

Chemical Analysis Report

WAS-SECT-2021-03-09-02

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

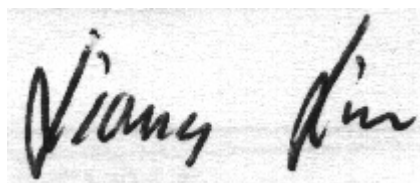
Event Description: **Alford Arm RPS**
Request ID: **RQ-2021-03-08-06**
Customer: **WAS-SECT**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 29-MAR-2021 10:07

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: Alford Arm Tributary At Miccosukee Rd.

Collection Date/Time: 03/08/2021 14:34

Field ID: G1WA0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2229908	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P394688	
	EPA 300.0 Rev. 2.1	Chloride	6.1		mg Cl/L	P394883	
		Sulfate	0.24	I	mg SO4/L	P394885	
	SM 2120 B-2011	Color (true)	89		PCU	P394706	
	SM 2320 B-2011	Total Alkalinity	3.8		mg CaCO3/L	P394789	
	SM 2540 C-2011	TDS	46		mg/L	P395159	
	SM 2540 D-2011	TSS	2	U	mg/L	P395151	
2229909	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P394792	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P394924	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P394976	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P394714	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P394820	
2229910	SM 5310 B-2011	Organic Carbon	9.1		mg C/L	P395175	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P394671	
2229914	EPA 8270E	Aldrin	0.79	U	ng/L	P394634	
		Dieldrin	0.42	U	ng/L	P394634	
		Alpha-BHC	2.1	U	ng/L	P394634	
		Kepone**	5.8	U	ng/L	P394634	
		Alpha-Chlordane	1.0	U	ng/L	P394634	
		Beta-BHC	8.4	U	ng/L	P394634	
		Beta-Cyfluthrin**	16	U	ng/L	P394634	
		Bifenthrin**	4.2	U	ng/L	P394634	
		Delta-BHC	8.4	U	ng/L	P394634	
		Gamma-BHC	8.4	U	ng/L	P394634	
		Chlorothalonil	2.1	U	ng/L	P394634	
		Cis-Nonachlor**	1.0	U	ng/L	P394634	
		Cypermethrin	21	U	ng/L	P394634	
		Dacthal**	1.0	U	ng/L	P394634	
		DDD-p,p'	5.2	U	ng/L	P394634	
		DDE-p,p'	5.2	U	ng/L	P394634	
		DDT-p,p'	6.3	U	ng/L	P394634	
		Deltamethrin**	21	U	ng/L	P394634	
		Dicofol	31	U	ng/L	P394634	
		Endosulfan I	4.2	U	ng/L	P394634	
		Endosulfan II	4.2	U	ng/L	P394634	
		Endosulfan Sulfate	2.1	U	ng/L	P394634	
		Endrin	2.1	U	ng/L	P394634	
		Endrin Aldehyde	2.1	U	ng/L	P394634	
		Endrin Ketone	2.1	U	ng/L	P394634	
		Ethalfuralin**	3.1	U	ng/L	P394634	
		Gamma-Chlordane	1.0	U	ng/L	P394634	
		Dichlobenil**	2.1	U	ng/L	P394634	
		Esfenvalerate**	21	U	ng/L	P394634	

Field ID: G1WA0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2229914	EPA 8270E	Fenprothrin**	10	U	ng/L	P394634	
		Heptachlor	1.6	U	ng/L	P394634	
		Heptachlor Epoxide	2.1	U	ng/L	P394634	
		Hexachlorobenzene	2.1	U	ng/L	P394634	
		Lambda-Cyhalothrin**	16	U	ng/L	P394634	
		Methoxychlor	4.2	U	ng/L	P394634	
		Mirex	2.1	U	ng/L	P394634	
		MGK-264**	3.1	U	ng/L	P394634	RPD
		Permethrin	10	U	ng/L	P394634	
		Phenothrin**	31	U	ng/L	P394634	RPD
		Piperonyl Butoxide**	1.6	U	ng/L	P394634	
		Prallethrin**	26	U	ng/L	P394634	RPD
		Tau-Fluvalinate**	3.7	U	ng/L	P394634	
		Tetramethrin**	8.4	U	ng/L	P394634	
		Trans-Nonachlor**	1.0	U	ng/L	P394634	
		Triclosan Methyl**	1.0	U	ng/L	P394634	
		Trifluralin	2.6	U	ng/L	P394634	
2229915		Acetochlor	0.25	U	ng/L	P394742	
		Alachlor	0.25	U	ng/L	P394742	
		Ametryn	0.60	U	ng/L	P394742	
		Atrazine	1.5		ng/L	P394742	
		Atrazine Desethyl	1.5	U	ng/L	P394742	
		Azinphos Methyl	2.0	U	ng/L	P394742	
		Azoxystrobin**	0.50	U	ng/L	P394742	
		Bromacil	0.50	U	ng/L	P394742	
		Butylate	0.40	U	ng/L	P394742	
		Caffeine**	7.4	UJ	ng/L	P394742	LCS
		Carbophenothion	0.50	U	ng/L	P394742	
		Carfentrazone Ethyl**	0.099	U	ng/L	P394742	
		Chlorpyrifos Ethyl	0.25	UJ	ng/L	P394742	LCS
		Chlorpyrifos Methyl	0.050	U	ng/L	P394742	
		Cyanazine	3.2	U	ng/L	P394742	
		Demeton	1.5	U	ng/L	P394742	
		Diazinon	0.12	U	ng/L	P394742	
		Difenoconazole**	0.60	U	ng/L	P394742	
		Dimethenamid**	0.099	U	ng/L	P394742	
		Disulfoton	0.50	U	ng/L	P394742	
		Dithiopyr**	0.17	UJ	ng/L	P394742	LCS
		EPTC	1.2	U	ng/L	P394742	
		Ethion	0.15	U	ng/L	P394742	
		Ethoprop	0.099	U	ng/L	P394742	
		Fenamiphos	0.50	U	ng/L	P394742	
		Fenbuconazole**	0.12	U	ng/L	P394742	
		Fipronil	0.25	U	ng/L	P394742	
		Fipronil Desulfinyl**	0.12	U	ng/L	P394742	

Field ID: G1WA0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2229915	EPA 8270E	Fipronil Sulfide	0.15	UJ	ng/L	P394742	LCS
		Fipronil Sulfone	0.15	UJ	ng/L	P394742	LCS
		Fluazifop-P-butyl**	0.099	U	ng/L	P394742	
		Fludioxonil**	0.12	U	ng/L	P394742	
		Flumioxazin**	1.7	U	ng/L	P394742	
		Flutolanil**	0.099	U	ng/L	P394742	
		Fluxapyroxad**	0.099	U	ng/L	P394742	
		Fonofos	0.20	U	ng/L	P394742	
		Hexazinone	0.50	U	ng/L	P394742	
		Imazalil**	0.74	U	ng/L	P394742	
		Iprodione**	0.60	U	ng/L	P394742	
		Malathion	0.35	U	ng/L	P394742	
		Metalaxyl	0.74	U	ng/L	P394742	
		Metolachlor	0.35	U	ng/L	P394742	
		Metribuzin	3.2	U	ng/L	P394742	
		Mevinphos	1.0	U	ng/L	P394742	
		Molinate	0.30	U	ng/L	P394742	
		Myclobutanil**	0.25	U	ng/L	P394742	
		Naled**	1.5	U	ng/L	P394742	
		Norflurazon	0.50	U	ng/L	P394742	
		Oxadiazon	0.30	U	ng/L	P394742	
		Oxyfluorfen**	0.15	U	ng/L	P394742	
		Parathion Ethyl	0.25	U	ng/L	P394742	
		Parathion Methyl	0.55	U	ng/L	P394742	
		Pendimethalin	0.99	U	ng/L	P394742	
		Phorate	0.52	U	ng/L	P394742	
		Prodiamine**	0.17	U	ng/L	P394742	
		Prometon	0.89	U	ng/L	P394742	
		Prometryn	0.20	U	ng/L	P394742	
		Pronamide**	0.15	UJ	ng/L	P394742	LCS
		Propiconazole**	0.50	U	ng/L	P394742	
		Pyriproxyfen**	0.12	UJ	ng/L	P394742	LCS, RPD
		Simazine	0.50	UJ	ng/L	P394742	LCS
		Sulfentrazone**	0.50	U	ng/L	P394742	
		Tebuconazole**	0.50	U	ng/L	P394742	
		Terbufos	0.099	U	ng/L	P394742	
		Terbuthylazine	0.42	UJ	ng/L	P394742	LCS
2229916	EPA 8321B	2,4-D	0.015		ug/L	P394600	
		Acesulfame K	0.10	U	ug/L	P394640	MS
		2,4,5-T	0.0040	U	ug/L	P394600	
		AMPA	0.10	U	ug/L	P394640	
		Sucralose	0.025	I	ug/L	P394640	
		Acetaminophen	0.025	I	ug/L	P394600	
		Acetamiprid	0.0020	U	ug/L	P394600	
		Endothall	0.25	U	ug/L	P394640	

Field ID: G1WA0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2229916	EPA 8321B	Glufosinate	0.10	U	ug/L	P394640	MS
		Glyphosate	0.10	U	ug/L	P394640	
		Afidopyropen	0.0020	U	ug/L	P394600	
		Bentazon	8.0E-04	U	ug/L	P394600	
		Benzovindiflupyr	0.0020	U	ug/L	P394600	
		Carbamazepine	8.0E-04	U	ug/L	P394600	
		Clothianidin	0.0020	U	ug/L	P394600	
		Dinotefuran	0.0020	U	ug/L	P394600	
		Diuron	0.0020	U	ug/L	P394600	
		Fenuron	0.016	U	ug/L	P394600	
		Fluridone	8.0E-04	U	ug/L	P394600	
		Imazapyr	0.015	I	ug/L	P394600	
		Hydrocodone	0.0020	U	ug/L	P394600	
		Ibuprofen	0.020	U	ug/L	P394600	
		Imidacloprid	0.0020	U	ug/L	P394600	
		Linuron	0.0040	U	ug/L	P394600	
		Mandestrobin	0.0020	U	ug/L	P394600	
		MCPP	0.0020	U	ug/L	P394600	
		Naproxen	0.0080	U	ug/L	P394600	
		Primidone	0.0040	U	ug/L	P394600	
		Pyraclostrobin	0.0020	U	ug/L	P394600	
		Thiamethoxam	0.0020	U	ug/L	P394600	
		Tolfenpyrad	0.0020	U	ug/L	P394600	
		Triclopyr	0.0040	U	ug/L	P394600	
2229917	EPA 200.7 Rev. 4.4	Barium	12.3		ug/L	P394723	
		Calcium	2.06		mg/L	P394723	
		Iron	690		ug/L	P394723	
		Magnesium	1.06		mg/L	P394723	
		Manganese	10.2		ug/L	P394723	
		Potassium	0.67	I	mg/L	P394723	
		Sodium	3.5		mg/L	P394723	
		Strontium	9.1		ug/L	P394723	
		Tin	3.0	U	ug/L	P394723	
		Titanium	2.1	I	ug/L	P394723	
		Vanadium	2.0	U	ug/L	P394723	
		Zinc	5.0	U	ug/L	P394723	
	EPA 200.8 Rev. 5.4	Aluminum	117		ug/L	P394723	
		Antimony	0.050	U	ug/L	P394723	
		Arsenic	0.34		ug/L	P394723	
		Beryllium	0.013	I	ug/L	P394723	
		Boron**	10.4		ug/L	P394723	
		Cadmium	0.020	U	ug/L	P394723	
		Chromium	0.46	I	ug/L	P394723	
		Cobalt	0.038	I	ug/L	P394723	
		Copper	0.44	I	ug/L	P394723	

Field ID: G1WA0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2229917	EPA 200.8 Rev. 5.4	Lead	0.20	U	ug/L	P394723	
		Manganese	9.33		ug/L	P394723	
		Molybdenum	0.15	U	ug/L	P394723	
		Nickel	0.50	U	ug/L	P394723	
		Selenium	0.20	U	ug/L	P394723	
		Silver	0.010	U	ug/L	P394723	
		Thallium	0.10	U	ug/L	P394723	
	SM 2340B	Hardness	9.5		mg/L	P394723	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0**Batch ID: P394688**

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4**Batch ID: P394723**

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
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4**Batch ID: P394723**

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1**Batch ID: P394883**

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1**Batch ID: P394885**

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394924

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P394976

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394714

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394820

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394671

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

Reference Method: EPA 8270E
Batch ID: P394634

Component	Result	Code	Units
Aldrin	0.75	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L
Beta-Cyfluthrin	15	U	ng/L
Bifenthrin	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
Dichlobenil	2.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P394634

Component	Result	Code	Units
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Esfenvalerate	20	U	ng/L
Ethalfuralin	3.0	U	ng/L
Fenpropathrin	10	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Kepone	5.5	U	ng/L
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
MGK-264	3.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Piperonyl Butoxide	1.5	U	ng/L
Prallethrin	25	U	ng/L
Tau-Fluvalinate	3.5	U	ng/L
Tetramethrin	8.0	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Triclosan Methyl	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8270E

Batch ID: P394742

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P394742

Component	Result	Code	Units
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
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
Metaxyl	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
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8321B

Batch ID: P394600

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B**Batch ID: P394600**

Component	Result	Code	Units
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B**Batch ID: P394640**

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: P394706**

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011**Batch ID: P394789**

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

Reference Method: SM 2540 C-2011**Batch ID: P395159**

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P395151

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P394792

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395175

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: P394723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	106		P	85 - 115
Iron	104		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	102		P	85 - 115
Potassium	98.2		P	85 - 115
Sodium	103		P	85 - 115
Strontium	99.0		P	85 - 115
Tin	100		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P394723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.7		P	85 - 115
Antimony	97.9		P	85 - 115
Arsenic	97.2		P	85 - 115
Beryllium	95.2		P	85 - 115
Boron	93.1		P	85 - 115
Cadmium	96.3		P	85 - 115
Chromium	93.8		P	85 - 115
Cobalt	94.6		P	85 - 115
Copper	95.9		P	85 - 115
Lead	105		P	85 - 115
Manganese	97.0		P	85 - 115
Molybdenum	96.6		P	85 - 115
Nickel	94.6		P	85 - 115
Selenium	98.8		P	85 - 115
Silver	102		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394883

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394885

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P394924

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P394976

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P394714

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: P394820

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P394671

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

Reference Method: EPA 8270E
 Batch ID: P394634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	28.1	28.6	P/P	20 - 110
Alpha-BHC	74.9	86.8	P/P	58 - 130
Alpha-Chlordane	65.6	77.9	P/P	61 - 105
Beta-BHC	91.9	104	P/P	53 - 164
Beta-Cyfluthrin	52.1	65.6	P/P	40 - 140
Bifenthrin	51.3	66.6	P/P	44 - 122
Chlorothalonil	68.0	80.0	P/P	20 - 201
Cis-Nonachlor	66.8	80.5	P/P	60 - 110
Cypermethrin	55.3	71.7	P/P	43 - 131
Dacthal	84.0	97.0	P/P	76 - 108
DDD-p,p'	72.4	89.3	P/P	68 - 118
DDE-p,p'	61.6	74.9	P/P	56 - 107
DDT-p,p'	58.4	72.3	P/P	55 - 122
Delta-BHC	104	118	P/P	60 - 181
Deltamethrin	64.5	75.2	P/P	51 - 139
Dichlobenil	48.0	57.5	P/P	20 - 106
Dicofol	79.3	94.7	P/P	56 - 130
Dieldrin	67.4	61.7	P/P	58 - 112
Endosulfan I	74.4	84.1	P/P	68 - 115
Endosulfan II	79.7	100	P/P	69 - 133
Endosulfan Sulfate	79.6	98.9	P/P	65 - 126
Endrin	76.5	91.4	P/P	66 - 118
Endrin Aldehyde	83.2	89.2	P/P	60 - 132
Endrin Ketone	80.9	100	P/P	68 - 121
Esfenvalerate	56.6	69.3	P/P	42 - 116
Ethalfuralin	61.1	75.1	P/P	50 - 118
Fenpropathrin	74.7	93.7	P/P	55 - 132
Gamma-BHC	85.5	95.6	P/P	65 - 147

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P394634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Gamma-Chlordane	61.3	73.4	P/P	56 - 103
Heptachlor	52.0	60.3	P/P	47 - 95.0
Heptachlor Epoxide	74.3	85.2	P/P	67 - 107
Hexachlorobenzene	46.9	57.6	P/P	45 - 99.0
Kepone	106	106	P/P	28 - 128
Lambda-Cyhalothrin	50.8	65.8	P/P	41 - 135
Methoxychlor	72.0	87.1	P/P	61 - 138
MGK-264	46.7	51.8	P/P	20 - 109
Mirex	44.0	58.0	P/P	36 - 92.0
Permethrin	50.3	64.8	P/P	45 - 111
Phenothrin	28.9	36.5	P/P	22 - 88.0
Piperonyl Butoxide	83.3	100	P/P	67 - 120
Prallethrin	45.8	52.6	P/P	28 - 92.0
Tau-Fluvalinate	58.4	74.3	P/P	38 - 145
Tetramethrin	62.6	61.1	P/P	29 - 150
Trans-Nonachlor	62.5	74.2	P/P	54 - 105
Triclosan Methyl	79.0	94.1	P/P	76 - 115
Trifluralin	59.2	72.7	P/P	53 - 111

Reference Method: EPA 8270E

Batch ID: P394742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	78.0	73.9	P/P	70 - 121
Alachlor	74.8	72.0	P/P	70 - 119
Ametryn	86.1	87.0	P/P	61 - 135
Atrazine	81.4	78.5	P/P	76 - 123
Atrazine Desethyl	70.5	64.2	P/P	35 - 140
Azinphos Methyl	87.8	68.6	P/P	57 - 163
Azoxystrobin	135	135	P/P	43 - 231
Bromacil	71.3	68.1	P/P	42 - 123
Butylate	46.9	44.1	P/P	34 - 92.0
Caffeine	67.7	64.4	F/F	70 - 130
Carbophenothion	84.7	64.2	P/P	61 - 121
Carfentrazone Ethyl	76.6	67.3	P/P	62 - 139
Chlorpyrifos Ethyl	68.9	64.9	P/F	67 - 121
Chlorpyrifos Methyl	74.8	68.9	P/P	67 - 120
Cyanazine	107	98.2	P/P	20 - 226
Demeton	72.5	71.7	P/P	35 - 125
Diazinon	78.1	71.5	P/P	70 - 122
Difenoconazole	125	120	P/P	56 - 186
Dimethenamid	78.1	72.1	P/P	67 - 119
Disulfoton	63.1	58.7	P/P	47 - 120
Dithiopyr	65.6	61.5	F/F	67 - 118
EPTC	45.9	44.0	P/P	33 - 90.0
Ethion	47.9	46.7	P/P	40 - 133
Ethoprop	74.8	71.7	P/P	61 - 121
Fenamiphos	73.0	69.3	P/P	31 - 139
Fenbuconazole	92.8	87.9	P/P	66 - 141
Fipronil	76.2	71.8	P/P	62 - 129
Fipronil Desulfinyl	71.6	68.1	P/P	59 - 126
Fipronil Sulfide	66.5	61.7	P/F	63 - 117

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P394742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil Sulfone	63.0	53.4	P/F	57 - 117
Fluazifop-P-butyl	78.5	68.3	P/P	63 - 124
Fludioxonil	71.8	65.1	P/P	63 - 123
Flumioxazin	137	126	P/P	34 - 245
Flutolanil	72.5	69.7	P/P	56 - 131
Fluxapyroxad	59.2	58.5	P/P	57 - 117
Fonofos	72.3	65.8	P/P	61 - 116
Hexazinone	72.4	69.4	P/P	55 - 138
Imazalil	80.6	68.5	P/P	33 - 143
Iprodione	68.7	67.8	P/P	59 - 118
Malathion	78.0	74.3	P/P	62 - 138
Metalaxyl	72.3	69.6	P/P	24 - 147
Metolachlor	73.8	68.6	P/P	68 - 118
Metribuzin	89.5	83.8	P/P	20 - 239
Mevinphos	70.6	67.9	P/P	46 - 124
Molinate	53.9	52.0	P/P	46 - 100
Myclobutanil	75.2	70.5	P/P	32 - 149
Naled	46.6	43.8	P/P	32 - 95.0
Norflurazon	69.7	65.0	P/P	57 - 127
Oxadiazon	74.0	68.3	P/P	63 - 118
Oxyfluorfen	79.2	73.3	P/P	69 - 137
Parathion Ethyl	74.5	71.7	P/P	70 - 113
Parathion Methyl	89.8	83.8	P/P	71 - 130
Pendimethalin	82.4	75.2	P/P	55 - 118
Phorate	75.8	74.0	P/P	46 - 125
Prodiamine	44.9	40.3	P/P	20 - 141
Prometon	84.0	74.4	P/P	54 - 122
Prometryn	89.4	83.1	P/P	66 - 124
Pronamide	81.8	74.5	P/F	79 - 122
Propiconazole	71.0	75.0	P/P	61 - 126
Pyriproxyfen	70.9	158	P/F	52 - 131
Simazine	80.0	73.7	P/F	75 - 128
Sulfentrazone	61.5	61.5	P/P	20 - 132
Tebuconazole	25.2	25.0	P/P	20 - 116
Terbufos	73.1	68.0	P/P	61 - 117
Terbuthylazine	76.2	70.4	P/F	74 - 116

Reference Method: EPA 8321B

Batch ID: P394600

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	107		P	30 - 160
2,4,5-T	90.3		P	30 - 160
Acetaminophen	87.2		P	30 - 160
Acetamiprid	89.1		P	30 - 160
Afidopyropen	68.4		P	30 - 160
Bentazon	83.9		P	30 - 160
Benzovindiflupyr	89.3		P	30 - 160
Carbamazepine	95.9		P	30 - 160
Clothianidin	95.9		P	30 - 160
Dinotefuran	88.4		P	30 - 160
Diuron	71.1		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P394600

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	104		P	30 - 160
Fluridone	93.2		P	30 - 160
Hydrocodone	98.7		P	30 - 160
Ibuprofen	83.2		P	30 - 160
Imazapyr	90.3		P	30 - 160
Imidacloprid	93.9		P	30 - 160
Linuron	78.5		P	30 - 160
Mandestrobin	85.6		P	30 - 160
MCPP	115		P	30 - 160
Naproxen	52.1		P	30 - 160
Primidone	96.1		P	30 - 160
Pyraclostrobin	81.7		P	30 - 160
Thiamethoxam	102		P	30 - 160
Tolfenpyrad	55.3		P	30 - 160
Triclopyr	97.6		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P394640

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	70.7		P	40 - 150
AMPA	92.7		P	40 - 150
Endothall	104		P	40 - 150
Glufosinate	132		P	40 - 150
Glyphosate	127		P	40 - 140
Sucralose	99.7		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P394706

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

Reference Method: SM 2320 B-2011

Batch ID: P394789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.7		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P394792

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

Reference Method: SM 5310 B-2011

Batch ID: P395175

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P394723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229917	Barium	106	109	P/P	80 - 120
2229917	Calcium	114	116	P/P	80 - 120
2229917	Iron	114	113	P/P	80 - 120
2229917	Magnesium	111	110	P/P	80 - 120
2229917	Manganese	104	108	P/P	80 - 120
2229917	Potassium	105	107	P/P	80 - 120
2229917	Sodium	110	112	P/P	80 - 120
2229917	Strontium	106	107	P/P	80 - 120
2229917	Tin	101	105	P/P	80 - 120
2229917	Titanium	104	107	P/P	80 - 120
2229917	Vanadium	105	108	P/P	80 - 120
2229917	Zinc	105	109	P/P	80 - 120
2229936	Barium	106		P	80 - 120
2229936	Calcium	110		P	80 - 120
2229936	Iron	111		P	80 - 120
2229936	Magnesium	109		P	80 - 120
2229936	Manganese	105		P	80 - 120
2229936	Potassium	105		P	80 - 120
2229936	Sodium	107		P	80 - 120
2229936	Strontium	104		P	80 - 120
2229936	Tin	102		P	80 - 120
2229936	Titanium	105		P	80 - 120
2229936	Vanadium	104		P	80 - 120
2229936	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P394723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229917	Aluminum	93.7	94.5	P/P	80 - 120
2229917	Antimony	97.6	97.7	P/P	80 - 120
2229917	Arsenic	96.7	96.0	P/P	80 - 120
2229917	Beryllium	91.7	89.6	P/P	80 - 120
2229917	Boron	90.4	91.8	P/P	80 - 120
2229917	Cadmium	97.6	96.0	P/P	80 - 120
2229917	Chromium	94.3	93.9	P/P	80 - 120
2229917	Cobalt	94.9	94.2	P/P	80 - 120
2229917	Copper	96.8	96.1	P/P	80 - 120
2229917	Lead	104	104	P/P	80 - 120
2229917	Manganese	97.2	97.2	P/P	80 - 120
2229917	Molybdenum	96.1	96.2	P/P	80 - 120
2229917	Nickel	94.3	94.6	P/P	80 - 120
2229917	Selenium	98.4	96.1	P/P	80 - 120
2229917	Silver	101	101	P/P	80 - 120
2229917	Thallium	104	103	P/P	80 - 120
2229936	Aluminum	95.2		P	80 - 120
2229936	Antimony	97.8		P	80 - 120
2229936	Arsenic	94.4		P	80 - 120
2229936	Beryllium	87.9		P	80 - 120
2229936	Boron	97.5		P	80 - 120
2229936	Cadmium	99.0		P	80 - 120
2229936	Chromium	93.5		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P394723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229936	Cobalt	92.6		P	80 - 120
2229936	Copper	93.7		P	80 - 120
2229936	Lead	104		P	80 - 120
2229936	Manganese	97.0		P	80 - 120
2229936	Molybdenum	95.5		P	80 - 120
2229936	Nickel	92.7		P	80 - 120
2229936	Selenium	93.1		P	80 - 120
2229936	Silver	101		P	80 - 120
2229936	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394883

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229543	Chloride	98.8		P	90 - 110
2229796	Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229543	Sulfate	95.2		P	90 - 110
2229796	Sulfate	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P394924

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229877	Ammonia-N	97.0	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P394976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229921	Kjeldahl Nitrogen	105	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P394714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229909	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P394820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229799	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P394671

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P394671

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229884	O-Phosphate-P	100	102	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P394634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229653	Aldrin	35.2	31.9	P/P	22 - 127
2229653	Dieldrin	57.4	53.7	P/P	52 - 123
2229653	Kepone	113	101	P/P	18 - 138
2229894	Alpha-BHC	77.2	83.7	P/P	53 - 147
2229894	Alpha-Chlordane	69.1	82.0	P/P	56 - 107
2229894	Beta-BHC	91.1	101	P/P	43 - 182
2229894	Beta-Cyfluthrin	63.7	72.3	P/P	42 - 157
2229894	Bifenthrin	67.1	74.4	P/P	52 - 124
2229894	Chlorothalonil	65.9	80.1	P/P	10 - 265
2229894	Cis-Nonachlor	71.4	86.6	P/P	55 - 112
2229894	Cypermethrin	69.2	79.9	P/P	46 - 144
2229894	Dacthal	83.9	96.4	P/P	72 - 110
2229894	DDD-p,p'	77.7	94.4	P/P	58 - 123
2229894	DDE-p,p'	66.3	78.6	P/P	52 - 106
2229894	DDT-p,p'	64.3	74.9	P/P	50 - 127
2229894	Delta-BHC	108	115	P/P	56 - 222
2229894	Deltamethrin	75.1	84.7	P/P	47 - 152
2229894	Dichlobenil	45.7	49.3	P/P	22 - 99.0
2229894	Dicofol	85.1	95.0	P/P	38 - 145
2229894	Endosulfan I	79.2	91.9	P/P	64 - 124
2229894	Endosulfan II	83.5	99.3	P/P	52 - 159
2229894	Endosulfan Sulfate	84.0	95.0	P/P	62 - 136
2229894	Endrin	76.3	91.7	P/P	57 - 126
2229894	Endrin Aldehyde	82.4	93.0	P/P	41 - 128
2229894	Endrin Ketone	81.9	93.9	P/P	67 - 129
2229894	Esfenvalerate	69.4	78.4	P/P	50 - 120
2229894	Ethalfuralin	64.7	73.9	P/P	41 - 125
2229894	Fenpropathrin	82.8	92.5	P/P	40 - 202
2229894	Gamma-BHC	84.8	93.7	P/P	58 - 180
2229894	Gamma-Chlordane	65.2	77.8	P/P	54 - 103
2229894	Heptachlor	57.6	65.2	P/P	46 - 94.0
2229894	Heptachlor Epoxide	76.0	87.2	P/P	62 - 111
2229894	Hexachlorobenzene	54.6	59.5	P/P	42 - 95.0
2229894	Lambda-Cyhalothrin	65.3	73.7	P/P	37 - 162
2229894	Methoxychlor	75.7	86.2	P/P	52 - 143
2229894	MGK-264	38.9	63.7	P/P	37 - 102
2229894	Mirex	53.8	62.3	P/P	43 - 91.0
2229894	Permethrin	61.7	70.5	P/P	48 - 113
2229894	Phenothrin	35.0	48.4	P/P	30 - 104
2229894	Piperonyl Butoxide	88.3	99.8	P/P	67 - 127
2229894	Prallethrin	41.2	61.0	P/P	28 - 102
2229894	Tau-Fluvalinate	76.6	86.7	P/P	46 - 174
2229894	Tetramethrin	68.4	85.4	P/P	28 - 176
2229894	Trans-Nonachlor	66.9	80.1	P/P	51 - 103
2229894	Triclosan Methyl	82.7	98.4	P/P	67 - 116
2229894	Trifluralin	63.4	73.1	P/P	47 - 118

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P394742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229895	Acetochlor	80.5	80.9	P/P	66 - 122
2229895	Alachlor	80.3	79.2	P/P	65 - 122
2229895	Ametryn	96.7	89.1	P/P	45 - 173
2229895	Atrazine	83.4	86.4	P/P	70 - 134
2229895	Atrazine Desethyl	68.5	69.7	P/P	25 - 150
2229895	Azinphos Methyl	73.7	78.2	P/P	44 - 174
2229895	Azoxystrobin	119	114	P/P	10 - 268
2229895	Bromacil	80.8	81.8	P/P	31 - 145
2229895	Butylate	53.0	54.9	P/P	15 - 97.0
2229895	Caffeine	73.1	75.6	P/P	70 - 130
2229895	Carbophenothion	71.7	69.7	P/P	42 - 129
2229895	Carfentrazone Ethyl	73.3	76.1	P/P	62 - 145
2229895	Chlorpyrifos Ethyl	70.6	72.2	P/P	60 - 124
2229895	Chlorpyrifos Methyl	79.2	78.0	P/P	66 - 119
2229895	Cyanazine	109	110	P/P	17 - 225
2229895	Demeton	78.7	79.9	P/P	36 - 142
2229895	Diazinon	86.6	90.5	P/P	70 - 128
2229895	Difenoconazole	112	106	P/P	33 - 222
2229895	Dimethenamid	78.3	76.8	P/P	54 - 125
2229895	Disulfoton	68.4	68.7	P/P	49 - 133
2229895	Dithiopyr	71.4	70.3	P/P	55 - 123
2229895	EPTC	52.1	55.5	P/P	19 - 91.0
2229895	Ethion	34.1	33.3	P/P	13 - 143
2229895	Ethoprop	81.1	82.6	P/P	49 - 144
2229895	Fenamiphos	67.4	67.3	P/P	32 - 136
2229895	Fenbuconazole	99.1	102	P/P	73 - 148
2229895	Fipronil	81.0	79.8	P/P	57 - 129
2229895	Fipronil Desulfinyl	78.7	75.4	P/P	49 - 127
2229895	Fipronil Sulfide	72.6	81.1	P/P	44 - 127
2229895	Fipronil Sulfone	66.3	69.2	P/P	35 - 126
2229895	Fluazifop-P-butyl	85.1	81.5	P/P	67 - 129
2229895	Fludioxonil	71.6	68.2	P/P	61 - 126
2229895	Flumioxazin	126	127	P/P	38 - 279
2229895	Flutolanil	71.2	69.6	P/P	55 - 136
2229895	Fluxapyroxad	48.0	52.0	P/P	33 - 140
2229895	Fonofos	75.1	78.0	P/P	58 - 125
2229895	Hexazinone	73.8	75.6	P/P	57 - 148
2229895	Imazalil	78.6	80.2	P/P	10 - 221
2229895	Iprodione	65.9	68.4	P/P	32 - 140
2229895	Malathion	83.2	84.1	P/P	52 - 138
2229895	Metalaxyl	79.4	75.0	P/P	46 - 134
2229895	Metolachlor	74.2	74.7	P/P	58 - 122
2229895	Metribuzin	96.0	94.9	P/P	16 - 272
2229895	Mevinphos	77.1	83.4	P/P	45 - 140
2229895	Molinate	61.6	64.8	P/P	41 - 103
2229895	Myclobutanil	75.7	75.0	P/P	60 - 134
2229895	Naled	50.3	51.5	P/P	20 - 113
2229895	Norflurazon	70.3	73.4	P/P	51 - 123
2229895	Oxadiazon	77.3	77.0	P/P	44 - 125
2229895	Oxyfluorfen	79.0	78.4	P/P	66 - 176
2229895	Parathion Ethyl	79.8	81.6	P/P	57 - 132
2229895	Parathion Methyl	98.1	95.4	P/P	59 - 156

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P394742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229895	Pendimethalin	85.7	81.7	P/P	59 - 129
2229895	Phorate	81.1	84.7	P/P	47 - 136
2229895	Prodiamine	51.9	51.1	P/P	10 - 159
2229895	Prometon	86.9	86.7	P/P	59 - 127
2229895	Prometryn	94.4	92.6	P/P	59 - 129
2229895	Pronamide	82.5	85.3	P/P	65 - 145
2229895	Propiconazole	69.4	72.4	P/P	28 - 165
2229895	Pyriproxyfen	77.8	66.4	P/P	21 - 180
2229895	Simazine	86.1	88.0	P/P	63 - 147
2229895	Sulfentrazone	61.6	67.7	P/P	32 - 136
2229895	Tebuconazole	19.6	19.2	P/P	-8.3 - 117
2229895	Terbufos	77.0	80.3	P/P	61 - 131
2229895	Terbutylazine	79.0	83.4	P/P	62 - 126

Reference Method: EPA 8321B

Batch ID: P394600

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229501	2,4-D	101	118	P/P	30 - 160
2229501	2,4,5-T	93.4	95.3	P/P	30 - 160
2229501	Acetaminophen	100	126	P/P	30 - 160
2229501	Acetamiprid	79.0	83.1	P/P	30 - 160
2229501	Afidopyropen	67.2	68.3	P/P	30 - 160
2229501	Benzovindiflupyr	80.2	88.5	P/P	30 - 160
2229501	Carbamazepine	73.6	81.6	P/P	30 - 160
2229501	Clothianidin	95.5	101	P/P	30 - 160
2229501	Dinotefuran	112	122	P/P	30 - 160
2229501	Diuron	41.9	51.6	P/P	30 - 160
2229501	Fenuron	76.7	80.2	P/P	30 - 160
2229501	Fluridone	69.6	64.0	P/P	30 - 160
2229501	Hydrocodone	90.4	103	P/P	30 - 160
2229501	Ibuprofen	77.0	87.8	P/P	30 - 160
2229501	Imidacloprid	132	138	P/P	30 - 160
2229501	Linuron	53.8	63.3	P/P	30 - 160
2229501	Mandestrobin	73.1	80.1	P/P	30 - 160
2229501	MCPP	102	103	P/P	30 - 160
2229501	Naproxen	62.5	81.4	P/P	30 - 160
2229501	Primidone	81.8	97.6	P/P	30 - 160
2229501	Pyraclostrobin	77.1	85.8	P/P	30 - 160
2229501	Thiamethoxam	133	147	P/P	30 - 160
2229501	Tolfenpyrad	51.5	58.3	P/P	30 - 160
2229501	Triclopyr	97.7	102	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P394640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229501	Acesulfame K	141	165	P/F	40 - 150
2229501	AMPA	118	116	P/P	40 - 150
2229501	Endothall	148	113	P/P	40 - 150
2229501	Glufosinate	118	130	P/P	40 - 150
2229501	Glyphosate	39.6	54.5	F/P	40 - 140

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P394640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229501	Sucralose	123	120	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P394792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230112	Fluoride	98.8	98.3	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P395175

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229798	Organic Carbon	94.8	94.5	P/P	85 - 115

Quality Assurance Report

Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P394688

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229920	Turbidity	6.88	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P394723

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229917	Barium	3.39	Spike	P	0 - 20
2229917	Calcium	1.01	Spike	P	0 - 20
2229917	Iron	1.14	Spike	P	0 - 20
2229917	Magnesium	1.04	Spike	P	0 - 20
2229917	Manganese	2.98	Spike	P	0 - 20
2229917	Potassium	0.939	Spike	P	0 - 20
2229917	Sodium	1.07	Spike	P	0 - 20
2229917	Strontium	0.663	Spike	P	0 - 20
2229917	Tin	3.04	Spike	P	0 - 20
2229917	Titanium	2.98	Spike	P	0 - 20
2229917	Vanadium	3.05	Spike	P	0 - 20
2229917	Zinc	3.48	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P394723

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229917	Aluminum	0.695	Spike	P	0 - 20
2229917	Antimony	0.0109	Spike	P	0 - 20
2229917	Arsenic	0.776	Spike	P	0 - 20
2229917	Beryllium	2.28	Spike	P	0 - 20
2229917	Boron	1.42	Spike	P	0 - 20
2229917	Cadmium	1.55	Spike	P	0 - 20
2229917	Chromium	0.395	Spike	P	0 - 20
2229917	Cobalt	0.792	Spike	P	0 - 20
2229917	Copper	0.706	Spike	P	0 - 20
2229917	Lead	0.397	Spike	P	0 - 20
2229917	Manganese	0.0384	Spike	P	0 - 20
2229917	Molybdenum	0.0196	Spike	P	0 - 20
2229917	Nickel	0.287	Spike	P	0 - 20
2229917	Selenium	2.32	Spike	P	0 - 20
2229917	Silver	0.123	Spike	P	0 - 20
2229917	Thallium	0.594	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P394883

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229543	Chloride	1.85	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P394885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229543	Sulfate	1.52	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P394924

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229877	Ammonia-N	0.654	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P394976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229921	Kjeldahl Nitrogen	2.08	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P394714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229909	NO2NO3-N	0.966	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P394820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229799	Total-P	0.0363	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P394671

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229884	O-Phosphate-P	0.946	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P394634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229653	Aldrin	9.72	Spike	P	0 - 30
2229653	Dieldrin	5.45	Spike	P	0 - 30
2229653	Kepone	11.0	Spike	P	0 - 30
2229894	Alpha-BHC	8.08	Spike	P	0 - 30
2229894	Alpha-Chlordane	17.0	Spike	P	0 - 30
2229894	Beta-BHC	10.1	Spike	P	0 - 30
2229894	Beta-Cyfluthrin	12.6	Spike	P	0 - 30
2229894	Bifenthrin	10.3	Spike	P	0 - 30
2229894	Chlorothalonil	19.4	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P394634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229894	Cis-Nonachlor	19.2	Spike	P	0 - 30
2229894	Cypermethrin	14.2	Spike	P	0 - 30
2229894	Dacthal	13.9	Spike	P	0 - 30
2229894	DDD-p,p'	19.3	Spike	P	0 - 30
2229894	DDE-p,p'	16.9	Spike	P	0 - 30
2229894	DDT-p,p'	15.2	Spike	P	0 - 30
2229894	Delta-BHC	6.24	Spike	P	0 - 30
2229894	Deltamethrin	11.9	Spike	P	0 - 30
2229894	Dichlobenil	7.50	Spike	P	0 - 30
2229894	Dicofol	11.0	Spike	P	0 - 30
2229894	Endosulfan I	14.9	Spike	P	0 - 30
2229894	Endosulfan II	17.3	Spike	P	0 - 30
2229894	Endosulfan Sulfate	12.3	Spike	P	0 - 30
2229894	Endrin	18.3	Spike	P	0 - 30
2229894	Endrin Aldehyde	12.0	Spike	P	0 - 30
2229894	Endrin Ketone	13.6	Spike	P	0 - 30
2229894	Esfenvalerate	12.1	Spike	P	0 - 30
2229894	Ethalfuralin	13.3	Spike	P	0 - 30
2229894	Fenpropathrin	11.1	Spike	P	0 - 30
2229894	Gamma-BHC	9.96	Spike	P	0 - 30
2229894	Gamma-Chlordane	17.6	Spike	P	0 - 30
2229894	Heptachlor	12.3	Spike	P	0 - 30
2229894	Heptachlor Epoxide	13.8	Spike	P	0 - 30
2229894	Hexachlorobenzene	8.53	Spike	P	0 - 30
2229894	Lambda-Cyhalothrin	12.1	Spike	P	0 - 30
2229894	Methoxychlor	13.0	Spike	P	0 - 30
2229894	MGK-264	48.3	Spike	F	0 - 30
2229894	Mirex	14.6	Spike	P	0 - 30
2229894	Permethrin	13.2	Spike	P	0 - 30
2229894	Phenothrin	32.0	Spike	F	0 - 30
2229894	Piperonyl Butoxide	12.2	Spike	P	0 - 30
2229894	Prallethrin	38.7	Spike	F	0 - 30
2229894	Tau-Fluvalinate	12.3	Spike	P	0 - 30
2229894	Tetramethrin	22.1	Spike	P	0 - 30
2229894	Trans-Nonachlor	17.9	Spike	P	0 - 30
2229894	Triclosan Methyl	17.3	Spike	P	0 - 30
2229894	Trifluralin	14.3	Spike	P	0 - 30
LFB	Aldrin	1.52	LCS	P	0 - 30
LFB	Alpha-BHC	14.7	LCS	P	0 - 30
LFB	Alpha-Chlordane	17.2	LCS	P	0 - 30
LFB	Beta-BHC	12.5	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	22.9	LCS	P	0 - 30
LFB	Bifenthrin	25.9	LCS	P	0 - 30
LFB	Chlorothalonil	16.2	LCS	P	0 - 30
LFB	Cis-Nonachlor	18.6	LCS	P	0 - 30
LFB	Cypermethrin	25.8	LCS	P	0 - 30
LFB	Dacthal	14.4	LCS	P	0 - 30
LFB	DDD-p,p'	20.9	LCS	P	0 - 30
LFB	DDE-p,p'	19.4	LCS	P	0 - 30
LFB	DDT-p,p'	21.3	LCS	P	0 - 30
LFB	Delta-BHC	13.0	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P394634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Deltamethrin	15.4	LCS	P	0 - 30
LFB	Dichlobenil	18.0	LCS	P	0 - 30
LFB	Dicofol	17.7	LCS	P	0 - 30
LFB	Dieldrin	8.93	LCS	P	0 - 30
LFB	Endosulfan I	12.2	LCS	P	0 - 30
LFB	Endosulfan II	22.7	LCS	P	0 - 30
LFB	Endosulfan Sulfate	21.6	LCS	P	0 - 30
LFB	Endrin	17.8	LCS	P	0 - 30
LFB	Endrin Aldehyde	6.99	LCS	P	0 - 30
LFB	Endrin Ketone	21.3	LCS	P	0 - 30
LFB	Esfenvalerate	20.2	LCS	P	0 - 30
LFB	Ethalfuralin	20.5	LCS	P	0 - 30
LFB	Fenpropathrin	22.6	LCS	P	0 - 30
LFB	Gamma-BHC	11.1	LCS	P	0 - 30
LFB	Gamma-Chlordane	17.9	LCS	P	0 - 30
LFB	Heptachlor	14.7	LCS	P	0 - 30
LFB	Heptachlor Epoxide	13.7	LCS	P	0 - 30
LFB	Hexachlorobenzene	20.5	LCS	P	0 - 30
LFB	Kepone	0.405	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	25.7	LCS	P	0 - 30
LFB	Methoxychlor	19.0	LCS	P	0 - 30
LFB	MGK-264	10.4	LCS	P	0 - 30
LFB	Mirex	27.5	LCS	P	0 - 30
LFB	Permethrin	25.1	LCS	P	0 - 30
LFB	Phenothrin	23.3	LCS	P	0 - 30
LFB	Piperonyl Butoxide	18.4	LCS	P	0 - 30
LFB	Prallethrin	13.8	LCS	P	0 - 30
LFB	Tau-Fluvalinate	23.9	LCS	P	0 - 30
LFB	Tetramethrin	2.48	LCS	P	0 - 30
LFB	Trans-Nonachlor	17.1	LCS	P	0 - 30
LFB	Triclosan Methyl	17.4	LCS	P	0 - 30
LFB	Trifluralin	20.4	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P394742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229895	Acetochlor	0.565	Spike	P	0 - 30
2229895	Alachlor	1.38	Spike	P	0 - 30
2229895	Ametryn	8.20	Spike	P	0 - 30
2229895	Atrazine	2.63	Spike	P	0 - 30
2229895	Atrazine Desethyl	1.43	Spike	P	0 - 30
2229895	Azinphos Methyl	6.00	Spike	P	0 - 30
2229895	Azoxystrobin	3.58	Spike	P	0 - 30
2229895	Bromacil	1.24	Spike	P	0 - 30
2229895	Butylate	3.47	Spike	P	0 - 30
2229895	Caffeine	3.33	Spike	P	0 - 30
2229895	Carbophenothion	2.62	Spike	P	0 - 30
2229895	Carfentrazone Ethyl	3.82	Spike	P	0 - 30
2229895	Chlorpyrifos Ethyl	2.13	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P394742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229895	Chlorpyrifos Methyl	1.53	Spike	P	0 - 30
2229895	Cyanazine	0.869	Spike	P	0 - 30
2229895	Demeton	1.52	Spike	P	0 - 30
2229895	Diazinon	4.42	Spike	P	0 - 30
2229895	Difenoconazole	5.59	Spike	P	0 - 30
2229895	Dimethenamid	1.86	Spike	P	0 - 30
2229895	Disulfoton	0.487	Spike	P	0 - 30
2229895	Dithiopyr	1.51	Spike	P	0 - 30
2229895	EPTC	6.28	Spike	P	0 - 30
2229895	Ethion	2.48	Spike	P	0 - 30
2229895	Ethoprop	1.80	Spike	P	0 - 30
2229895	Fenamiphos	0.163	Spike	P	0 - 30
2229895	Fenbuconazole	2.54	Spike	P	0 - 30
2229895	Fipronil	1.50	Spike	P	0 - 30
2229895	Fipronil Desulfinyl	4.29	Spike	P	0 - 30
2229895	Fipronil Sulfide	11.1	Spike	P	0 - 30
2229895	Fipronil Sulfone	4.20	Spike	P	0 - 30
2229895	Fluazifop-P-butyl	4.33	Spike	P	0 - 30
2229895	Fludioxonil	4.95	Spike	P	0 - 30
2229895	Flumioxazin	0.529	Spike	P	0 - 30
2229895	Flutolanil	2.18	Spike	P	0 - 30
2229895	Fluxapyroxad	7.38	Spike	P	0 - 30
2229895	Fonofos	3.85	Spike	P	0 - 30
2229895	Hexazinone	1.98	Spike	P	0 - 30
2229895	Imazalil	1.97	Spike	P	0 - 30
2229895	Iprodione	3.79	Spike	P	0 - 30
2229895	Malathion	1.08	Spike	P	0 - 30
2229895	Metalaxyl	5.72	Spike	P	0 - 30
2229895	Metolachlor	0.477	Spike	P	0 - 30
2229895	Metribuzin	1.21	Spike	P	0 - 30
2229895	Mevinphos	7.91	Spike	P	0 - 30
2229895	Molinate	5.04	Spike	P	0 - 30
2229895	Myclobutanil	0.931	Spike	P	0 - 30
2229895	Naled	2.33	Spike	P	0 - 30
2229895	Norflurazon	4.29	Spike	P	0 - 30
2229895	Oxadiazon	0.392	Spike	P	0 - 30
2229895	Oxyfluorfen	0.769	Spike	P	0 - 30
2229895	Parathion Ethyl	2.17	Spike	P	0 - 30
2229895	Parathion Methyl	2.85	Spike	P	0 - 30
2229895	Pendimethalin	4.83	Spike	P	0 - 30
2229895	Phorate	4.38	Spike	P	0 - 30
2229895	Prodiamine	1.53	Spike	P	0 - 30
2229895	Prometon	0.222	Spike	P	0 - 30
2229895	Prometryn	1.91	Spike	P	0 - 30
2229895	Pronamide	3.41	Spike	P	0 - 30
2229895	Propiconazole	4.27	Spike	P	0 - 30
2229895	Pyriproxyfen	15.8	Spike	P	0 - 30
2229895	Simazine	2.20	Spike	P	0 - 30
2229895	Sulfentrazone	9.44	Spike	P	0 - 30
2229895	Tebuconazole	2.08	Spike	P	0 - 30
2229895	Terbufos	4.24	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P394742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229895	Terbutylazine	5.40	Spike	P	0 - 30
LFB	Acetochlor	5.37	LCS	P	0 - 30
LFB	Alachlor	3.81	LCS	P	0 - 30
LFB	Ametryn	1.00	LCS	P	0 - 30
LFB	Atrazine	3.65	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.27	LCS	P	0 - 30
LFB	Azinphos Methyl	24.4	LCS	P	0 - 30
LFB	Azoxystrobin	0.669	LCS	P	0 - 30
LFB	Bromacil	4.55	LCS	P	0 - 30
LFB	Butylate	6.05	LCS	P	0 - 30
LFB	Caffeine	4.93	LCS	P	0 - 30
LFB	Carbophenothion	27.6	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	12.9	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	5.95	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	8.15	LCS	P	0 - 30
LFB	Cyanazine	9.02	LCS	P	0 - 30
LFB	Demeton	1.11	LCS	P	0 - 30
LFB	Diazinon	8.83	LCS	P	0 - 30
LFB	Difenoconazole	4.28	LCS	P	0 - 30
LFB	Dimethenamid	8.08	LCS	P	0 - 30
LFB	Disulfoton	7.10	LCS	P	0 - 30
LFB	Dithiopyr	6.55	LCS	P	0 - 30
LFB	EPTC	4.38	LCS	P	0 - 30
LFB	Ethion	2.48	LCS	P	0 - 30
LFB	Ethoprop	4.15	LCS	P	0 - 30
LFB	Fenamiphos	5.23	LCS	P	0 - 30
LFB	Fenbuconazole	5.41	LCS	P	0 - 30
LFB	Fipronil	5.91	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	5.07	LCS	P	0 - 30
LFB	Fipronil Sulfide	7.56	LCS	P	0 - 30
LFB	Fipronil Sulfone	16.5	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	13.9	LCS	P	0 - 30
LFB	Fludioxonil	9.69	LCS	P	0 - 30
LFB	Flumioxazin	8.20	LCS	P	0 - 30
LFB	Flutolanil	3.83	LCS	P	0 - 30
LFB	Fluxapyroxad	1.19	LCS	P	0 - 30
LFB	Fonofos	9.36	LCS	P	0 - 30
LFB	Hexazinone	4.23	LCS	P	0 - 30
LFB	Imazalil	16.2	LCS	P	0 - 30
LFB	Iprodione	1.38	LCS	P	0 - 30
LFB	Malathion	4.79	LCS	P	0 - 30
LFB	Metalaxyl	3.84	LCS	P	0 - 30
LFB	Metolachlor	7.28	LCS	P	0 - 30
LFB	Metribuzin	6.57	LCS	P	0 - 30
LFB	Mevinphos	3.87	LCS	P	0 - 30
LFB	Molinate	3.58	LCS	P	0 - 30
LFB	Myclobutanil	6.41	LCS	P	0 - 30
LFB	Naled	6.08	LCS	P	0 - 30
LFB	Norflurazon	6.97	LCS	P	0 - 30
LFB	Oxadiazon	8.02	LCS	P	0 - 30
LFB	Oxyfluorfen	7.65	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P394742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Parathion Ethyl	3.86	LCS	P	0 - 30
LFB	Parathion Methyl	7.01	LCS	P	0 - 30
LFB	Pendimethalin	9.13	LCS	P	0 - 30
LFB	Phorate	2.45	LCS	P	0 - 30
LFB	Prodiamine	10.8	LCS	P	0 - 30
LFB	Prometon	12.1	LCS	P	0 - 30
LFB	Prometryn	7.33	LCS	P	0 - 30
LFB	Pronamide	9.45	LCS	P	0 - 30
LFB	Propiconazole	5.54	LCS	P	0 - 30
LFB	Pyriproxyfen	76.0	LCS	F	0 - 30
LFB	Simazine	8.20	LCS	P	0 - 30
LFB	Sulfentrazone	0.00203	LCS	P	0 - 30
LFB	Tebuconazole	0.431	LCS	P	0 - 30
LFB	Terbufos	7.21	LCS	P	0 - 30
LFB	Terbutylazine	7.82	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P394600

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229501	2,4-D	9.49	Spike	P	0 - 30
2229501	2,4,5-T	2.09	Spike	P	0 - 30
2229501	Acetaminophen	13.7	Spike	P	0 - 30
2229501	Acetamiprid	5.14	Spike	P	0 - 30
2229501	Afidopyropen	1.64	Spike	P	0 - 30
2229501	Bentazon	7.56	Spike	P	0 - 30
2229501	Benzovindiflupyr	9.79	Spike	P	0 - 30
2229501	Carbamazepine	9.68	Spike	P	0 - 30
2229501	Clothianidin	5.83	Spike	P	0 - 30
2229501	Dinotefuran	8.45	Spike	P	0 - 30
2229501	Diuron	16.8	Spike	P	0 - 30
2229501	Fenuron	4.42	Spike	P	0 - 30
2229501	Fluridone	4.91	Spike	P	0 - 30
2229501	Hydrocodone	13.0	Spike	P	0 - 30
2229501	Ibuprofen	13.1	Spike	P	0 - 30
2229501	Imazapyr	12.0	Spike	P	0 - 30
2229501	Imidacloprid	3.44	Spike	P	0 - 30
2229501	Linuron	16.3	Spike	P	0 - 30
2229501	Mandestrobin	9.19	Spike	P	0 - 30
2229501	MCPP	0.679	Spike	P	0 - 30
2229501	Naproxen	26.2	Spike	P	0 - 30
2229501	Primidone	14.9	Spike	P	0 - 30
2229501	Pyraclostrobin	10.6	Spike	P	0 - 30
2229501	Thiamethoxam	10.3	Spike	P	0 - 30
2229501	Tolfenpyrad	12.4	Spike	P	0 - 30
2229501	Triclopyr	3.94	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P394640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229501	Acesulfame K	13.2	Spike	P	0 - 30
2229501	AMPA	1.65	Spike	P	0 - 30
2229501	Endothall	27.2	Spike	P	0 - 30
2229501	Glufosinate	9.09	Spike	P	0 - 30
2229501	Glyphosate	17.2	Spike	P	0 - 30
2229501	Sucralose	1.86	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P394706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229923	Color (true)	2.33	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P394789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230112	Total Alkalinity	1.03	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P395159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229875	TDS	6.41	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P394792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230112	Fluoride	0.462	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P395175

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229798	Organic Carbon	0.288	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2229914

Field Sample ID: G1WA0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	96.5	P	40 - 123
EPA 8270E	Decachlorobiphenyl	73.7	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	45.8	P	31 - 100
EPA 8270E	Tetrachloro-m-xylene	46.3	P	33 - 102

Lab Sample ID: 2229915

Field Sample ID: G1WA0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	90.8	P	20 - 200
EPA 8270E	Simazine-d10	95.7	P	73 - 135
EPA 8270E	Terbufos-d10	87.6	P	58 - 130

Lab Sample ID: 2229916

Field Sample ID: G1WA0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	134	P	30 - 160
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.6	P	30 - 160
EPA 8321B	Diuron-d6	63.0	P	30 - 160
EPA 8321B	Endothall-d6	122	P	40 - 160
EPA 8321B	Endothall-d6	122	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	93.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	93.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	78.6	P	30 - 160
EPA 8321B	Primidone-d5	95.1	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A103966
Included Lab Sample IDs: 2229916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	90.1	76.3	P/P	50 - 150
2,4,5-T	84.3	93.0	P/P	50 - 150
Acetaminophen	110	100	P/P	60 - 160
Acetamiprid	104	108	P/P	50 - 150
Afidopyropen	86.3	88.3	P/P	50 - 150
Bentazon	106	105	P/P	50 - 160
Benzovindiflupyr	106	104	P/P	50 - 160
Carbamazepine	100	100	P/P	60 - 150
Clothianidin	107	112	P/P	60 - 150
Dinotefuran	109	111	P/P	50 - 150
Diuron	106	105	P/P	60 - 160
Fenuron	104	103	P/P	60 - 150
Fluridone	125	118	P/P	60 - 160
Hydrocodone	106	114	P/P	60 - 150
Ibuprofen	91.6	96.7	P/P	50 - 160
Imazapyr	101	111	P/P	50 - 160
Imidacloprid	90.2	98.3	P/P	60 - 150
Linuron	107	108	P/P	60 - 150
Mandestrobin	99.6	103	P/P	50 - 150
MCPP	92.7	101	P/P	50 - 150
Naproxen	84.0	78.3	P/P	50 - 160
Primidone	94.7	112	P/P	60 - 150
Pyraclostrobin	99.8	97.7	P/P	60 - 150
Thiamethoxam	108	108	P/P	50 - 150
Tolfenpyrad	97.2	94.8	P/P	60 - 150
Triclopyr	101	88.0	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A103968
Included Lab Sample IDs: 2229910

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	98.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A103971
Included Lab Sample IDs: 2229908

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A103974
Included Lab Sample IDs: 2229908

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.3	98.3	P/P	90 - 110
Sulfate	96.7	96.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A103976

Included Lab Sample IDs: 2229908

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

Reference Method: EPA 8321B

Run ID: A103978

Included Lab Sample IDs: 2229916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	84.3	81.4	P/P	60 - 160
AMPA	84.0	81.7	P/P	60 - 160
Endothall	121	151	P/P	60 - 160
Glufosinate	79.2	104	P/P	60 - 160
Glyphosate	151	127	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103979

Included Lab Sample IDs: 2229909

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	106	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A104006

Included Lab Sample IDs: 2229908

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

Reference Method: SM 4500 F-C-2011

Run ID: A104006

Included Lab Sample IDs: 2229908

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104026

Included Lab Sample IDs: 2229917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	107	110	P/P	90 - 110
Calcium	106	108	P/P	90 - 110
Iron	104	106	P/P	90 - 110
Magnesium	104	106	P/P	90 - 110
Manganese	106	107	P/P	90 - 110
Potassium	100	103	P/P	90 - 110
Sodium	102	105	P/P	90 - 110
Strontium	104	107	P/P	90 - 110
Tin	103	106	P/P	90 - 110
Titanium	103	105	P/P	90 - 110
Vanadium	103	105	P/P	90 - 110
Zinc	105	109	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A104046

Included Lab Sample IDs: 2229909

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104054

Included Lab Sample IDs: 2229909

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	99.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A104063

Included Lab Sample IDs: 2229914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.9		P	80 - 120
Dieldrin	94.8		P	80 - 120
Kepone	99.4		P	80 - 120

Reference Method: EPA 8321B

Run ID: A104071

Included Lab Sample IDs: 2229916

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	108	110	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104096

Included Lab Sample IDs: 2229909

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	98.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A104097

Included Lab Sample IDs: 2229917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.6	97.6	P/P	90 - 110
Antimony	96.5	96.0	P/P	90 - 110
Arsenic	97.8	97.8	P/P	90 - 110
Beryllium	95.9	97.0	P/P	90 - 110
Boron	92.1	96.4	P/P	90 - 110
Cadmium	97.0	97.1	P/P	90 - 110
Chromium	95.1	97.0	P/P	90 - 110
Cobalt	97.3	98.0	P/P	90 - 110
Copper	96.4	96.9	P/P	90 - 110
Lead	107	107	P/P	90 - 110
Manganese	95.7	98.4	P/P	90 - 110
Molybdenum	95.2	95.6	P/P	90 - 110
Nickel	96.2	97.2	P/P	90 - 110
Selenium	96.5	98.9	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A104097

Included Lab Sample IDs: 2229917

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	99.3	99.4	P/P	90 - 110
Thallium	101	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A104117

Included Lab Sample IDs: 2229914

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	96.3		P	80 - 120
Beta-BHC	107		P	80 - 120
Beta-Cyfluthrin	86.0		P	80 - 120
Bifenthrin	98.0		P	80 - 120
Chlorothalonil	98.2		P	80 - 120
Cis-Nonachlor	95.9		P	80 - 120
Cypermethrin	93.6		P	80 - 120
Dacthal	97.5		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	97.9		P	80 - 120
DDT-p,p'	99.8		P	80 - 120
Delta-BHC	110		P	80 - 120
Deltamethrin	97.4		P	80 - 120
Dichlobenil	102		P	80 - 120
Dicofol	96.8		P	80 - 120
Endosulfan I	92.7		P	80 - 120
Endosulfan II	96.4		P	80 - 120
Endosulfan Sulfate	103		P	80 - 120
Endrin	96.8		P	80 - 120
Endrin Aldehyde	102		P	80 - 120
Endrin Ketone	102		P	80 - 120
Esfenvalerate	93.0		P	80 - 120
Ethalfuralin	97.5		P	80 - 120
Fenpropathrin	93.8		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	95.2		P	80 - 120
Heptachlor	93.2		P	80 - 120
Heptachlor Epoxide	97.2		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Lambda-Cyhalothrin	90.6		P	80 - 120
Methoxychlor	98.3		P	80 - 120
MGK-264	98.4		P	80 - 120
Mirex	99.6		P	80 - 120
Permethrin	90.0		P	80 - 120
Phenothrin	92.6		P	80 - 120
Piperonyl Butoxide	101		P	80 - 120
Prallethrin	95.1		P	80 - 120
Tau-Fluvalinate	98.8		P	80 - 120
Tetramethrin	98.7		P	80 - 120
Trans-Nonachlor	95.9		P	80 - 120
Triclosan Methyl	97.5		P	80 - 120
Trifluralin	98.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A104142

Included Lab Sample IDs: 2229909

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.8	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A104185

Included Lab Sample IDs: 2229915

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	106		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	110		P	80 - 120
Atrazine	98.9		P	80 - 120
Atrazine Desethyl	96.7		P	80 - 120
Azinphos Methyl	83.3		P	80 - 120
Azoxystrobin	112		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	94.8		P	80 - 120
Caffeine	103		P	70 - 120
Carbophenothion	92.1		P	80 - 120
Carfentrazone Ethyl	95.8		P	80 - 120
Chlorpyrifos Ethyl	94.0		P	80 - 120
Chlorpyrifos Methyl	92.9		P	80 - 120
Cyanazine	89.9		P	80 - 120
Demeton	91.1		P	80 - 120
Diazinon	95.7		P	80 - 120
Difenoconazole	96.5		P	80 - 120
Dimethenamid	105		P	80 - 120
Disulfoton	93.5		P	80 - 120
Dithiopyr	102		P	80 - 120
EPTC	99.8		P	80 - 120
Ethion	92.4		P	80 - 120
Ethoprop	92.2		P	80 - 120
Fenamiphos	103		P	80 - 120
Fenbuconazole	103		P	80 - 120
Fipronil	94.6		P	80 - 120
Fipronil Desulfinyl	107		P	80 - 120
Fipronil Sulfide	96.8		P	80 - 120
Fipronil Sulfone	95.8		P	80 - 120
Fluazifop-P-butyl	95.9		P	80 - 120
Fludioxonil	106		P	80 - 120
Flumioxazin	88.1		P	80 - 120
Flutolanil	103		P	80 - 120
Fluxapyroxad	100		P	80 - 120
Fonofos	99.9		P	80 - 120
Hexazinone	99.2		P	80 - 120
Imazalil	114		P	80 - 120
Iprodione	90.3		P	80 - 120
Malathion	86.7		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	98.6		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A104185

Included Lab Sample IDs: 2229915

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Molinate	98.8		P	80 - 120
Myclobutanil	110		P	80 - 120
Naled	98.4		P	80 - 120
Norflurazon	97.0		P	80 - 120
Oxadiazon	105		P	80 - 120
Oxyfluorfen	98.4		P	80 - 120
Parathion Ethyl	98.3		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	115		P	80 - 120
Phorate	89.1		P	80 - 120
Prodiamine	86.3		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	111		P	80 - 120
Pronamide	100		P	80 - 120
Propiconazole	102		P	80 - 120
Pyriproxyfen	99.6		P	80 - 120
Simazine	97.8		P	80 - 120
Sulfentrazone	96.0		P	80 - 120
Tebuconazole	105		P	80 - 120
Terbufos	97.4		P	80 - 120
Terbutylazine	100		P	80 - 120

* 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							6.88	
EPA 200.7 Rev. 4.4	Barium	102		106	109	106			3.39
	Calcium	106		114	116	110			1.01
	Iron	104		114	113	111			1.14
	Magnesium	101		111	110	109			1.04
	Manganese	102		104	108	105			2.98
	Potassium	98.2		105	107	105			0.939
	Sodium	103		110	112	107			1.07
	Strontium	99.0		106	107	104			0.663
	Tin	100		101	105	102			3.04
	Titanium	102		104	107	105			2.98
	Vanadium	101		105	108	104			3.05
	Zinc	101		105	109	105			3.48
EPA 200.8 Rev. 5.4	Aluminum	95.7		93.7	94.5	95.2			0.695
	Antimony	97.9		97.6	97.7	97.8			0.0109
	Arsenic	97.2		96.7	96.0	94.4			0.776
	Beryllium	95.2		91.7	89.6	87.9			2.28
	Boron	93.1		90.4	91.8	97.5			1.42
	Cadmium	96.3		97.6	96.0	99.0			1.55
	Chromium	93.8		94.3	93.9	93.5			0.395
	Cobalt	94.6		94.9	94.2	92.6			0.792
	Copper	95.9		96.8	96.1	93.7			0.706
	Lead	105		104	104	104			0.397
	Manganese	97.0		97.2	97.2	97.0			0.0384
	Molybdenum	96.6		96.1	96.2	95.5			0.0196
	Nickel	94.6		94.3	94.6	92.7			0.287
	Selenium	98.8		98.4	96.1	93.1			2.32
	Silver	102		101	101	101			0.123
	Thallium	102		104	103	103			0.594
EPA 300.0 Rev. 2.1	Chloride	98.2		98.8	98.6			1.85	
	Sulfate	96.7		95.2	96.7			1.52	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4		97.0	98.0				0.654
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		105	108				2.08
EPA 353.2 Rev. 2.0	NO2NO3-N	104		103	104				0.966
EPA 365.1 Rev. 2.0	Total-P	106		107	107				0.0363
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1		100	102				0.946
EPA 8270E	Acetochlor	78.0	73.9	80.5	80.9	5.37			0.565
	Alachlor	74.8	72.0	80.3	79.2	3.81			1.38
	Aldrin	28.1	28.6	35.2	31.9	1.52			9.72
	Alpha-BHC	74.9	86.8	77.2	83.7	14.7			8.08
	Alpha-Chlordane	65.6	77.9	69.1	82.0	17.2			17.0
	Ametryn	86.1	87.0	96.7	89.1	1.00			8.20
	Atrazine	81.4	78.5	83.4	86.4	3.65			2.63
	Atrazine Desethyl	70.5	64.2	68.5	69.7	9.27			1.43
	Azinphos Methyl	87.8	68.6	73.7	78.2	24.4			6.00
	Azoxystrobin	135	135	114	119	0.669			3.58
	Beta-BHC	91.9	104	91.1	101	12.5			10.1
	Beta-Cyfluthrin	52.1	65.6	63.7	72.3	22.9			12.6
	Bifenthrin	51.3	66.6	67.1	74.4	25.9			10.3
	Bromacil	71.3	68.1	81.8	80.8	4.55			1.24
	Butylate	46.9	44.1	54.9	53.0	6.05			3.47
	Caffeine	67.7	64.4	73.1	75.6	4.93			3.33
	Carbophenothion	84.7	64.2	69.7	71.7	27.6			2.62
	Carfentrazone Ethyl	76.6	67.3	73.3	76.1	12.9			3.82

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Chlorothalonil	68.0	80.0	65.9	80.1	16.2		19.4
	Chlorpyrifos Ethyl	68.9	64.9	70.6	72.2	5.95		2.13
	Chlorpyrifos Methyl	74.8	68.9	79.2	78.0	8.15		1.53
	Cis-Nonachlor	66.8	80.5	71.4	86.6	18.6		19.2
	Cyanazine	107	98.2	109	110	9.02		0.869
	Cypermethrin	55.3	71.7	69.2	79.9	25.8		14.2
	Dacthal	84.0	97.0	83.9	96.4	14.4		13.9
	DDD-p,p'	72.4	89.3	77.7	94.4	20.9		19.3
	DDE-p,p'	61.6	74.9	66.3	78.6	19.4		16.9
	DDT-p,p'	58.4	72.3	64.3	74.9	21.3		15.2
	Delta-BHC	104	118	108	115	13.0		6.24
	Deltamethrin	64.5	75.2	75.1	84.7	15.4		11.9
	Demeton	72.5	71.7	78.7	79.9	1.11		1.52
	Diazinon	78.1	71.5	86.6	90.5	8.83		4.42
	Dichlobenil	48.0	57.5	45.7	49.3	18.0		7.50
	Dicofol	79.3	94.7	85.1	95.0	17.7		11.0
	Dieldrin	67.4	61.7	57.4	53.7	8.93		5.45
	Difenoconazole	125	120	112	106	4.28		5.59
	Dimethenamid	78.1	72.1	78.3	76.8	8.08		1.86
	Disulfoton	63.1	58.7	68.4	68.7	7.10		0.487
	Dithiopyr	65.6	61.5	71.4	70.3	6.55		1.51
	Endosulfan I	74.4	84.1	79.2	91.9	12.2		14.9
	Endosulfan II	79.7	100	83.5	99.3	22.7		17.3
	Endosulfan Sulfate	79.6	98.9	84.0	95.0	21.6		12.3
	Endrin	76.5	91.4	76.3	91.7	17.8		18.3
	Endrin Aldehyde	83.2	89.2	82.4	93.0	6.99		12.0
	Endrin Ketone	80.9	100	81.9	93.9	21.3		13.6
	EPTC	45.9	44.0	52.1	55.5	4.38		6.28
	Esfenvalerate	56.6	69.3	69.4	78.4	20.2		12.1
	Ethalfuralin	61.1	75.1	64.7	73.9	20.5		13.3
	Ethion	47.9	46.7	34.1	33.3	2.48		2.48
	Ethoprop	74.8	71.7	81.1	82.6	4.15		1.80
	Fenamiphos	73.0	69.3	67.4	67.3	5.23		0.163
	Fenbuconazole	92.8	87.9	99.1	102	5.41		2.54
	Fenpropathrin	74.7	93.7	82.8	92.5	22.6		11.1
	Fipronil	76.2	71.8	81.0	79.8	5.91		1.50
	Fipronil Desulfanyl	71.6	68.1	78.7	75.4	5.07		4.29
	Fipronil Sulfide	66.5	61.7	72.6	81.1	7.56		11.1
	Fipronil Sulfone	63.0	53.4	66.3	69.2	16.5		4.20
	Fluazifop-P-butyl	78.5	68.3	85.1	81.5	13.9		4.33
	Fludioxonil	71.8	65.1	71.6	68.2	9.69		4.95
	Flumioxazin	137	126	126	127	8.20		0.529
	Flutolanil	72.5	69.7	71.2	69.6	3.83		2.18
	Fluxapyroxad	59.2	58.5	48.0	52.0	1.19		7.38
	Fonofos	72.3	65.8	75.1	78.0	9.36		3.85
	Gamma-BHC	85.5	95.6	84.8	93.7	11.1		9.96
	Gamma-Chlordane	61.3	73.4	65.2	77.8	17.9		17.6
	Heptachlor	52.0	60.3	57.6	65.2	14.7		12.3
	Heptachlor Epoxide	74.3	85.2	76.0	87.2	13.7		13.8
	Hexachlorobenzene	46.9	57.6	54.6	59.5	20.5		8.53
	Hexazinone	72.4	69.4	73.8	75.6	4.23		1.98
	Imazalil	80.6	68.5	78.6	80.2	16.2		1.97
	Iprodione	68.7	67.8	65.9	68.4	1.38		3.79
	Kepone	106	106	113	101	0.405		11.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 8270E	Lambda-Cyhalothrin	50.8	65.8	65.3	73.7	25.7		12.1
	Malathion	78.0	74.3	83.2	84.1	4.79		1.08
	Metalaxyl	72.3	69.6	79.4	75.0	3.84		5.72
	Methoxychlor	72.0	87.1	75.7	86.2	19.0		13.0
	Metolachlor	73.8	68.6	74.2	74.7	7.28		0.477
	Metribuzin	89.5	83.8	96.0	94.9	6.57		1.21
	Mevinphos	70.6	67.9	77.1	83.4	3.87		7.91
	MGK-264	46.7	51.8	38.9	63.7	10.4		48.3
	Mirex	44.0	58.0	53.8	62.3	27.5		14.6
	Molinate	53.9	52.0	61.6	64.8	3.58		5.04
	Myclobutanil	75.2	70.5	75.7	75.0	6.41		0.931
	Naled	46.6	43.8	50.3	51.5	6.08		2.33
	Norflurazon	69.7	65.0	70.3	73.4	6.97		4.29
	Oxadiazon	74.0	68.3	77.3	77.0	8.02		0.392
	Oxyfluorfen	79.2	73.3	79.0	78.4	7.65		0.769
	Parathion Ethyl	74.5	71.7	79.8	81.6	3.86		2.17
	Parathion Methyl	89.8	83.8	98.1	95.4	7.01		2.85
	Pendimethalin	82.4	75.2	85.7	81.7	9.13		4.83
	Permethrin	50.3	64.8	61.7	70.5	25.1		13.2
	Phenothrin	28.9	36.5	35.0	48.4	23.3		32.0
	Phorate	75.8	74.0	81.1	84.7	2.45		4.38
	Piperonyl Butoxide	83.3	100	88.3	99.8	18.4		12.2
	Prallethrin	45.8	52.6	41.2	61.0	13.8		38.7
	Prodiamine	44.9	40.3	51.9	51.1	10.8		1.53
	Prometon	84.0	74.4	86.9	86.7	12.1		0.222
	Prometryn	89.4	83.1	94.4	92.6	7.33		1.91
	Pronamide	81.8	74.5	82.5	85.3	9.45		3.41
	Propiconazole	71.0	75.0	69.4	72.4	5.54		4.27
	Pyriproxyfen	70.9	158	66.4	77.8	76.0		15.8
	Simazine	80.0	73.7	88.0	86.1	8.20		2.20
	Sulfentrazone	61.5	61.5	67.7	61.6	0.0020		9.44
	Tau-Fluvalinate	58.4	74.3	76.6	86.7	23.9		12.3
	Tebuconazole	25.2	25.0	19.2	19.6	0.431		2.08
	Terbufos	73.1	68.0	80.3	77.0	7.21		4.24
	Terbutylazine	76.2	70.4	83.4	79.0	7.82		5.40
	Tetramethrin	62.6	61.1	68.4	85.4	2.48		22.1
	Trans-Nonachlor	62.5	74.2	66.9	80.1	17.1		17.9
	Triclosan Methyl	79.0	94.1	82.7	98.4	17.4		17.3
	Trifluralin	59.2	72.7	63.4	73.1	20.4		14.3
EPA 8321B	2,4-D	107		101	118			9.49
	2,4,5-T	90.3		93.4	95.3			2.09
	Acesulfame K	70.7		141	165			13.2
	Acetaminophen	87.2		100	126			13.7
	Acetamiprid	89.1		79.0	83.1			5.14
	Afidopyropen	68.4		67.2	68.3			1.64
	AMPA	92.7		118	116			1.65
	Bentazon	83.9						7.56
	Benzovindiflupyr	89.3		80.2	88.5			9.79
	Carbamazepine	95.9		73.6	81.6			9.68
	Clothianidin	95.9		95.5	101			5.83
	Dinotefuran	88.4		112	122			8.45
	Diuron	71.1		41.9	51.6			16.8
	Endothall	104		148	113			27.2
	Fenuron	104		76.7	80.2			4.42

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Fluridone	93.2	69.6	64.0		4.91
	Glufosinate	132	118	130		9.09
	Glyphosate	127	39.6	54.5		17.2
	Hydrocodone	98.7	90.4	103		13.0
	Ibuprofen	83.2	77.0	87.8		13.1
	Imazapyr	90.3				12.0
	Imidacloprid	93.9	132	138		3.44
	Linuron	78.5	53.8	63.3		16.3
	Mandestrobin	85.6	73.1	80.1		9.19
	MCPP	115	102	103		0.679
	Naproxen	52.1	62.5	81.4		26.2
	Primidone	96.1	81.8	97.6		14.9
	Pyraclostrobin	81.7	77.1	85.8		10.6
	Sucralose	99.7	123	120		1.86
	Thiamethoxam	102	133	147		10.3
	Tolfenpyrad	55.3	51.5	58.3		12.4
	Triclopyr	97.6	97.7	102		3.94
SM 2120 B-2011	Color (true)	100			2.33	
SM 2320 B-2011	Total Alkalinity	99.7			1.03	
SM 2540 C-2011	TDS				6.41	
SM 4500 F-C-2011	Fluoride	99.3	98.8	98.3		0.462
SM 5310 B-2011	Organic Carbon	94.4	94.8	94.5		0.288

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2229908
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2229917
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2229917
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2229908
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2229908
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2229909
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2229909
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2229909
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2229909
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2229910
EPA 8270E	Dieldrin (ultra low level) in water matrices by GC/MS/MS	2229914
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2229914
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2229915
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2229916
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2229916
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2229908
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2229908
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2229917
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2229908
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2229908
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2229908
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2229909

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	03/09/2021			03/09/2021 15:16	Yen Ta	2229908
EPA 200.7 Rev. 4.4	03/09/2021	03/10/2021 12:55	Elliott D. Healy	03/11/2021 14:45	Betina Topolski	2229917
EPA 200.8 Rev. 5.4	03/09/2021	03/10/2021 12:55	Elliott D. Healy	03/16/2021 14:46	McKinley C Carter	2229917
EPA 300.0 Rev. 2.1	03/09/2021			03/10/2021 20:30	Lipi Saha	2229908
EPA 350.1 Rev. 2.0	03/09/2021			03/12/2021 18:03	Ping Hua	2229909
EPA 351.2 Rev. 2.0	03/09/2021	03/15/2021 12:24	Benjamin T. Nordmann	03/16/2021 12:00	Virginia P. Brown	2229909
EPA 353.2 Rev. 2.0	03/09/2021			03/10/2021 09:54	Beverly Y. Sanders	2229909
EPA 365.1 Rev. 2.0	03/09/2021	03/11/2021 12:40	Yen Ta	03/12/2021 15:37	Shengyu Ding	2229909
EPA 365.1 Rev. 2.0 dissolved	03/09/2021			03/09/2021 13:29	Lipi Saha	2229910
EPA 8270E	03/09/2021	03/10/2021 08:00	Fe-Val Siddell	03/12/2021 00:19	Arthur Maknenko	2229914
	03/09/2021	03/10/2021 08:00	Fe-Val Siddell	03/15/2021 21:15	Michael Poppell	2229914
	03/09/2021	03/12/2021 08:30	Rasheda Ghaffari	03/19/2021 17:32	Vandana T. Nagar	2229915
EPA 8321B	03/09/2021	03/09/2021 10:00	Hoor Shaik	03/10/2021 08:15	Juyoung Kim	2229916
	03/09/2021	03/09/2021 10:00	Rebecca Ware	03/09/2021 16:10	Rebecca Ware	2229916
	03/09/2021	03/09/2021 10:00	Rebecca Ware	03/12/2021 22:27	Rebecca Ware	2229916
SM 2120 B-2011	03/09/2021			03/09/2021 16:15	Benjamin T. Nordmann	2229908
SM 2320 B-2011	03/09/2021			03/10/2021 21:26	Dale L. Simmons	2229908
SM 2340B	03/09/2021			03/11/2021 14:45	Betina Topolski	2229917
SM 2540 C-2011	03/09/2021			03/12/2021 14:32	Yijie Li	2229908
SM 2540 D-2011	03/09/2021			03/12/2021 14:32	Yijie Li	2229908
SM 4500 F-C-2011	03/09/2021			03/10/2021 21:26	Dale L. Simmons	2229908
SM 5310 B-2011	03/09/2021			03/18/2021 02:17	Madeline Gruver	2229909