

Chemical Analysis Report

NE-DIST-2021-03-19-03

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

Event Description: **Cannon SCI's**
Request ID: **RQ-2021-03-15-47**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 12-APR-2021 14:44

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: Cannon CR @ S Ward St

Collection Date/Time: 03/18/2021 11:50

Field ID: 21030016FLA

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2232795	EPA 180.1 Rev. 2.0	Turbidity	4.2	A	NTU	P395219	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P395466	
		Sulfate	1.5		mg SO4/L	P395468	
	SM 2120 B-2011	Color (true)	140		PCU	P395236	
	SM 2320 B-2011	Total Alkalinity	58		mg CaCO3/L	P395328	
	SM 2540 C-2011	TDS	112		mg/L	P395620	
	SM 2540 D-2011	TSS	2	I	mg/L	P395624	
	SM 4500 F-C-2011	Fluoride	0.067	I	mg F/L	P395332	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P395908	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P395607	
2232796	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P395338	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P395485	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P395667	
2232797	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P395242	
2232808	EPA 8276	Chlordane	5.2	U	ng/L	P395393	
		Toxaphene	31	U	ng/L	P395393	
2232809	EPA 8270E	Acetochlor	0.25	U	ng/L	P395480	
		Alachlor	0.25	U	ng/L	P395480	
		Ametryn	0.59	U	ng/L	P395480	
		Atrazine	9.1		ng/L	P395480	
		Atrazine Desethyl	1.6	I	ng/L	P395480	
		Azinphos Methyl	2.0	UJ	ng/L	P395480	CCV, LCS
		Azoxystrobin**	0.66	I	ng/L	P395480	
		Bromacil	0.49	U	ng/L	P395480	
		Butylate	0.40	U	ng/L	P395480	
		Caffeine**	7.4	U	ng/L	P395480	
		Carbophenothion	0.49	U	ng/L	P395480	
		Carfentrazone Ethyl**	0.099	U	ng/L	P395480	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P395480	
		Chlorpyrifos Methyl	0.049	U	ng/L	P395480	
		Cyanazine	3.2	U	ng/L	P395480	
		Demeton	1.5	U	ng/L	P395480	
		Diazinon	0.12	U	ng/L	P395480	
		Difenoconazole**	0.59	U	ng/L	P395480	
		Dimethenamid**	0.099	U	ng/L	P395480	
		Disulfoton	0.49	U	ng/L	P395480	
		Dithiopyr**	0.17	U	ng/L	P395480	
		EPTC	1.2	UJ	ng/L	P395480	RPD
		Ethion	0.15	U	ng/L	P395480	
		Ethoprop	0.099	U	ng/L	P395480	
		Fenamiphos	0.49	U	ng/L	P395480	
		Fenbuconazole**	0.12	U	ng/L	P395480	
		Fipronil	0.41	I	ng/L	P395480	

Field ID: 21030016FLA

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2232809	EPA 8270E	Fipronil Desulfinyl**	0.40	I	ng/L	P395480	MS
		Fipronil Sulfide	0.57	I	ng/L	P395480	
		Fipronil Sulfone	1.2		ng/L	P395480	
		Fluazifop-P-butyl**	0.099	U	ng/L	P395480	
		Fludioxonil**	0.12	U	ng/L	P395480	
		Flumioxazin**	1.7	U	ng/L	P395480	
		Flutolanil**	0.71		ng/L	P395480	
		Fluxapyroxad**	0.19	I	ng/L	P395480	
		Fonofos	0.20	U	ng/L	P395480	
		Hexazinone	0.49	U	ng/L	P395480	
		Imazalil**	0.74	U	ng/L	P395480	
		Iprodione**	0.59	U	ng/L	P395480	
		Malathion	0.35	U	ng/L	P395480	
		Metalaxyl	0.74	U	ng/L	P395480	
		Metolachlor	0.41	I	ng/L	P395480	
		Metribuzin	3.2	U	ng/L	P395480	
		Mevinphos	1.0	U	ng/L	P395480	
		Molinate	0.30	U	ng/L	P395480	
		Myclobutanil**	0.25	U	ng/L	P395480	
		Naled**	1.5	U	ng/L	P395480	
		Norflurazon	0.49	U	ng/L	P395480	
		Oxadiazon	0.72	I	ng/L	P395480	
		Oxyfluorfen**	0.15	U	ng/L	P395480	
		Parathion Ethyl	0.25	U	ng/L	P395480	
		Parathion Methyl	0.54	U	ng/L	P395480	
		Pendimethalin	0.99	U	ng/L	P395480	
		Phorate	0.52	U	ng/L	P395480	
		Prodiamine**	0.59	I	ng/L	P395480	
		Prometon	0.89	U	ng/L	P395480	
		Prometryn	0.20	U	ng/L	P395480	
		Pronamide**	0.15	U	ng/L	P395480	
		Propiconazole**	0.49	U	ng/L	P395480	
		Pyriproxyfen**	0.12	UJ	ng/L	P395480	CCV, LCS, RPD
		Simazine	510		ng/L	P395480	
		Sulfentrazone**	0.56	I	ng/L	P395480	
		Tebuconazole**	1.7	I	ng/L	P395480	
2232810	EPA 8321B	Terbufos	0.099	U	ng/L	P395480	MS
		Terbuthylazine	0.42	U	ng/L	P395480	
		2,4-D	0.0026	I	ug/L	P395318	
		Acesulfame K	0.26	I	ug/L	P395198	
		2,4,5-T	0.0040	U	ug/L	P395318	
		AMPA	0.18	I	ug/L	P395198	
		Sucralose	0.095		ug/L	P395198	
		Acetaminophen	0.0080	UJ	ug/L	P395318	LCS

Field ID: 21030016FLA

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2232810	EPA 8321B	Acetamiprid	0.0020	U	ug/L	P395318	
		Endothall	0.25	U	ug/L	P395198	
		Glufosinate	0.10	U	ug/L	P395198	
		Glyphosate	0.10	U	ug/L	P395198	
		Afidopyropen	0.0020	U	ug/L	P395318	
		Bentazon	0.0018	I	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	8.1E-04	I	ug/L	P395318	
		Imazapyr	0.038		ug/L	P395318	
		Hydrocodone	0.0020	U	ug/L	P395318	
		Ibuprofen	0.020	U	ug/L	P395318	
		Imidacloprid	0.072		ug/L	P395318	
		Linuron	0.0040	U	ug/L	P395318	
		Mandestrobin	0.0020	U	ug/L	P395318	
		MCP	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	
		Thiamethoxam	0.0020	U	ug/L	P395318	
		Tolfenpyrad	0.0020	U	ug/L	P395318	
		Triclopyr	0.0040	U	ug/L	P395318	
2232811	EPA 200.7 Rev. 4.4	Barium	9.7		ug/L	P395294	
		Calcium	25.2		mg/L	P395294	
		Iron	470		ug/L	P395294	
		Magnesium	2.47		mg/L	P395294	
		Manganese	5.4		ug/L	P395294	
		Potassium	0.84	I	mg/L	P395294	
		Sodium	7.5		mg/L	P395294	
		Zinc	5.0	U	ug/L	P395294	
	EPA 200.8 Rev. 5.4	Aluminum	146		ug/L	P395294	
		Antimony	0.063	I	ug/L	P395294	
		Arsenic	1.34		ug/L	P395294	
		Beryllium	0.010	U	ug/L	P395294	
		Boron**	14.6		ug/L	P395294	
		Cadmium	0.020	U	ug/L	P395294	
		Chromium	0.69	I	ug/L	P395294	
		Copper	0.65	I	ug/L	P395294	
		Lead	0.20	U	ug/L	P395294	
		Nickel	0.50	U	ug/L	P395294	
		Selenium	0.20	U	ug/L	P395294	

Field ID: 21030016FLA

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2232811	EPA 200.8 Rev. 5.4	Silver	0.010	U	ug/L	P395294	
		Thallium	0.10	U	ug/L	P395294	
	SM 2340B	Hardness	73		mg/L	P395294	

Ref. Method and Comment:

SM 2120 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 8270E: MS accuracy for some parameters not assessed due to high content of these parameter in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8321B: 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: P395219

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P395294

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: P395294

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: P395466

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395468

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395908

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: P395607

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P395338

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P395485

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P395242

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

Reference Method: EPA 8270E
 Batch ID: P395480

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: P395480

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	0.30	U	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 8276

Batch ID: P395393

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B

Batch ID: P395198

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P395198

Component	Result	Code	Units
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/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

Reference Method: SM 2120 B-2011

Batch ID: P395236

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P395328

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

Reference Method: SM 2540 C-2011

Batch ID: P395620

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P395624

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P395332

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395667

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: P395294

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	94.9		P	85 - 115
Calcium	104		P	85 - 115
Iron	102		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	98.3		P	85 - 115
Potassium	101		P	85 - 115
Sodium	100		P	85 - 115
Zinc	92.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P395294

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	94.4		P	85 - 115
Antimony	96.3		P	85 - 115
Arsenic	97.4		P	85 - 115
Beryllium	91.7		P	85 - 115
Boron	96.9		P	85 - 115
Cadmium	96.5		P	85 - 115
Chromium	93.7		P	85 - 115
Copper	99.1		P	85 - 115
Lead	99.2		P	85 - 115
Nickel	96.7		P	85 - 115
Selenium	94.8		P	85 - 115
Silver	99.1		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395466

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395468

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395908

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395607

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P395338

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P395485

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P395242

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

Reference Method: EPA 8270E
 Batch ID: P395480

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	83.5	84.2	P/P	70 - 121
Alachlor	81.6	80.9	P/P	70 - 119
Ametryn	91.5	91.1	P/P	61 - 135
Atrazine	85.2	90.9	P/P	76 - 123
Atrazine Desethyl	69.9	69.9	P/P	35 - 140
Azinphos Methyl	159	175	P/F	57 - 163
Azoxystrobin	184	142	P/P	43 - 231
Bromacil	78.8	82.1	P/P	42 - 123
Butylate	37.4	50.4	P/P	34 - 92.0
Caffeine	88.3	81.1	P/P	70 - 130
Carbophenothion	76.0	69.0	P/P	61 - 121
Carfentrazone Ethyl	85.7	78.1	P/P	62 - 139
Chlorpyrifos Ethyl	76.8	78.6	P/P	67 - 121
Chlorpyrifos Methyl	88.9	86.0	P/P	67 - 120
Cyanazine	97.3	100	P/P	20 - 226
Demeton	75.0	80.7	P/P	35 - 125
Diazinon	85.7	86.3	P/P	70 - 122
Difenoconazole	147	144	P/P	56 - 186
Dimethenamid	82.5	83.2	P/P	67 - 119
Disulfoton	66.6	69.2	P/P	47 - 120
Dithiopyr	76.1	79.3	P/P	67 - 118
EPTC	33.2	45.5	P/P	33 - 90.0
Ethion	65.4	55.7	P/P	40 - 133
Ethoprop	81.9	79.2	P/P	61 - 121
Fenamiphos	79.5	74.1	P/P	31 - 139
Fenbuconazole	101	102	P/P	66 - 141
Fipronil	82.4	81.4	P/P	62 - 129
Fipronil Desulfinyl	76.1	76.9	P/P	59 - 126
Fipronil Sulfide	76.9	70.5	P/P	63 - 117
Fipronil Sulfone	66.5	57.2	P/P	57 - 117
Fluazifop-P-butyl	84.6	82.8	P/P	63 - 124
Fludioxonil	83.9	82.7	P/P	63 - 123
Flumioxazin	161	169	P/P	34 - 245
Flutolanil	82.7	79.4	P/P	56 - 131

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P395480

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluxapyroxad	72.8	67.5	P/P	57 - 117
Fonofos	74.0	75.1	P/P	61 - 116
Hexazinone	81.7	79.1	P/P	55 - 138
Imazalil	87.3	82.6	P/P	33 - 143
Iprodione	88.7	79.2	P/P	59 - 118
Malathion	95.0	91.7	P/P	62 - 138
Metalaxyl	80.8	80.3	P/P	24 - 147
Metolachlor	79.1	80.2	P/P	68 - 118
Metribuzin	87.2	91.1	P/P	20 - 239
Mevinphos	78.6	95.7	P/P	46 - 124
Molinate	50.7	58.0	P/P	46 - 100
Myclobutanil	82.4	77.5	P/P	32 - 149
Naled	42.6	45.0	P/P	32 - 95.0
Norflurazon	78.0	74.1	P/P	57 - 127
Oxadiazon	87.6	80.9	P/P	63 - 118
Oxyfluorfen	91.6	88.4	P/P	69 - 137
Parathion Ethyl	87.4	84.2	P/P	70 - 113
Parathion Methyl	102	96.2	P/P	71 - 130
Pendimethalin	93.7	87.8	P/P	55 - 118
Phorate	76.4	79.4	P/P	46 - 125
Prodiamine	44.2	52.8	P/P	20 - 141
Prometon	90.2	82.7	P/P	54 - 122
Prometryn	96.7	96.6	P/P	66 - 124
Pronamide	90.0	90.8	P/P	79 - 122
Propiconazole	79.4	75.6	P/P	61 - 126
Pyriproxyfen	194	198	F/F	52 - 131
Simazine	91.5	91.1	P/P	75 - 128
Sulfentrazone	72.1	70.8	P/P	20 - 132
Tebuconazole	34.8	33.4	P/P	20 - 116
Terbufos	76.1	78.4	P/P	61 - 117
Terbutylazine	81.1	87.9	P/P	74 - 116

Reference Method: EPA 8276
Batch ID: P395393

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	105	105	P/P	56 - 117
Toxaphene	85.0	79.1	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P395198

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	102		P	40 - 150
Endothall	120		P	40 - 150
Glufosinate	121		P	40 - 150
Glyphosate	137		P	40 - 140
Sucralose	97.5		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

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: SM 2120 B-2011

Batch ID: P395236

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

Reference Method: SM 2320 B-2011

Batch ID: P395328

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

Reference Method: SM 4500 F-C-2011

Batch ID: P395332

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.2		P	90 - 106

Reference Method: SM 5310 B-2011

Batch ID: P395667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P395294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232332	Barium	98.9	96.2	P/P	80 - 120
2232332	Calcium	107	103	P/P	80 - 120
2232332	Iron	107	102	P/P	80 - 120
2232332	Magnesium	106	101	P/P	80 - 120
2232332	Manganese	102	98.9	P/P	80 - 120
2232332	Potassium	110	104	P/P	80 - 120
2232332	Sodium	105	100	P/P	80 - 120
2232332	Zinc	95.6	93.6	P/P	80 - 120
2232774	Barium	98.6		P	80 - 120
2232774	Calcium	108		P	80 - 120
2232774	Iron	107		P	80 - 120
2232774	Magnesium	106		P	80 - 120
2232774	Manganese	102		P	80 - 120
2232774	Potassium	105		P	80 - 120
2232774	Sodium	106		P	80 - 120
2232774	Zinc	95.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P395294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232332	Aluminum	93.2	96.8	P/P	80 - 120
2232332	Antimony	95.7	98.4	P/P	80 - 120
2232332	Arsenic	95.0	97.7	P/P	80 - 120
2232332	Beryllium	93.1	93.8	P/P	80 - 120
2232332	Boron	96.2	98.0	P/P	80 - 120
2232332	Cadmium	97.8	100	P/P	80 - 120
2232332	Chromium	92.3	94.8	P/P	80 - 120
2232332	Copper	96.6	99.9	P/P	80 - 120
2232332	Lead	98.1	99.6	P/P	80 - 120
2232332	Nickel	94.9	97.6	P/P	80 - 120
2232332	Selenium	93.4	95.4	P/P	80 - 120
2232332	Silver	98.1	100	P/P	80 - 120
2232332	Thallium	102	105	P/P	80 - 120
2232774	Aluminum	95.5		P	80 - 120
2232774	Antimony	98.2		P	80 - 120
2232774	Arsenic	95.8		P	80 - 120
2232774	Beryllium	88.4		P	80 - 120
2232774	Boron	99.6		P	80 - 120
2232774	Cadmium	98.3		P	80 - 120
2232774	Chromium	95.0		P	80 - 120
2232774	Copper	97.4		P	80 - 120
2232774	Lead	100		P	80 - 120
2232774	Nickel	96.1		P	80 - 120
2232774	Selenium	94.2		P	80 - 120
2232774	Silver	99.6		P	80 - 120
2232774	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395466

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395466

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232577	Chloride	103		P	90 - 110
2232746	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232577	Sulfate	101		P	90 - 110
2232746	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233012	Ammonia-N	95.4	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395607

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232748	Kjeldahl Nitrogen	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395338

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232796	NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232213	Total-P	104	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232749	O-Phosphate-P	103	101	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P395480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232695	Acetochlor	77.9	80.8	P/P	66 - 122
2232695	Alachlor	73.1	77.0	P/P	65 - 122
2232695	Ametryn	126	110	P/P	45 - 173
2232695	Atrazine Desethyl	50.8	68.9	P/P	25 - 150
2232695	Azinphos Methyl	134	167	P/P	44 - 174
2232695	Azoxystrobin	140	137	P/P	10 - 268
2232695	Butylate	33.9	37.2	P/P	15 - 97.0
2232695	Caffeine	81.4	81.9	P/P	70 - 130

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P395480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232695	Carbophenothion	57.3	58.4	P/P	42 - 129
2232695	Carfentrazone Ethyl	63.4	63.4	P/P	62 - 145
2232695	Chlorpyrifos Ethyl	65.1	74.7	P/P	60 - 124
2232695	Chlorpyrifos Methyl	80.9	81.8	P/P	66 - 119
2232695	Cyanazine	85.3	92.2	P/P	17 - 225
2232695	Demeton	94.8	104	P/P	36 - 142
2232695	Diazinon	84.6	87.0	P/P	70 - 128
2232695	Difenoconazole	140	143	P/P	33 - 222
2232695	Dimethenamid	73.4	77.2	P/P	54 - 125
2232695	Disulfoton	65.0	70.4	P/P	49 - 133
2232695	Dithiopyr	64.9	69.2	P/P	55 - 123
2232695	EPTC	30.8	35.9	P/P	19 - 91.0
2232695	Ethion	61.9	65.5	P/P	13 - 143
2232695	Ethoprop	83.6	84.8	P/P	49 - 144
2232695	Fenamiphos	67.9	77.4	P/P	32 - 136
2232695	Fenbuconazole	101	106	P/P	73 - 148
2232695	Fipronil	65.6	69.6	P/P	57 - 129
2232695	Fipronil Desulfinyl	65.7	71.7	P/P	49 - 127
2232695	Fipronil Sulfide	58.0	62.8	P/P	44 - 127
2232695	Fipronil Sulfone	50.4	57.9	P/P	35 - 126
2232695	Fluazifop-P-butyl	61.7	63.2	F/F	67 - 129
2232695	Fludioxonil	70.8	79.1	P/P	61 - 126
2232695	Flumioxazin	149	165	P/P	38 - 279
2232695	Flutolanil	60.7	73.3	P/P	55 - 136
2232695	Fluxapyroxad	56.4	57.7	P/P	33 - 140
2232695	Fonofos	68.5	72.0	P/P	58 - 125
2232695	Hexazinone	83.2	90.6	P/P	57 - 148
2232695	Imazalil	73.8	87.2	P/P	10 - 221
2232695	Iprodione	59.6	68.4	P/P	32 - 140
2232695	Malathion	81.4	90.3	P/P	52 - 138
2232695	Metalaxyl	75.2	76.6	P/P	46 - 134
2232695	Metolachlor	66.9	71.6	P/P	58 - 122
2232695	Metribuzin	81.6	94.9	P/P	16 - 272
2232695	Mevinphos	103	108	P/P	45 - 140
2232695	Molinate	49.7	52.6	P/P	41 - 103
2232695	Myclobutanil	62.6	67.8	P/P	60 - 134
2232695	Naled	38.0	45.1	P/P	20 - 113
2232695	Oxadiazon	52.7	61.6	P/P	44 - 125
2232695	Oxyfluorfen	79.6	88.4	P/P	66 - 176
2232695	Parathion Ethyl	85.1	87.3	P/P	57 - 132
2232695	Parathion Methyl	110	114	P/P	59 - 156
2232695	Pendimethalin	94.5	101	P/P	59 - 129
2232695	Phorate	77.1	81.0	P/P	47 - 136
2232695	Prodiamine	44.1	46.9	P/P	10 - 159
2232695	Prometon	65.0	73.2	P/P	59 - 127
2232695	Prometryn	89.5	92.6	P/P	59 - 129
2232695	Pronamide	90.8	103	P/P	65 - 145
2232695	Propiconazole	80.5	80.6	P/P	28 - 165
2232695	Pyriproxyfen	71.6	127	P/P	21 - 180
2232695	Simazine	92.7	102	P/P	63 - 147
2232695	Sulfentrazone	53.2	58.3	P/P	32 - 136
2232695	Tebuconazole	33.4	36.7	P/P	-8.3 - 117

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P395480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232695	Terbufos	80.6	86.9	P/P	61 - 131
2232695	Terbutylazine	82.4	88.1	P/P	62 - 126

Reference Method: EPA 8276
Batch ID: P395393

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232808	Chlordane	103	104	P/P	47 - 128
2232808	Toxaphene	125	128	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P395198

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232387	Acesulfame K	256	293	F/F	40 - 150
2232387	AMPA	115	115	P/P	40 - 150
2232387	Endothall	98.2	81.7	P/P	40 - 150
2232387	Glufosinate	121	121	P/P	40 - 150
2232387	Glyphosate	89.3	114	P/P	40 - 140
2232387	Sucralose	65.9	72.5	P/P	40 - 150

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	MCCPP	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

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P395332

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232751	Fluoride	98.3	98.3	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P395667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233012	Organic Carbon	93.5	94.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P395219

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232795	Turbidity	6.83	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P395294

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232332	Barium	2.79	Spike	P	0 - 20
2232332	Calcium	2.80	Spike	P	0 - 20
2232332	Iron	4.65	Spike	P	0 - 20
2232332	Magnesium	4.27	Spike	P	0 - 20
2232332	Manganese	2.88	Spike	P	0 - 20
2232332	Potassium	4.92	Spike	P	0 - 20
2232332	Sodium	3.64	Spike	P	0 - 20
2232332	Zinc	2.09	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P395294

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232332	Aluminum	3.67	Spike	P	0 - 20
2232332	Antimony	2.74	Spike	P	0 - 20
2232332	Arsenic	2.88	Spike	P	0 - 20
2232332	Beryllium	0.732	Spike	P	0 - 20
2232332	Boron	1.75	Spike	P	0 - 20
2232332	Cadmium	2.50	Spike	P	0 - 20
2232332	Chromium	2.45	Spike	P	0 - 20
2232332	Copper	3.05	Spike	P	0 - 20
2232332	Lead	1.50	Spike	P	0 - 20
2232332	Nickel	2.82	Spike	P	0 - 20
2232332	Selenium	2.11	Spike	P	0 - 20
2232332	Silver	2.16	Spike	P	0 - 20
2232332	Thallium	3.67	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395466

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232577	Chloride	0.743	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395468

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232577	Sulfate	0.0839	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P395908

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233012	Ammonia-N	2.47	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P395607

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232748	Kjeldahl Nitrogen	1.07	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P395338

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232796	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395485

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232213	Total-P	4.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P395242

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232749	O-Phosphate-P	1.18	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P395480

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232695	Acetochlor	3.70	Spike	P	0 - 30
2232695	Alachlor	5.13	Spike	P	0 - 30
2232695	Ametryn	13.8	Spike	P	0 - 30
2232695	Atrazine	2.75	Spike	P	0 - 30
2232695	Atrazine Desethyl	20.7	Spike	P	0 - 30
2232695	Azinphos Methyl	21.8	Spike	P	0 - 30
2232695	Azoxystrobin	1.65	Spike	P	0 - 30
2232695	Bromacil	4.97	Spike	P	0 - 30
2232695	Butylate	9.31	Spike	P	0 - 30
2232695	Caffeine	0.632	Spike	P	0 - 30
2232695	Carbophenothion	1.92	Spike	P	0 - 30
2232695	Carfentrazone Ethyl	0.00197	Spike	P	0 - 30
2232695	Chlorpyrifos Ethyl	13.7	Spike	P	0 - 30
2232695	Chlorpyrifos Methyl	1.14	Spike	P	0 - 30
2232695	Cyanazine	7.76	Spike	P	0 - 30
2232695	Demeton	9.58	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P395480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232695	Diazinon	2.87	Spike	P	0 - 30
2232695	Difenoconazole	1.89	Spike	P	0 - 30
2232695	Dimethenamid	5.14	Spike	P	0 - 30
2232695	Disulfoton	7.98	Spike	P	0 - 30
2232695	Dithiopyr	6.38	Spike	P	0 - 30
2232695	EPTC	15.2	Spike	P	0 - 30
2232695	Ethion	5.68	Spike	P	0 - 30
2232695	Ethoprop	1.41	Spike	P	0 - 30
2232695	Fenamiphos	13.2	Spike	P	0 - 30
2232695	Fenbuconazole	5.07	Spike	P	0 - 30
2232695	Fipronil	6.00	Spike	P	0 - 30
2232695	Fipronil Desulfinyl	8.72	Spike	P	0 - 30
2232695	Fipronil Sulfide	7.92	Spike	P	0 - 30
2232695	Fipronil Sulfone	13.8	Spike	P	0 - 30
2232695	Fluazifop-P-butyl	2.46	Spike	P	0 - 30
2232695	Fludioxonil	11.0	Spike	P	0 - 30
2232695	Flumioxazin	10.3	Spike	P	0 - 30
2232695	Flutolanil	18.7	Spike	P	0 - 30
2232695	Fluxapyroxad	2.30	Spike	P	0 - 30
2232695	Fonofos	4.94	Spike	P	0 - 30
2232695	Hexazinone	7.45	Spike	P	0 - 30
2232695	Imazalil	16.7	Spike	P	0 - 30
2232695	Iprodione	13.7	Spike	P	0 - 30
2232695	Malathion	10.4	Spike	P	0 - 30
2232695	Metalaxyl	1.69	Spike	P	0 - 30
2232695	Metolachlor	5.94	Spike	P	0 - 30
2232695	Metribuzin	15.0	Spike	P	0 - 30
2232695	Mevinphos	4.64	Spike	P	0 - 30
2232695	Molinate	5.75	Spike	P	0 - 30
2232695	Myclobutanil	8.01	Spike	P	0 - 30
2232695	Naled	17.0	Spike	P	0 - 30
2232695	Norflurazon	2.86	Spike	P	0 - 30
2232695	Oxadiazon	12.5	Spike	P	0 - 30
2232695	Oxyfluorfen	10.5	Spike	P	0 - 30
2232695	Parathion Ethyl	2.53	Spike	P	0 - 30
2232695	Parathion Methyl	4.16	Spike	P	0 - 30
2232695	Pendimethalin	6.34	Spike	P	0 - 30
2232695	Phorate	4.93	Spike	P	0 - 30
2232695	Prodiamine	6.07	Spike	P	0 - 30
2232695	Prometon	11.8	Spike	P	0 - 30
2232695	Prometryn	3.41	Spike	P	0 - 30
2232695	Pronamide	12.2	Spike	P	0 - 30
2232695	Propiconazole	0.0924	Spike	P	0 - 30
2232695	Pyriproxyfen	56.0	Spike	F	0 - 30
2232695	Simazine	9.50	Spike	P	0 - 30
2232695	Sulfentrazone	9.14	Spike	P	0 - 30
2232695	Tebuconazole	9.44	Spike	P	0 - 30
2232695	Terbufos	7.56	Spike	P	0 - 30
2232695	Terbuthylazine	6.78	Spike	P	0 - 30
LFB	Acetochlor	0.820	LCS	P	0 - 30
LFB	Alachlor	0.874	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P395480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Ametryn	0.472	LCS	P	0 - 30
LFB	Atrazine	6.47	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.000447	LCS	P	0 - 30
LFB	Azinphos Methyl	9.83	LCS	P	0 - 30
LFB	Azoxystrobin	25.3	LCS	P	0 - 30
LFB	Bromacil	4.18	LCS	P	0 - 30
LFB	Butylate	29.7	LCS	P	0 - 30
LFB	Caffeine	8.44	LCS	P	0 - 30
LFB	Carbophenothion	9.66	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	9.30	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.38	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.31	LCS	P	0 - 30
LFB	Cyanazine	3.26	LCS	P	0 - 30
LFB	Demeton	7.27	LCS	P	0 - 30
LFB	Diazinon	0.632	LCS	P	0 - 30
LFB	Difenoconazole	2.10	LCS	P	0 - 30
LFB	Dimethenamid	0.939	LCS	P	0 - 30
LFB	Disulfoton	3.93	LCS	P	0 - 30
LFB	Dithiopyr	4.10	LCS	P	0 - 30
LFB	EPTC	31.2	LCS	F	0 - 30
LFB	Ethion	16.0	LCS	P	0 - 30
LFB	Ethoprop	3.39	LCS	P	0 - 30
LFB	Fenamiphos	7.02	LCS	P	0 - 30
LFB	Fenbuconazole	0.892	LCS	P	0 - 30
LFB	Fipronil	1.22	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	1.05	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.81	LCS	P	0 - 30
LFB	Fipronil Sulfone	15.0	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	2.16	LCS	P	0 - 30
LFB	Fludioxonil	1.42	LCS	P	0 - 30
LFB	Flumioxazin	4.78	LCS	P	0 - 30
LFB	Flutolanil	4.12	LCS	P	0 - 30
LFB	Fluxapyroxad	7.47	LCS	P	0 - 30
LFB	Fonofos	1.41	LCS	P	0 - 30
LFB	Hexazinone	3.18	LCS	P	0 - 30
LFB	Imazalil	5.55	LCS	P	0 - 30
LFB	Iprodione	11.3	LCS	P	0 - 30
LFB	Malathion	3.55	LCS	P	0 - 30
LFB	Metalaxyl	0.634	LCS	P	0 - 30
LFB	Metolachlor	1.44	LCS	P	0 - 30
LFB	Metribuzin	4.39	LCS	P	0 - 30
LFB	Mevinphos	19.6	LCS	P	0 - 30
LFB	Molinate	13.4	LCS	P	0 - 30
LFB	Myclobutanil	6.11	LCS	P	0 - 30
LFB	Naled	5.53	LCS	P	0 - 30
LFB	Norflurazon	5.17	LCS	P	0 - 30
LFB	Oxadiazon	7.87	LCS	P	0 - 30
LFB	Oxyfluorfen	3.56	LCS	P	0 - 30
LFB	Parathion Ethyl	3.72	LCS	P	0 - 30
LFB	Parathion Methyl	5.53	LCS	P	0 - 30
LFB	Pendimethalin	6.52	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P395480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	3.92	LCS	P	0 - 30
LFB	Prodiamine	17.7	LCS	P	0 - 30
LFB	Prometon	8.70	LCS	P	0 - 30
LFB	Prometryn	0.0743	LCS	P	0 - 30
LFB	Pronamide	0.877	LCS	P	0 - 30
LFB	Propiconazole	4.90	LCS	P	0 - 30
LFB	Pyriproxyfen	2.12	LCS	P	0 - 30
LFB	Simazine	0.501	LCS	P	0 - 30
LFB	Sulfentrazone	1.84	LCS	P	0 - 30
LFB	Tebuconazole	4.35	LCS	P	0 - 30
LFB	Terbufos	3.03	LCS	P	0 - 30
LFB	Terbuthylazine	8.00	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P395393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232808	Chlordane	1.23	Spike	P	0 - 30
2232808	Toxaphene	2.31	Spike	P	0 - 30
LFB	Chlordane	0.341	LCS	P	0 - 30
LFB	Toxaphene	7.15	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232387	Acesulfame K	13.4	Spike	P	0 - 30
2232387	AMPA	0.119	Spike	P	0 - 30
2232387	Endothall	18.3	Spike	P	0 - 30
2232387	Glufosinate	0.464	Spike	P	0 - 30
2232387	Glyphosate	24.3	Spike	P	0 - 30
2232387	Sucralose	9.40	Spike	P	0 - 30

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
2232693	Dinotefuran	5.98	Spike	P	0 - 30
2232693	Diuron	8.12	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	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	MCCP	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: SM 2320 B-2011

Batch ID: P395328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232751	Total Alkalinity	0.0288	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011

Batch ID: P395620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232699	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P395332

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232751	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011

Batch ID: P395667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233012	Organic Carbon	1.12	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2232808
Field Sample ID: 21030016FLA

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	75.5	P	29 - 92.0
EPA 8276	PCNB	97.4	P	43 - 134

Lab Sample ID: 2232809
Field Sample ID: 21030016FLA

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	69.3	P	20 - 200
EPA 8270E	Simazine-d10	111	P	73 - 135
EPA 8270E	Terbufos-d10	96.2	P	58 - 130

Lab Sample ID: 2232810
Field Sample ID: 21030016FLA

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.0	P	30 - 160
EPA 8321B	Diuron-d6	58.6	P	30 - 160
EPA 8321B	Endothall-d6	122	P	40 - 160
EPA 8321B	Endothall-d6	122	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	85.3	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	85.3	P	40 - 160
EPA 8321B	Ibuprofen-d3	82.4	P	30 - 160
EPA 8321B	Primidone-d5	91.0	P	30 - 160
EPA 8321B	Sucralose-d6	78.2	P	30 - 160
EPA 8321B	Sucralose-d6	78.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104168

Included Lab Sample IDs: 2232795

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

Reference Method: SM 2120 B-2011

Run ID: A104175

Included Lab Sample IDs: 2232795

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104176

Included Lab Sample IDs: 2232797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.4	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A104199

Included Lab Sample IDs: 2232810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	97.1	110	P/P	60 - 160
AMPA	120	115	P/P	60 - 160
Endothall	96.7	88.1	P/P	60 - 160
Glufosinate	122	117	P/P	60 - 160
Glyphosate	140	143	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A104210

Included Lab Sample IDs: 2232795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104210

Included Lab Sample IDs: 2232795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104215

Included Lab Sample IDs: 2232796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104216

Included Lab Sample IDs: 2232795

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.7	99.9	P/P	90 - 110
Sulfate	99.8	99.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A104230

Included Lab Sample IDs: 2232811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.9	98.4	P/P	90 - 110
Antimony	96.9	97.3	P/P	90 - 110
Arsenic	98.8	98.7	P/P	90 - 110
Beryllium	96.2	95.6	P/P	90 - 110
Boron	103	100	P/P	90 - 110
Cadmium	99.3	98.7	P/P	90 - 110
Chromium	99.9	99.4	P/P	90 - 110
Copper	96.4	96.4	P/P	90 - 110
Lead	99.9	100	P/P	90 - 110
Nickel	99.2	98.6	P/P	90 - 110
Selenium	97.6	96.2	P/P	90 - 110
Silver	98.4	97.8	P/P	90 - 110
Thallium	105	104	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104262

Included Lab Sample IDs: 2232811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	97.8	96.7	P/P	90 - 110
Calcium	102	101	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	100	99.7	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Potassium	104	102	P/P	90 - 110
Sodium	100	98.9	P/P	90 - 110
Zinc	98.4	97.5	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A104269

Included Lab Sample IDs: 2232808

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.6		P	80 - 120
Toxaphene	100		P	80 - 120

Reference Method: EPA 8321B

Run ID: A104272

Included Lab Sample IDs: 2232810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.1	100	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A104297
Included Lab Sample IDs: 2232810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	109	111	P/P	50 - 150
2,4,5-T	113	99.0	P/P	50 - 150
Acetaminophen	115	102	P/P	60 - 160
Acetamiprid	112	107	P/P	50 - 150
Afidopyropen	112	105	P/P	50 - 150
Bentazon	86.3	81.3	P/P	50 - 160
Benzovindiflupyr	117	118	P/P	50 - 160
Carbamazepine	107	107	P/P	60 - 150
Clothianidin	118	112	P/P	60 - 150
Dinotefuran	123	102	P/P	50 - 150
Diuron	111	107	P/P	60 - 160
Fenuron	104	98.8	P/P	60 - 150
Fluridone	112	114	P/P	60 - 160
Hydrocodone	114	111	P/P	60 - 150
Ibuprofen	111	105	P/P	50 - 160
Imazapyr	100	84.2	P/P	50 - 160
Imidacloprid	107	104	P/P	60 - 150
Linuron	104	106	P/P	60 - 150
Mandestrobin	109	110	P/P	50 - 150
MCPP	124	112	P/P	50 - 150
Naproxen	79.3	124	P/P	50 - 160
Primidone	109	97.0	P/P	60 - 150
Pyraclostrobin	110	108	P/P	60 - 150
Thiamethoxam	111	111	P/P	50 - 150
Tolfenpyrad	109	112	P/P	60 - 150
Triclopyr	123	108	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A104298
Included Lab Sample IDs: 2232796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	97.5	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A104362
Included Lab Sample IDs: 2232796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	95.8	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A104366
Included Lab Sample IDs: 2232809

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	99.3		P	80 - 120
Ametryn	108		P	80 - 120
Atrazine	98.4		P	80 - 120
Atrazine Desethyl	99.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A104366
Included Lab Sample IDs: 2232809

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Azinphos Methyl	142*		F	80 - 120
Azoxystrobin	93.3		P	80 - 120
Bromacil	96.2		P	80 - 120
Butylate	102		P	80 - 120
Caffeine	97.7		P	70 - 120
Carbophenothion	93.5		P	80 - 120
Carfentrazone Ethyl	98.7		P	80 - 120
Chlorpyrifos Ethyl	95.3		P	80 - 120
Chlorpyrifos Methyl	97.2		P	80 - 120
Cyanazine	98.6		P	80 - 120
Demeton	98.0		P	80 - 120
Diazinon	98.8		P	80 - 120
Difenoconazole	90.2		P	80 - 120
Dimethenamid	100		P	80 - 120
Disulfoton	97.4		P	80 - 120
Dithiopyr	102		P	80 - 120
EPTC	99.7		P	80 - 120
Ethion	96.9		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	94.5		P	80 - 120
Fenbuconazole	90.9		P	80 - 120
Fipronil	97.6		P	80 - 120
Fipronil Desulfinyl	99.2		P	80 - 120
Fipronil Sulfide	95.2		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	103		P	80 - 120
Fludioxonil	97.6		P	80 - 120
Flumioxazin	92.8		P	80 - 120
Flutolanil	97.3		P	80 - 120
Fluxapyroxad	101		P	80 - 120
Fonofos	97.3		P	80 - 120
Hexazinone	97.6		P	80 - 120
Imazalil	96.7		P	80 - 120
Iprodione	101		P	80 - 120
Malathion	91.9		P	80 - 120
Metaxyl	100		P	80 - 120
Metolachlor	99.9		P	80 - 120
Metribuzin	99.9		P	80 - 120
Mevinphos	104		P	80 - 120
Molinate	103		P	80 - 120
Myclobutanil	96.9		P	80 - 120
Naled	96.2		P	80 - 120
Norflurazon	99.5		P	80 - 120
Oxadiazon	103		P	80 - 120
Oxyfluorfen	98.2		P	80 - 120
Parathion Ethyl	95.0		P	80 - 120
Parathion Methyl	89.5		P	80 - 120
Pendimethalin	112		P	80 - 120
Phorate	106		P	80 - 120
Prodiamine	98.4		P	80 - 120
Prometon	97.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A104366
Included Lab Sample IDs: 2232809

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Prometryn	100		P	80 - 120
Pronamide	95.6		P	80 - 120
Propiconazole	98.1		P	80 - 120
Pyriproxyfen	189*		F	80 - 120
Sulfentrazone	97.1		P	80 - 120
Tebuconazole	100		P	80 - 120
Terbufos	98.0		P	80 - 120
Terbuthylazine	96.7		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A104367
Included Lab Sample IDs: 2232796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	101	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A104416
Included Lab Sample IDs: 2232809

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Simazine	104		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A104465
Included Lab Sample IDs: 2232796

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	98.1	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision	
							LCS	SMP MS
EPA 180.1 Rev. 2.0	Turbidity							6.83
EPA 200.7 Rev. 4.4	Barium	94.9		98.9	96.2	98.6		2.79
	Calcium	104		107	103	108		2.80
	Iron	102		107	102	107		4.65
	Magnesium	101		106	101	106		4.27
	Manganese	98.3		102	98.9	102		2.88
	Potassium	101		110	104	105		4.92
	Sodium	100		105	100	106		3.64
	Zinc	92.9		95.6	93.6	95.0		2.09
EPA 200.8 Rev. 5.4	Aluminum	94.4		93.2	96.8	95.5		3.67
	Antimony	96.3		95.7	98.4	98.2		2.74
	Arsenic	97.4		95.0	97.7	95.8		2.88
	Beryllium	91.7		93.1	93.8	88.4		0.732
	Boron	96.9		96.2	98.0	99.6		1.75
	Cadmium	96.5		97.8	100	98.3		2.50
	Chromium	93.7		92.3	94.8	95.0		2.45
	Copper	99.1		96.6	99.9	97.4		3.05
	Lead	99.2		98.1	99.6	100		1.50
	Nickel	96.7		94.9	97.6	96.1		2.82
	Selenium	94.8		93.4	95.4	94.2		2.11
	Silver	99.1		98.1	100	99.6		2.16
	Thallium	103		102	105	103		3.67
EPA 300.0 Rev. 2.1	Chloride	103		103	104			0.743
	Sulfate	102		101	102			0.0839
EPA 350.1 Rev. 2.0	Ammonia-N	97.4		95.4	99.4			2.47
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109		101	102			1.07
EPA 353.2 Rev. 2.0	NO2NO3-N	102		99.0	99.5			0.504
EPA 365.1 Rev. 2.0	Total-P	107		104	109			4.44
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		103	101			1.18
EPA 8270E	Acetochlor	83.5	84.2	77.9	80.8	0.820		3.70
	Alachlor	81.6	80.9	73.1	77.0	0.874		5.13
	Ametryn	91.5	91.1	126	110	0.472		13.8
	Atrazine	85.2	90.9			6.47		2.75
	Atrazine Desethyl	69.9	69.9	50.8	68.9	0.0004		20.7
	Azinphos Methyl	159	175	134	167	9.83		21.8
	Azoxystrobin	184	142	140	137	25.3		1.65
	Bromacil	78.8	82.1			4.18		4.97
	Butylate	37.4	50.4	33.9	37.2	29.7		9.31
	Caffeine	88.3	81.1	81.4	81.9	8.44		0.632
	Carbophenothion	76.0	69.0	57.3	58.4	9.66		1.92
	Carfentrazone Ethyl	85.7	78.1	63.4	63.4	9.30		0.0019
	Chlorpyrifos Ethyl	76.8	78.6	65.1	74.7	2.38		13.7
	Chlorpyrifos Methyl	88.9	86.0	80.9	81.8	3.31		1.14
	Cyanazine	97.3	100	85.3	92.2	3.26		7.76
	Demeton	75.0	80.7	94.8	104	7.27		9.58
	Diazinon	85.7	86.3	84.6	87.0	0.632		2.87
	Difenoconazole	147	144	140	143	2.10		1.89
	Dimethenamid	82.5	83.2	73.4	77.2	0.939		5.14
	Disulfoton	66.6	69.2	65.0	70.4	3.93		7.98
	Dithiopyr	76.1	79.3	64.9	69.2	4.10		6.38
	EPTC	33.2	45.5	30.8	35.9	31.2		15.2
	Ethion	65.4	55.7	61.9	65.5	16.0		5.68
	Ethoprop	81.9	79.2	83.6	84.8	3.39		1.41
	Fenamiphos	79.5	74.1	67.9	77.4	7.02		13.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Fenbuconazole	101	102	101	106	0.892		5.07
	Fipronil	82.4	81.4	65.6	69.6	1.22		6.00
	Fipronil Desulfinyl	76.1	76.9	65.7	71.7	1.05		8.72
	Fipronil Sulfide	76.9	70.5	58.0	62.8	8.81		7.92
	Fipronil Sulfone	66.5	57.2	50.4	57.9	15.0		13.8
	Fluazifop-P-butyl	84.6	82.8	61.7	63.2	2.16		2.46
	Fludioxonil	83.9	82.7	70.8	79.1	1.42		11.0
	Flumioxazin	161	169	149	165	4.78		10.3
	Flutolanil	82.7	79.4	60.7	73.3	4.12		18.7
	Fluxapyroxad	72.8	67.5	56.4	57.7	7.47		2.30
	Fonofos	74.0	75.1	68.5	72.0	1.41		4.94
	Hexazinone	81.7	79.1	83.2	90.6	3.18		7.45
	Imazalil	87.3	82.6	73.8	87.2	5.55		16.7
	Iprodione	88.7	79.2	59.6	68.4	11.3		13.7
	Malathion	95.0	91.7	81.4	90.3	3.55		10.4
	Metalaxyl	80.8	80.3	75.2	76.6	0.634		1.69
	Metolachlor	79.1	80.2	66.9	71.6	1.44		5.94
	Metribuzin	87.2	91.1	81.6	94.9	4.39		15.0
	Mevinphos	78.6	95.7	103	108	19.6		4.64
	Molinate	50.7	58.0	49.7	52.6	13.4		5.75
	Myclobutanil	82.4	77.5	62.6	67.8	6.11		8.01
	Naled	42.6	45.0	38.0	45.1	5.53		17.0
	Norflurazon	78.0	74.1			5.17		2.86
	Oxadiazon	87.6	80.9	52.7	61.6	7.87		12.5
	Oxyfluorfen	91.6	88.4	79.6	88.4	3.56		10.5
	Parathion Ethyl	87.4	84.2	85.1	87.3	3.72		2.53
	Parathion Methyl	102	96.2	110	114	5.53		4.16
	Pendimethalin	93.7	87.8	94.5	101	6.52		6.34
	Phorate	76.4	79.4	77.1	81.0	3.92		4.93
	Prodiamine	44.2	52.8	44.1	46.9	17.7		6.07
	Prometon	90.2	82.7	65.0	73.2	8.70		11.8
	Prometryn	96.7	96.6	89.5	92.6	0.0743		3.41
	Pronamide	90.0	90.8	90.8	103	0.877		12.2
	Propiconazole	79.4	75.6	80.5	80.6	4.90		0.0924
	Pyriproxyfen	194	198	71.6	127	2.12		56.0
	Simazine	91.5	91.1	92.7	102	0.501		9.50
	Sulfentrazone	72.1	70.8	53.2	58.3	1.84		9.14
	Tebuconazole	34.8	33.4	33.4	36.7	4.35		9.44
	Terbufos	76.1	78.4	80.6	86.9	3.03		7.56
	Terbutylazine	81.1	87.9	82.4	88.1	8.00		6.78
EPA 8276	Chlordane	105	105	103	104	0.341		1.23
	Toxaphene	85.0	79.1	125	128	7.15		2.31
EPA 8321B	2,4-D	126		112	98.8			12.1
	2,4,5-T	96.7		104	97.7			5.77
	Acesulfame K	104		256	293			13.4
	Acetaminophen	203		108	98.9			8.43
	Acetamiprid	83.0		93.9	75.5			21.7
	Afidopyropen	70.3		80.5	64.6			21.8
	AMPA	102		115	115			0.119
	Bentazon	62.6		36.4	37.6			3.25
	Benzovindiflupyr	86.8		91.8	81.8			11.5
	Carbamazepine	91.1		75.9	74.6			1.75
	Clothianidin	93.6		83.2	96.8			15.1
	Dinotefuran	82.0		120	113			5.98

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Diuron	68.1	53.1	48.9			8.12
	Endothall	120	98.2	81.7			18.3
	Fenuron	87.9	67.5	65.6			2.80
	Fluridone	79.5	84.5	68.2			21.4
	Glufosinate	121	121	121			0.464
	Glyphosate	137	89.3	114			24.3
	Hydrocodone	91.3	99.5	96.2			3.36
	Ibuprofen	80.2	82.8	71.7			14.4
	Imazapyr	78.9	93.7	83.8			5.74
	Imidacloprid	103	152	142			7.06
	Linuron	67.1	61.9	56.1			9.67
	Mandestrobin	85.2	91.4	82.9			9.80
	MCPP	110	103	94.5			8.54
	Naproxen	62.8	58.5	48.2			19.3
	Primidone	91.1	102	97.6			4.40
	Pyraclostrobin	78.8	86.9	76.6			12.6
	Sucralose	97.5	65.9	72.5			9.40
	Thiamethoxam	99.4	135	127			5.64
	Tolfenpyrad	44.4	55.5	55.3			0.337
	Triclopyr	111	117	107			8.82
SM 2120 B-2011	Color (true)	101					
SM 2320 B-2011	Total Alkalinity	101				0.0288	
SM 2540 C-2011	TDS					0.0	
SM 4500 F-C-2011	Fluoride	99.2	98.3	98.3			0.0
SM 5310 B-2011	Organic Carbon	95.2	93.5	94.9			1.12

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2232795
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2232811
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2232811
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2232795
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2232795
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2232796
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2232796
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2232796
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2232796
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2232797
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2232809
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2232808
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2232810
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2232810
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2232795
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2232795
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2232811
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2232795
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2232795
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2232795
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2232796

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	03/19/2021			03/19/2021 14:00	Yen Ta	2232795
EPA 200.7 Rev. 4.4	03/19/2021	03/22/2021 15:05	Elliott D. Healy	03/24/2021 16:18	Betina Topolski	2232811
EPA 200.8 Rev. 5.4	03/19/2021	03/22/2021 15:05	Elliott D. Healy	03/23/2021 22:27	Alexander Thompson	2232811
EPA 300.0 Rev. 2.1	03/19/2021			03/25/2021 00:38	Lipi Saha	2232795
EPA 350.1 Rev. 2.0	03/19/2021			04/03/2021 09:31	Ping Hua	2232796
EPA 351.2 Rev. 2.0	03/19/2021	03/29/2021 13:13	Benjamin T. Nordmann	03/30/2021 12:04	Virginia P. Brown	2232796
EPA 353.2 Rev. 2.0	03/19/2021			03/23/2021 10:04	Beverly Y. Sanders	2232796
EPA 365.1 Rev. 2.0	03/19/2021	03/25/2021 12:45	Yen Ta	03/26/2021 13:09	Shengyu Ding	2232796
EPA 365.1 Rev. 2.0 dissolved	03/19/2021			03/19/2021 15:44	Blanca Fach	2232797
EPA 8270E	03/19/2021	03/23/2021 08:30	Chiran X. Ghimire	03/25/2021 22:39	Michael Poppell	2232809
	03/19/2021	03/23/2021 08:30	Chiran X. Ghimire	03/31/2021 17:11	Michael Poppell	2232809
EPA 8276	03/19/2021	03/22/2021 08:30	Rasheda Ghaffari	03/25/2021 01:40	Julie Wi	2232808
EPA 8321B	03/19/2021	03/19/2021 14:10	Rebecca Ware	03/19/2021 14:38	Rebecca Ware	2232810
	03/19/2021	03/19/2021 14:10	Rebecca Ware	03/24/2021 20:50	Rebecca Ware	2232810
	03/19/2021	03/25/2021 09:00	Hoor Shaik	03/26/2021 20:59	Juyoung Kim	2232810
SM 2120 B-2011	03/19/2021			03/19/2021 15:06	Benjamin T. Nordmann	2232795
SM 2320 B-2011	03/19/2021			03/22/2021 21:50	Dale L. Simmons	2232795
SM 2340B	03/19/2021			03/24/2021 16:18	Betina Topolski	2232811
SM 2540 C-2011	03/19/2021			03/22/2021 14:26	Yijie Li	2232795
SM 2540 D-2011	03/19/2021			03/22/2021 14:26	Yijie Li	2232795
SM 4500 F-C-2011	03/19/2021			03/22/2021 21:50	Dale L. Simmons	2232795
SM 5310 B-2011	03/19/2021			03/30/2021 01:53	Madeline Gruver	2232796