5	88.8	85.6	0.577	3.61
	Metribuzin	90.4	90.0	87.2	84.3	0.463	3.36
	Mevinphos	82.9	85.4	81.0	90.0	3.02	10.5
	Molinate	66.5	61.1	55.6	58.5	8.53	5.06
	Myclobutanil	81.6	85.6	73.9	76.8	4.81	3.81
	Naled	53.2	52.9	46.1	53.4	0.481	14.6
	Norflurazon	85.1	102	91.6	94.2	17.8	2.87
	Oxadiazon	107	98.8	65.4	64.1	7.97	1.60
	Oxyfluorfen	102	109	98.2	99.3	6.75	1.09
	Parathion Ethyl	84.9	91.4	78.9	79.6	7.39	0.890
	Parathion Methyl	96.5	99.5	83.0	86.2	3.04	3.80
	Pendimethalin	86.0	84.9	79.3	79.3	1.33	0.0934
	Phorate	75.1	80.9	67.3	69.0	7.44	2.43
	Prodiamine	62.0	59.9	60.5	61.5	3.35	1.70
	Prometon	78.8	85.1	78.8	80.3	7.76	1.87
	Prometryn	79.7	90.4	74.0	74.2	12.6	0.245
	Pronamide	90.0	96.6	105	95.6	7.03	8.97
	Propiconazole	75.1	88.7	79.4	77.9	16.6	1.94
	Pyriproxyfen	78.2	90.1	78.9	83.1	14.1	5.24
	Simazine	97.4	92.4	78.5	85.4	5.29	8.40
	Sulfentrazone	71.8	90.4	79.5	79.9	22.9	0.513
	Tebuconazole	64.4	69.0	59.3	47.6	6.90	21.9
	Terbufos	86.9	84.0	73.1	80.1	3.34	9.18
	Terbutylazine	91.1	94.4	82.7	82.8	3.59	0.134
EPA 8321B	2,4-D	122		97.3	97.2		0.191
	2,4,5-T	92.4		70.7	69.6		1.64
	Acesulfame K	139		198	211		6.12
	Acetaminophen	87.9		83.0	94.8		11.5
	Acetamiprid	108		114	93.5		19.4
	Afidopyropen	81.9		76.1	60.5		22.8
	AMPA	115		114	136		17.4
	Bentazon	59.0		32.3	37.3		14.3
	Benzovindiflupyr	103		94.4	93.3		1.16
	Carbamazepine	106		87.3	90.1		3.20
	Clothianidin	121		123	116		5.50
	Dinotefuran	96.3		112	99.9		11.6
	Diuron	80.6		53.8	59.2		9.59
	Endothall	89.0		80.8	77.0		4.83
	Fenuron	102		81.8	86.5		5.63
	Fluridone	97.4		83.7	82.1		1.94

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Glufosinate	101	104	103			0.584
	Glyphosate	80.1	63.7	67.4			5.70
	Hydrocodone	114	121	116			4.41
	Ibuprofen	77.5	68.8	70.6			2.54
	Imazapyr	87.4	82.4	83.7			1.53
	Imidacloprid	118	169	160			5.22
	Linuron	80.4	65.7	65.5			0.364
	Mandestrobin	102	90.7	89.2			1.66
	MCPP	113	91.9	92.0			0.161
	Naproxen	68.8	55.5	65.4			16.4
	Primidone	103	95.7	102			6.09
	Pyraclostrobin	83.7	87.0	87.9			0.979
	Sucralose	101	97.9	99.4			1.49
	Thiamethoxam	125	163	153			6.43
	Tolfenpyrad	52.6	55.4	63.0			12.8
	Triclopyr	103	75.5	80.6			6.59
SM 2120 B-2011	Color (true)	99.2				1.06	
SM 2320 B-2011	Total Alkalinity	101				1.33	
SM 2540 C-2011	TDS					6.06	
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
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2233513
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2233519
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2233519
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2233513
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2233513
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2233514
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2233514
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2233514
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2233514
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2233515
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2233520
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2233518
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2233518
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2233513
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2233513
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2233513
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2233513
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2233513
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2233514

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	2233513
EPA 200.7 Rev. 4.4	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/29/2021 21:53	Josef B Mick	2233519
EPA 200.8 Rev. 5.4	03/24/2021	03/24/2021 16:30	Elliott D. Healy	03/26/2021 16:50	Alexander Thompson	2233519
EPA 300.0 Rev. 2.1	03/24/2021			03/29/2021 20:11	Lipi Saha	2233513
EPA 350.1 Rev. 2.0	03/24/2021			04/03/2021 10:31	Ping Hua	2233514
EPA 351.2 Rev. 2.0	03/24/2021	04/01/2021 12:36	Benjamin T. Nordmann	04/02/2021 11:28	Virginia P. Brown	2233514
EPA 353.2 Rev. 2.0	03/24/2021			03/25/2021 10:19	Beverly Y. Sanders	2233514
EPA 365.1 Rev. 2.0	03/24/2021	03/26/2021 12:49	Yen Ta	03/29/2021 14:07	Shengyu Ding	2233514
EPA 365.1 Rev. 2.0 dissolved	03/24/2021			03/24/2021 15:27	Patrick M. Roche	2233515
EPA 8270E	03/24/2021	03/29/2021 08:00	Rasheda Ghaffari	03/31/2021 15:06	Vandana T. Nagar	2233520
EPA 8321B	03/24/2021	03/26/2021 10:30	Rebecca Ware	03/26/2021 15:54	Rebecca Ware	2233518
	03/24/2021	03/26/2021 10:30	Rebecca Ware	04/05/2021 16:39	Rebecca Ware	2233518
	03/24/2021	03/29/2021 10:00	Hoor Shaik	03/29/2021 22:48	Juyoung Kim	2233518
SM 2120 B-2011	03/24/2021			03/24/2021 15:55	Benjamin T. Nordmann	2233513
SM 2320 B-2011	03/24/2021			03/25/2021 21:55	Dale L. Simmons	2233513
SM 2540 C-2011	03/24/2021			03/26/2021 15:08	Yijie Li	2233513
SM 2540 D-2011	03/24/2021			03/26/2021 15:08	Yijie Li	2233513
SM 4500 F-C-2011	03/24/2021			03/25/2021 21:55	Dale L. Simmons	2233513
SM 5310 B-2011	03/24/2021			03/31/2021 00:36	Madeline Gruver	2233514