

Chemical Analysis Report

CEN-DIST-2021-03-10-01

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

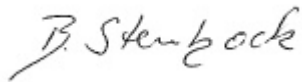
Event Description: **Eau Gallie/IRL/Crane**
Request ID: **RQ-2021-02-08-14**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Kalina Warren

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 31-MAR-2021 16:26



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 group are included in this report: 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: Crane Creek @ 200m Upstream of RR Bridge

Collection Date/Time: 03/09/2021 13:18

Field ID: G5CE0097

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230479	EPA 8321B	Aldicarb	0.020	U	ug/L	P394767	
		Aldicarb Sulfone	0.0020	U	ug/L	P394767	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P394767	
		Carbaryl	0.0020	U	ug/L	P394767	
		Carbofuran	0.0020	U	ug/L	P394767	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P394767	
		Methiocarb	0.0020	U	ug/L	P394767	
		Methomyl	0.0020	U	ug/L	P394767	RPD
		Oxamyl	0.0020	U	ug/L	P394767	
		Propoxur	0.0020	U	ug/L	P394767	
2230480		Acesulfame K	0.20	I	ug/L	P394775	
		2,4-D	0.018		ug/L	P394766	
		AMPA	1.0	U	ug/L	P394775	
		2,4,5-T	0.0040	U	ug/L	P394766	
		Sucralose	0.54		ug/L	P394775	
		Acetaminophen	0.036		ug/L	P394766	
		Endothall	0.25	U	ug/L	P394775	
		Acetamiprid	0.0020	U	ug/L	P394766	
		Glufosinate	1.0	U	ug/L	P394775	
		Glyphosate	1.0	U	ug/L	P394775	
		Afidopyropen	0.0020	U	ug/L	P394766	
		Bentazon	0.023		ug/L	P394766	
		Benzovindiflupyr	0.0020	U	ug/L	P394766	
		Carbamazepine	0.0018	I	ug/L	P394766	
		Clothianidin	0.0020	U	ug/L	P394766	
		Dinotefuran	0.0020	U	ug/L	P394766	
		Diuron	0.0021	I	ug/L	P394766	
		Fenuron	0.016	U	ug/L	P394766	
		Fluridone	0.0053		ug/L	P394766	
		Imazapyr	0.15		ug/L	P394766	
		Hydrocodone	0.0020	U	ug/L	P394766	
		Ibuprofen	0.020	U	ug/L	P394766	
		Imidacloprid	0.0054	I	ug/L	P394766	
		Linuron	0.0040	U	ug/L	P394766	
		Mandestrobin	0.0020	U	ug/L	P394766	
		MCP	0.0026	I	ug/L	P394766	
		Naproxen	0.0080	U	ug/L	P394766	
		Primidone	0.0040	U	ug/L	P394766	
		Pyraclostrobin	0.0020	U	ug/L	P394766	
		Thiamethoxam	0.0020	U	ug/L	P394766	
		Tolfenpyrad	0.0020	U	ug/L	P394766	
		Triclopyr	0.0040	U	ug/L	P394766	
2230481	EPA 8270E	Aldrin	4.3	U	ng/L	P395072	
		Alpha-BHC	2.1	U	ng/L	P395072	

Field ID: G5CE0097

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230481	EPA 8270E	Alpha-Chlordane	1.1	U	ng/L	P395072	
		Beta-BHC	8.5	U	ng/L	P395072	
		Beta-Cyfluthrin**	16	U	ng/L	P395072	
		Bifenthrin**	4.3	U	ng/L	P395072	
		Delta-BHC	8.5	U	ng/L	P395072	
		Gamma-BHC	8.5	U	ng/L	P395072	
		Chlorothalonil	2.1	U	ng/L	P395072	MS
		Cis-Nonachlor**	1.1	U	ng/L	P395072	
		Cypermethrin	21	U	ng/L	P395072	
		Dacthal**	1.1	U	ng/L	P395072	
		DDD-p,p'	5.3	U	ng/L	P395072	
		DDE-p,p'	5.3	U	ng/L	P395072	
		DDT-p,p'	6.4	U	ng/L	P395072	
		Deltamethrin**	21	U	ng/L	P395072	
		Dicofol	32	U	ng/L	P395072	
		Dieldrin	4.3	U	ng/L	P395072	
		Endosulfan I	4.3	U	ng/L	P395072	
		Endosulfan II	4.3	U	ng/L	P395072	MS
		Endosulfan Sulfate	2.1	U	ng/L	P395072	
		Endrin	2.1	U	ng/L	P395072	
		Endrin Aldehyde	2.1	U	ng/L	P395072	
		Endrin Ketone	2.1	U	ng/L	P395072	
		Ethalfuralin**	3.2	U	ng/L	P395072	
		Gamma-Chlordane	1.1	U	ng/L	P395072	
		Dichlobenil**	2.1	U	ng/L	P395072	
		Esfenvalerate**	21	U	ng/L	P395072	
		Fenpropathrin**	11	U	ng/L	P395072	
		Heptachlor	1.6	U	ng/L	P395072	
		Heptachlor Epoxide	2.1	U	ng/L	P395072	
		Hexachlorobenzene	2.1	U	ng/L	P395072	
		Lambda-Cyhalothrin**	16	U	ng/L	P395072	
		Methoxychlor	4.3	U	ng/L	P395072	
		Mirex	2.1	U	ng/L	P395072	
		MGK-264**	3.2	U	ng/L	P395072	
		Permethrin	11	U	ng/L	P395072	
		Phenothrin**	32	U	ng/L	P395072	
		Piperonyl Butoxide**	1.6	U	ng/L	P395072	MS
		Prallethrin**	27	U	ng/L	P395072	
		Tau-Fluvalinate**	3.7	U	ng/L	P395072	
		Tetramethrin**	8.5	U	ng/L	P395072	
		Trans-Nonachlor**	1.1	U	ng/L	P395072	
		Triclosan Methyl**	1.1	U	ng/L	P395072	
		Trifluralin	2.7	U	ng/L	P395072	
	EPA 8276	Chlordane	5.3	U	ng/L	P395072	
		Toxaphene	32	U	ng/L	P395072	

Field ID: G5CE0097

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230482	EPA 8270E	Acetochlor	0.25	U	ng/L	P394742	
		Alachlor	0.25	U	ng/L	P394742	
		Ametryn	0.61	U	ng/L	P394742	
		Atrazine	60		ng/L	P394742	
		Atrazine Desethyl	3.5	I	ng/L	P394742	
		Azinphos Methyl	2.0	U	ng/L	P394742	
		Azoxystrobin**	0.51	U	ng/L	P394742	
		Bromacil	0.51	U	ng/L	P394742	
		Butylate	0.40	U	ng/L	P394742	
		Caffeine**	19	IJ	ng/L	P394742	LCS
		Carbophenothion	0.51	U	ng/L	P394742	
		Carfentrazone Ethyl**	0.10	U	ng/L	P394742	
		Chlorpyrifos Ethyl	0.25	UJ	ng/L	P394742	LCS
		Chlorpyrifos Methyl	0.051	U	ng/L	P394742	
		Cyanazine	3.3	U	ng/L	P394742	
		Demeton	1.5	U	ng/L	P394742	
		Diazinon	0.13	U	ng/L	P394742	
		Difenoconazole**	0.61	U	ng/L	P394742	
		Dimethenamid**	0.10	U	ng/L	P394742	
		Disulfoton	0.51	U	ng/L	P394742	
		Dithiopyr**	0.22	IJ	ng/L	P394742	LCS
		EPTC	1.3	U	ng/L	P394742	
		Ethion	0.15	U	ng/L	P394742	
		Ethoprop	0.10	U	ng/L	P394742	
		Fenamiphos	0.51	U	ng/L	P394742	
		Fenbuconazole**	0.13	U	ng/L	P394742	
		Fipronil	0.25	U	ng/L	P394742	
		Fipronil Desulfinyl**	0.22	I	ng/L	P394742	
		Fipronil Sulfide	0.33	IJ	ng/L	P394742	LCS
		Fipronil Sulfone	0.65	J	ng/L	P394742	LCS
		Fluazifop-P-butyl**	0.10	U	ng/L	P394742	
		Fludioxonil**	0.13	U	ng/L	P394742	
		Flumioxazin**	1.8	U	ng/L	P394742	
		Flutolanil**	0.10	U	ng/L	P394742	
		Fluxapyroxad**	0.10	U	ng/L	P394742	
		Fonofos	0.20	U	ng/L	P394742	
		Hexazinone	0.83	I	ng/L	P394742	
		Imazalil**	0.76	U	ng/L	P394742	
		Iprodione**	0.61	U	ng/L	P394742	
		Malathion	0.35	U	ng/L	P394742	
		Metalaxyl	0.76	U	ng/L	P394742	
		Metolachlor	0.35	U	ng/L	P394742	
		Metribuzin	3.3	U	ng/L	P394742	
		Mevinphos	1.1	U	ng/L	P394742	
		Molinate	0.30	U	ng/L	P394742	

Field ID: G5CE0097

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2230482	EPA 8270E	Myclobutanil**	0.25	U	ng/L	P394742	
		Naled**	1.5	U	ng/L	P394742	
		Norflurazon	0.51	U	ng/L	P394742	
		Oxadiazon	0.43	I	ng/L	P394742	
		Oxyfluorfen**	0.15	U	ng/L	P394742	
		Parathion Ethyl	0.25	U	ng/L	P394742	
		Parathion Methyl	0.56	U	ng/L	P394742	
		Pendimethalin	1.0	U	ng/L	P394742	
		Phorate	0.53	U	ng/L	P394742	
		Prodiamine**	0.18	U	ng/L	P394742	
		Prometon	0.91	U	ng/L	P394742	
		Prometryn	0.20	U	ng/L	P394742	
		Pronamide**	0.15	UJ	ng/L	P394742	LCS
		Propiconazole**	0.51	U	ng/L	P394742	
		Pyriproxyfen**	0.13	UJ	ng/L	P394742	LCS, RPD
		Simazine	3.0	J	ng/L	P394742	LCS
		Sulfentrazone**	5.4		ng/L	P394742	
		Tebuconazole**	0.51	U	ng/L	P394742	
		Terbufos	0.10	U	ng/L	P394742	
		Terbuthylazine	0.43	UJ	ng/L	P394742	LCS

Ref. Method and Comment:

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8270E: Matrix spike precision for chlorothalonil not assessed due to very low recoveries.

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

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
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P394742

Component	Result	Code	Units
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 8270E

Batch ID: P395072

Component	Result	Code	Units
Aldrin	4.0	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	4.0	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
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
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P395072

Component	Result	Code	Units
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 8276

Batch ID: P395072

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

Reference Method: EPA 8321B

Batch ID: P394766

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P394767

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B

Batch ID: P394775

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

Quality Assurance Report

Laboratory Control Sample Accuracy

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
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
Metaxyl	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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P394742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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 8270E
 Batch ID: P395072

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	47.3	48.1	P/P	20 - 82.0
Alpha-BHC	92.1	87.0	P/P	58 - 130
Alpha-Chlordane	77.1	77.2	P/P	61 - 105
Beta-BHC	91.8	98.3	P/P	53 - 164
Beta-Cyfluthrin	82.7	81.2	P/P	40 - 140
Bifenthrin	72.4	73.0	P/P	44 - 122
Chlorothalonil	83.9	77.0	P/P	20 - 201
Cis-Nonachlor	76.6	77.5	P/P	60 - 110
Cypermethrin	72.0	72.5	P/P	43 - 131
Dacthal	85.3	86.6	P/P	76 - 108
DDD-p,p'	78.8	81.7	P/P	68 - 118
DDE-p,p'	74.5	75.3	P/P	56 - 107
DDT-p,p'	73.3	73.5	P/P	55 - 122
Delta-BHC	105	104	P/P	60 - 181
Deltamethrin	88.3	90.1	P/P	51 - 139
Dichlobenil	56.0	59.6	P/P	20 - 106
Dicofol	82.8	86.4	P/P	56 - 130
Dieldrin	81.1	82.0	P/P	67 - 111
Endosulfan I	87.4	85.2	P/P	68 - 115
Endosulfan II	84.1	98.4	P/P	69 - 133
Endosulfan Sulfate	72.3	77.2	P/P	65 - 126
Endrin	88.0	81.6	P/P	66 - 118
Endrin Aldehyde	90.9	91.1	P/P	60 - 132
Endrin Ketone	78.9	81.7	P/P	68 - 121
Esfenvalerate	64.6	66.1	P/P	42 - 116
Ethalfuralin	72.8	72.3	P/P	50 - 118
Fenpropathrin	72.1	72.7	P/P	55 - 132
Gamma-BHC	96.0	93.5	P/P	65 - 147
Gamma-Chlordane	74.1	74.6	P/P	56 - 103
Heptachlor	65.0	63.3	P/P	47 - 95.0
Heptachlor Epoxide	78.7	80.2	P/P	67 - 107
Hexachlorobenzene	62.9	64.8	P/P	45 - 99.0
Lambda-Cyhalothrin	81.3	80.1	P/P	41 - 135
Methoxychlor	82.3	82.1	P/P	61 - 138

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P395072

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
MGK-264	60.4	62.2	P/P	20 - 109
Mirex	60.3	60.6	P/P	36 - 92.0
Permethrin	68.6	70.1	P/P	45 - 111
Phenothrin	47.2	48.3	P/P	22 - 88.0
Piperonyl Butoxide	100	102	P/P	67 - 120
Prallethrin	52.0	52.7	P/P	28 - 92.0
Tau-Fluvalinate	84.6	84.7	P/P	38 - 145
Tetramethrin	97.2	102	P/P	29 - 150
Trans-Nonachlor	74.6	74.1	P/P	54 - 105
Triclosan Methyl	86.8	87.0	P/P	76 - 115
Trifluralin	69.3	69.4	P/P	53 - 111

Reference Method: EPA 8276
 Batch ID: P395072

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	103	101	P/P	56 - 117
Toxaphene	109	115	P/P	45 - 116

Reference Method: EPA 8321B
 Batch ID: P394766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	119		P	30 - 160
2,4,5-T	115		P	30 - 160
Acetaminophen	144		P	30 - 160
Acetamiprid	88.1		P	30 - 160
Afidopyropen	64.2		P	30 - 160
Bentazon	80.8		P	30 - 160
Benzovindiflupyr	98.0		P	30 - 160
Carbamazepine	102		P	30 - 160
Clothianidin	70.1		P	30 - 160
Dinotefuran	94.7		P	30 - 160
Diuron	84.1		P	30 - 160
Fenuron	106		P	30 - 160
Fluridone	84.2		P	30 - 160
Hydrocodone	100		P	30 - 160
Ibuprofen	99.4		P	30 - 160
Imazapyr	90.4		P	30 - 160
Imidacloprid	99.3		P	30 - 160
Linuron	80.7		P	30 - 160
Mandestrobin	96.0		P	30 - 160
MCPP	133		P	30 - 160
Naproxen	63.5		P	30 - 160
Primidone	93.8		P	30 - 160
Pyraclostrobin	84.4		P	30 - 160
Thiamethoxam	101		P	30 - 160
Tolfenpyrad	56.5		P	30 - 160
Triclopyr	121		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P394767

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	107		P	30 - 160
Aldicarb	94.9		P	30 - 160
Aldicarb Sulfone	111		P	30 - 160
Aldicarb Sulfoxide	99.6		P	30 - 160
Carbaryl	71.9		P	30 - 160
Carbofuran	80.9		P	30 - 160
Methiocarb	80.8		P	30 - 160
Methomyl	84.9		P	30 - 160
Oxamyl	102		P	30 - 160
Propoxur	68.0		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P394775

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	85.5		P	40 - 150
AMPA	102		P	40 - 150
Endothall	84.9		P	40 - 150
Glufosinate	110		P	40 - 150
Glyphosate	136		P	40 - 140
Sucralose	105		P	40 - 150

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 8270E
Batch ID: P395072

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230780	Aldrin	60.5	58.8	P/P	29 - 83.0
2230780	Alpha-BHC	98.3	98.3	P/P	53 - 147
2230780	Alpha-Chlordane	77.7	78.5	P/P	56 - 107
2230780	Beta-BHC	87.8	74.1	P/P	43 - 182
2230780	Beta-Cyfluthrin	100	89.8	P/P	42 - 157
2230780	Bifenthrin	81.2	75.8	P/P	52 - 124
2230780	Chlorothalonil	3.89	6.01	F/F	10 - 265
2230780	Cis-Nonachlor	78.8	79.8	P/P	55 - 112
2230780	Cypermethrin	91.2	92.5	P/P	46 - 144
2230780	Dacthal	88.8	90.2	P/P	72 - 110
2230780	DDD-p,p'	81.1	81.7	P/P	58 - 123
2230780	DDE-p,p'	74.0	74.6	P/P	52 - 106
2230780	DDT-p,p'	75.4	74.0	P/P	50 - 127
2230780	Delta-BHC	154	168	P/P	56 - 222
2230780	Deltamethrin	108	118	P/P	47 - 152
2230780	Dichlobenil	36.7	36.3	P/P	22 - 99.0
2230780	Dicofol	81.3	73.8	P/P	38 - 145
2230780	Dieldrin	80.2	84.8	P/P	59 - 118
2230780	Endosulfan I	99.3	102	P/P	64 - 124
2230780	Endosulfan II	257	259	F/F	52 - 159
2230780	Endosulfan Sulfate	83.6	84.1	P/P	62 - 136
2230780	Endrin	86.6	99.5	P/P	57 - 126
2230780	Endrin Aldehyde	57.2	59.5	P/P	41 - 128
2230780	Endrin Ketone	86.7	88.8	P/P	67 - 129
2230780	Esfenvalerate	75.3	79.9	P/P	50 - 120
2230780	Ethalfuralin	76.5	76.6	P/P	41 - 125
2230780	Fenpropathrin	79.1	82.2	P/P	40 - 202
2230780	Gamma-BHC	103	95.1	P/P	58 - 180
2230780	Gamma-Chlordane	75.4	75.5	P/P	54 - 103
2230780	Heptachlor	63.5	65.4	P/P	46 - 94.0
2230780	Heptachlor Epoxide	82.0	82.2	P/P	62 - 111
2230780	Hexachlorobenzene	61.4	60.3	P/P	42 - 95.0
2230780	Lambda-Cyhalothrin	110	113	P/P	37 - 162
2230780	Methoxychlor	78.5	77.0	P/P	52 - 143

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P395072

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230780	MGK-264	75.0	77.1	P/P	37 - 102
2230780	Mirex	68.1	69.2	P/P	43 - 91.0
2230780	Permethrin	80.0	81.0	P/P	48 - 113
2230780	Phenothrin	71.3	72.2	P/P	30 - 104
2230780	Piperonyl Butoxide	131	137	F/F	67 - 127
2230780	Prallethrin	66.2	67.0	P/P	28 - 102
2230780	Tau-Fluvalinate	112	118	P/P	46 - 174
2230780	Tetramethrin	172	165	P/P	28 - 176
2230780	Trans-Nonachlor	74.9	75.5	P/P	51 - 103
2230780	Triclosan Methyl	89.8	90.8	P/P	67 - 116
2230780	Trifluralin	70.8	70.5	P/P	47 - 118

Reference Method: EPA 8276

Batch ID: P395072

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230872	Chlordane	87.6	90.6	P/P	47 - 128
2230872	Toxaphene	117	119	P/P	11 - 163

Reference Method: EPA 8321B

Batch ID: P394766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229932	2,4-D	101	119	P/P	30 - 160
2229932	2,4,5-T	103	106	P/P	30 - 160
2229932	Acetaminophen	93.0	98.4	P/P	30 - 160
2229932	Acetamiprid	84.4	89.6	P/P	30 - 160
2229932	Afidopyropen	67.3	77.7	P/P	30 - 160
2229932	Bentazon	60.1	65.2	P/P	30 - 160
2229932	Benzovindiflupyr	88.7	99.1	P/P	30 - 160
2229932	Carbamazepine	93.9	104	P/P	30 - 160
2229932	Clothianidin	69.2	78.9	P/P	30 - 160
2229932	Dinotefuran	94.4	108	P/P	30 - 160
2229932	Diuron	70.2	72.2	P/P	30 - 160
2229932	Fenuron	93.4	97.9	P/P	30 - 160
2229932	Fluridone	77.5	78.4	P/P	30 - 160
2229932	Hydrocodone	96.6	109	P/P	30 - 160
2229932	Ibuprofen	72.5	85.8	P/P	30 - 160
2229932	Imazapyr	76.1	86.5	P/P	30 - 160
2229932	Imidacloprid	119	127	P/P	30 - 160
2229932	Linuron	65.3	72.2	P/P	30 - 160
2229932	Mandestrobin	94.4	98.9	P/P	30 - 160
2229932	MCPP	119	136	P/P	30 - 160
2229932	Naproxen	64.5	58.0	P/P	30 - 160
2229932	Primidone	101	105	P/P	30 - 160
2229932	Pyraclostrobin	83.4	91.7	P/P	30 - 160
2229932	Thiamethoxam	118	122	P/P	30 - 160
2229932	Tolfenpyrad	55.5	59.4	P/P	30 - 160
2229932	Triclopyr	108	110	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P394767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229892	3-Hydroxycarbofuran	98.8	105	P/P	30 - 160
2229892	Aldicarb	86.6	83.8	P/P	30 - 160
2229892	Aldicarb Sulfone	108	113	P/P	30 - 160
2229892	Aldicarb Sulfoxide	77.0	83.9	P/P	30 - 160
2229892	Carbaryl	70.0	73.5	P/P	30 - 160
2229892	Carbofuran	73.6	84.9	P/P	30 - 160
2229892	Methiocarb	74.0	75.1	P/P	30 - 160
2229892	Methomyl	75.8	113	P/P	30 - 160
2229892	Oxamyl	101	105	P/P	30 - 160
2229892	Propoxur	62.9	77.4	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P394775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2229932	Acesulfame K	126	114	P/P	40 - 150
2229932	AMPA	120	116	P/P	40 - 150
2229932	Endothall	86.4	100	P/P	40 - 150
2229932	Glufosinate	117	120	P/P	40 - 150
2229932	Glyphosate	109	128	P/P	40 - 140
2229932	Sucralose	115	116	P/P	40 - 150

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	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
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

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	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
2229895	Terbuthylazine	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

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	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
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 8270E

Batch ID: P395072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230780	Aldrin	2.84	Spike	P	0 - 30
2230780	Alpha-BHC	0.00746	Spike	P	0 - 30
2230780	Alpha-Chlordane	0.966	Spike	P	0 - 30
2230780	Beta-BHC	16.9	Spike	P	0 - 30
2230780	Beta-Cyfluthrin	10.8	Spike	P	0 - 30
2230780	Bifenthrin	6.89	Spike	P	0 - 30
2230780	Cis-Nonachlor	1.37	Spike	P	0 - 30
2230780	Cypermethrin	1.50	Spike	P	0 - 30
2230780	Dacthal	1.62	Spike	P	0 - 30
2230780	DDD-p,p'	0.715	Spike	P	0 - 30
2230780	DDE-p,p'	0.753	Spike	P	0 - 30
2230780	DDT-p,p'	1.94	Spike	P	0 - 30
2230780	Delta-BHC	8.45	Spike	P	0 - 30
2230780	Deltamethrin	8.37	Spike	P	0 - 30
2230780	Dichlobenil	1.11	Spike	P	0 - 30
2230780	Dicofol	9.73	Spike	P	0 - 30
2230780	Dieldrin	5.53	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P395072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230780	Endosulfan I	2.49	Spike	P	0 - 30
2230780	Endosulfan II	0.801	Spike	P	0 - 30
2230780	Endosulfan Sulfate	0.641	Spike	P	0 - 30
2230780	Endrin	13.8	Spike	P	0 - 30
2230780	Endrin Aldehyde	4.06	Spike	P	0 - 30
2230780	Endrin Ketone	2.41	Spike	P	0 - 30
2230780	Esfenvalerate	5.87	Spike	P	0 - 30
2230780	Ethalfuralin	0.174	Spike	P	0 - 30
2230780	Fenpropathrin	3.90	Spike	P	0 - 30
2230780	Gamma-BHC	8.29	Spike	P	0 - 30
2230780	Gamma-Chlordane	0.138	Spike	P	0 - 30
2230780	Heptachlor	2.90	Spike	P	0 - 30
2230780	Heptachlor Epoxide	0.224	Spike	P	0 - 30
2230780	Hexachlorobenzene	1.79	Spike	P	0 - 30
2230780	Lambda-Cyhalothrin	2.36	Spike	P	0 - 30
2230780	Methoxychlor	1.94	Spike	P	0 - 30
2230780	MGK-264	2.72	Spike	P	0 - 30
2230780	Mirex	1.65	Spike	P	0 - 30
2230780	Permethrin	1.23	Spike	P	0 - 30
2230780	Phenothrin	1.27	Spike	P	0 - 30
2230780	Piperonyl Butoxide	5.02	Spike	P	0 - 30
2230780	Prallethrin	1.14	Spike	P	0 - 30
2230780	Tau-Fluvalinate	5.33	Spike	P	0 - 30
2230780	Tetramethrin	4.06	Spike	P	0 - 30
2230780	Trans-Nonachlor	0.798	Spike	P	0 - 30
2230780	Triclosan Methyl	1.09	Spike	P	0 - 30
2230780	Trifluralin	0.464	Spike	P	0 - 30
LFB	Aldrin	1.77	LCS	P	0 - 30
LFB	Alpha-BHC	5.69	LCS	P	0 - 30
LFB	Alpha-Chlordane	0.168	LCS	P	0 - 30
LFB	Beta-BHC	6.83	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	1.86	LCS	P	0 - 30
LFB	Bifenthrin	0.825	LCS	P	0 - 30
LFB	Chlorothalonil	8.65	LCS	P	0 - 30
LFB	Cis-Nonachlor	1.04	LCS	P	0 - 30
LFB	Cypermethrin	0.700	LCS	P	0 - 30
LFB	Dacthal	1.56	LCS	P	0 - 30
LFB	DDD-p,p'	3.63	LCS	P	0 - 30
LFB	DDE-p,p'	1.08	LCS	P	0 - 30
LFB	DDT-p,p'	0.211	LCS	P	0 - 30
LFB	Delta-BHC	0.733	LCS	P	0 - 30
LFB	Deltamethrin	2.06	LCS	P	0 - 30
LFB	Dichlobenil	6.27	LCS	P	0 - 30
LFB	Dicofol	4.24	LCS	P	0 - 30
LFB	Dieldrin	1.14	LCS	P	0 - 30
LFB	Endosulfan I	2.50	LCS	P	0 - 30
LFB	Endosulfan II	15.7	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.50	LCS	P	0 - 30
LFB	Endrin	7.65	LCS	P	0 - 30
LFB	Endrin Aldehyde	0.234	LCS	P	0 - 30
LFB	Endrin Ketone	3.50	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P395072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Esfenvalerate	2.27	LCS	P	0 - 30
LFB	Ethalfuralin	0.602	LCS	P	0 - 30
LFB	Fenpropathrin	0.874	LCS	P	0 - 30
LFB	Gamma-BHC	2.61	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.805	LCS	P	0 - 30
LFB	Heptachlor	2.64	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.96	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.98	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	1.54	LCS	P	0 - 30
LFB	Methoxychlor	0.232	LCS	P	0 - 30
LFB	MGK-264	2.95	LCS	P	0 - 30
LFB	Mirex	0.436	LCS	P	0 - 30
LFB	Permethrin	2.16	LCS	P	0 - 30
LFB	Phenothrin	2.26	LCS	P	0 - 30
LFB	Piperonyl Butoxide	1.52	LCS	P	0 - 30
LFB	Prallethrin	1.38	LCS	P	0 - 30
LFB	Tau-Fluvalinate	0.0871	LCS	P	0 - 30
LFB	Tetramethrin	4.69	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.569	LCS	P	0 - 30
LFB	Triclosan Methyl	0.234	LCS	P	0 - 30
LFB	Trifluralin	0.233	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P395072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230872	Chlordane	3.29	Spike	P	0 - 30
2230872	Toxaphene	1.46	Spike	P	0 - 30
LFB	Chlordane	1.98	LCS	P	0 - 30
LFB	Toxaphene	5.00	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P394766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229932	2,4-D	14.6	Spike	P	0 - 30
2229932	2,4,5-T	2.72	Spike	P	0 - 30
2229932	Acetaminophen	5.69	Spike	P	0 - 30
2229932	Acetamiprid	5.98	Spike	P	0 - 30
2229932	Afidopyropen	14.3	Spike	P	0 - 30
2229932	Bentazon	8.06	Spike	P	0 - 30
2229932	Benzovindiflupyr	11.1	Spike	P	0 - 30
2229932	Carbamazepine	10.4	Spike	P	0 - 30
2229932	Clothianidin	13.1	Spike	P	0 - 30
2229932	Dinotefuran	13.5	Spike	P	0 - 30
2229932	Diuron	2.89	Spike	P	0 - 30
2229932	Fenuron	4.75	Spike	P	0 - 30
2229932	Fluridone	1.23	Spike	P	0 - 30
2229932	Hydrocodone	11.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P394766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229932	Ibuprofen	16.8	Spike	P	0 - 30
2229932	Imazapyr	12.9	Spike	P	0 - 30
2229932	Imidacloprid	6.71	Spike	P	0 - 30
2229932	Linuron	10.1	Spike	P	0 - 30
2229932	Mandestrobin	4.61	Spike	P	0 - 30
2229932	MCCP	13.3	Spike	P	0 - 30
2229932	Naproxen	10.7	Spike	P	0 - 30
2229932	Primidone	4.17	Spike	P	0 - 30
2229932	Pyraclostrobin	9.49	Spike	P	0 - 30
2229932	Thiamethoxam	3.02	Spike	P	0 - 30
2229932	Tolfenpyrad	6.95	Spike	P	0 - 30
2229932	Triclopyr	2.15	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P394767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229892	3-Hydroxycarbofuran	6.14	Spike	P	0 - 30
2229892	Aldicarb	3.25	Spike	P	0 - 30
2229892	Aldicarb Sulfone	4.38	Spike	P	0 - 30
2229892	Aldicarb Sulfoxide	8.65	Spike	P	0 - 30
2229892	Carbaryl	4.89	Spike	P	0 - 30
2229892	Carbofuran	14.2	Spike	P	0 - 30
2229892	Methiocarb	1.54	Spike	P	0 - 30
2229892	Methomyl	39.1	Spike	F	0 - 30
2229892	Oxamyl	3.86	Spike	P	0 - 30
2229892	Propoxur	20.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P394775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2229932	Acesulfame K	9.72	Spike	P	0 - 30
2229932	AMPA	3.80	Spike	P	0 - 30
2229932	Endothall	14.7	Spike	P	0 - 30
2229932	Glufosinate	2.43	Spike	P	0 - 30
2229932	Glyphosate	15.9	Spike	P	0 - 30
2229932	Sucralose	0.905	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2230479
Field Sample ID: G5CE0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	58.7	P	30 - 160

Lab Sample ID: 2230480
Field Sample ID: G5CE0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	125	P	30 - 160
EPA 8321B	Acetaminophen-d4	138	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.5	P	30 - 160
EPA 8321B	Diuron-d6	76.6	P	30 - 160
EPA 8321B	Endothall-d6	97.2	P	40 - 160
EPA 8321B	Endothall-d6	97.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	159	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	159	P	40 - 160
EPA 8321B	Ibuprofen-d3	90.2	P	30 - 160
EPA 8321B	Primidone-d5	81.7	P	30 - 160
EPA 8321B	Sucralose-d6	120	P	30 - 160
EPA 8321B	Sucralose-d6	120	P	30 - 160

Lab Sample ID: 2230481
Field Sample ID: G5CE0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	83.8	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	57.9	P	33 - 102
EPA 8276	Decachlorobiphenyl	72.2	P	29 - 92.0
EPA 8276	PCNB	86.2	P	43 - 134

Lab Sample ID: 2230482
Field Sample ID: G5CE0097

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	87.3	P	20 - 200
EPA 8270E	Simazine-d10	92.2	P	73 - 135
EPA 8270E	Terbufos-d10	91.0	P	58 - 130

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8321B
Run ID: A104071
Included Lab Sample IDs: 2230480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	103	P/P	60 - 160

Reference Method: EPA 8276
Run ID: A104149
Included Lab Sample IDs: 2230481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.3		P	80 - 120
Toxaphene	100		P	80 - 120

Reference Method: EPA 8270E
Run ID: A104151
Included Lab Sample IDs: 2230481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	106		P	80 - 120
Alpha-Chlordane	100		P	80 - 120
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	90.1		P	80 - 120
Bifenthrin	94.9		P	80 - 120
Chlorothalonil	103		P	80 - 120
Cis-Nonachlor	98.8		P	80 - 120
Cypermethrin	95.6		P	80 - 120
Dacthal	100		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	102		P	80 - 120
Deltamethrin	108		P	80 - 120
Dichlobenil	97.7		P	80 - 120
Dicofol	97.1		P	80 - 120
Dieldrin	98.9		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	115		P	80 - 120
Endosulfan Sulfate	92.9		P	80 - 120
Endrin	100		P	80 - 120
Endrin Aldehyde	108		P	80 - 120
Endrin Ketone	95.9		P	80 - 120
Esfenvalerate	92.7		P	80 - 120
Ethalfuralin	97.6		P	80 - 120
Fenpropathrin	93.9		P	80 - 120
Gamma-BHC	107		P	80 - 120
Gamma-Chlordane	98.2		P	80 - 120
Heptachlor	96.8		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Hexachlorobenzene	104		P	80 - 120
Lambda-Cyhalothrin	93.8		P	80 - 120
Methoxychlor	103		P	80 - 120
MGK-264	100		P	80 - 120
Mirex	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A104151
Included Lab Sample IDs: 2230481

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Permethrin	89.5		P	80 - 120
Phenothrin	88.7		P	80 - 120
Piperonyl Butoxide	98.6		P	80 - 120
Prallethrin	89.3		P	80 - 120
Tau-Fluvalinate	104		P	80 - 120
Tetramethrin	87.4		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	97.6		P	80 - 120

Reference Method: EPA 8321B
Run ID: A104155
Included Lab Sample IDs: 2230479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	106	113	P/P	60 - 150
Aldicarb	82.1	111	P/P	60 - 150
Aldicarb Sulfone	109	111	P/P	50 - 150
Aldicarb Sulfoxide	112	108	P/P	50 - 150
Carbaryl	113	104	P/P	60 - 150
Carbofuran	103	122	P/P	50 - 150
Methiocarb	115	111	P/P	50 - 150
Methomyl	80.4	106	P/P	50 - 150
Oxamyl	112	99.4	P/P	50 - 150
Propoxur	87.2	99.7	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A104157
Included Lab Sample IDs: 2230480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.2	105	P/P	50 - 150
2,4,5-T	113	102	P/P	50 - 150
Acetaminophen	92.6	111	P/P	60 - 160
Acetamiprid	106	106	P/P	50 - 150
Afidopyropen	103	102	P/P	50 - 150
Bentazon	102	103	P/P	50 - 160
Benzovindiflupyr	105	104	P/P	50 - 160
Carbamazepine	110	105	P/P	60 - 150
Clothianidin	99.5	95.2	P/P	60 - 150
Dinotefuran	107	105	P/P	50 - 150
Diuron	122	118	P/P	60 - 160
Fenuron	95.1	109	P/P	60 - 150
Fluridone	109	116	P/P	60 - 160
Hydrocodone	105	105	P/P	60 - 150
Ibuprofen	126	110	P/P	50 - 160
Imazapyr	82.9	98.7	P/P	50 - 160
Imidacloprid	96.6	96.2	P/P	60 - 150
Linuron	102	99.5	P/P	60 - 150
Mandestrobin	116	116	P/P	50 - 150
MCPP	105	101	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A104157
Included Lab Sample IDs: 2230480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Naproxen	98.4	69.7	P/P	50 - 160
Primidone	108	94.6	P/P	60 - 150
Pyraclostrobin	105	103	P/P	60 - 150
Thiamethoxam	105	102	P/P	50 - 150
Tolfenpyrad	106	106	P/P	60 - 150
Triclopyr	88.9	109	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A104164
Included Lab Sample IDs: 2230480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.6	74.9	P/P	60 - 160
AMPA	113	117	P/P	60 - 160
Endothall	87.9	121	P/P	60 - 160
Glufosinate	114	108	P/P	60 - 160
Glyphosate	153	149	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A104185
Included Lab Sample IDs: 2230482

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 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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A104185
Included Lab Sample IDs: 2230482

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

Reference Method: EPA 8270E
Run ID: A104193
Included Lab Sample IDs: 2230482

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	98.6		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		Precision	
						LCS	MS
						SMP	
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	47.3	48.1	60.5	58.8	1.77	2.84
	Alpha-BHC	92.1	87.0	98.3	98.3	5.69	0.0074
	Alpha-Chlordane	77.1	77.2	77.7	78.5	0.168	0.966
	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	91.8	98.3	87.8	74.1	6.83	16.9
	Beta-Cyfluthrin	82.7	81.2	100	89.8	1.86	10.8
	Bifenthrin	72.4	73.0	81.2	75.8	0.825	6.89
	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
	Chlorothalonil	83.9	77.0	3.89	6.01	8.65	
	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	76.6	77.5	78.8	79.8	1.04	1.37
	Cyanazine	107	98.2	109	110	9.02	0.869
	Cypermethrin	72.0	72.5	91.2	92.5	0.700	1.50
	Dacthal	85.3	86.6	88.8	90.2	1.56	1.62
	DDD-p,p'	78.8	81.7	81.1	81.7	3.63	0.715
	DDE-p,p'	74.5	75.3	74.0	74.6	1.08	0.753
	DDT-p,p'	73.3	73.5	75.4	74.0	0.211	1.94
	Delta-BHC	105	104	154	168	0.733	8.45
	Deltamethrin	88.3	90.1	108	118	2.06	8.37
	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	56.0	59.6	36.7	36.3	6.27	1.11
	Dicofol	82.8	86.4	81.3	73.8	4.24	9.73
	Dieldrin	81.1	82.0	80.2	84.8	1.14	5.53
	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	87.4	85.2	99.3	102	2.50	2.49
	Endosulfan II	84.1	98.4	257	259	15.7	0.801
	Endosulfan Sulfate	72.3	77.2	83.6	84.1	6.50	0.641
	Endrin	88.0	81.6	86.6	99.5	7.65	13.8
	Endrin Aldehyde	90.9	91.1	57.2	59.5	0.234	4.06
	Endrin Ketone	78.9	81.7	86.7	88.8	3.50	2.41
	EPTC	45.9	44.0	52.1	55.5	4.38	6.28
	Esfenvalerate	64.6	66.1	75.3	79.9	2.27	5.87
	Ethalfuralin	72.8	72.3	76.5	76.6	0.602	0.174
	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	72.1	72.7	79.1	82.2	0.874	3.90
	Fipronil	76.2	71.8	81.0	79.8	5.91	1.50

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						SMP	MS
EPA 8270E	Fipronil Desulfinyl	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	96.0	93.5	103	95.1	2.61	8.29
	Gamma-Chlordane	74.1	74.6	75.4	75.5	0.805	0.138
	Heptachlor	65.0	63.3	63.5	65.4	2.64	2.90
	Heptachlor Epoxide	78.7	80.2	82.0	82.2	1.96	0.224
	Hexachlorobenzene	62.9	64.8	61.4	60.3	2.98	1.79
	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
	Lambda-Cyhalothrin	81.3	80.1	110	113	1.54	2.36
	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	82.3	82.1	78.5	77.0	0.232	1.94
	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	60.4	62.2	75.0	77.1	2.95	2.72
	Mirex	60.3	60.6	68.1	69.2	0.436	1.65
	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	68.6	70.1	80.0	81.0	2.16	1.23
	Phenothrin	47.2	48.3	71.3	72.2	2.26	1.27
	Phorate	75.8	74.0	81.1	84.7	2.45	4.38
	Piperonyl Butoxide	100	102	131	137	1.52	5.02
	Prallethrin	52.0	52.7	66.2	67.0	1.38	1.14
	Prodimine	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	84.6	84.7	112	118	0.0871	5.33
	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
	Terbuthylazine	76.2	70.4	83.4	79.0	7.82	5.40
	Tetramethrin	97.2	102	172	165	4.69	4.06
	Trans-Nonachlor	74.6	74.1	74.9	75.5	0.569	0.798

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Triclosan Methyl	86.8	87.0	89.8	90.8	0.234	1.09
	Trifluralin	69.3	69.4	70.8	70.5	0.233	0.464
EPA 8276	Chlordane	103	101	87.6	90.6	1.98	3.29
	Toxaphene	109	115	117	119	5.00	1.46
EPA 8321B	2,4-D	119		101	119		14.6
	2,4,5-T	115		103	106		2.72
	3-Hydroxycarbofuran	107		98.8	105		6.14
	Acesulfame K	85.5		126	114		9.72
	Acetaminophen	144		93.0	98.4		5.69
	Acetamiprid	88.1		84.4	89.6		5.98
	Afidopyropen	64.2		67.3	77.7		14.3
	Aldicarb	94.9		86.6	83.8		3.25
	Aldicarb Sulfone	111		108	113		4.38
	Aldicarb Sulfoxide	99.6		77.0	83.9		8.65
	AMPA	102		120	116		3.80
	Bentazon	80.8		60.1	65.2		8.06
	Benzovindiflupyr	98.0		88.7	99.1		11.1
	Carbamazepine	102		93.9	104		10.4
	Carbaryl	71.9		70.0	73.5		4.89
	Carbofuran	80.9		73.6	84.9		14.2
	Clothianidin	70.1		69.2	78.9		13.1
	Dinotefuran	94.7		94.4	108		13.5
	Diuron	84.1		70.2	72.2		2.89
	Endothall	84.9		86.4	100		14.7
	Fenuron	106		93.4	97.9		4.75
	Fluridone	84.2		77.5	78.4		1.23
	Glufosinate	110		117	120		2.43
	Glyphosate	136		109	128		15.9
	Hydrocodone	100		96.6	109		11.9
	Ibuprofen	99.4		72.5	85.8		16.8
	Imazapyr	90.4		76.1	86.5		12.9
	Imidacloprid	99.3		119	127		6.71
	Linuron	80.7		65.3	72.2		10.1
	Mandestrobin	96.0		94.4	98.9		4.61
	MCPP	133		119	136		13.3
	Methiocarb	80.8		74.0	75.1		1.54
	Methomyl	84.9		75.8	113		39.1
	Naproxen	63.5		64.5	58.0		10.7
	Oxamyl	102		101	105		3.86
	Primidone	93.8		101	105		4.17
	Propoxur	68.0		62.9	77.4		20.6
	Pyraclostrobin	84.4		83.4	91.7		9.49
	Sucralose	105		115	116		0.905
	Thiamethoxam	101		118	122		3.02
	Tolfenpyrad	56.5		55.5	59.4		6.95
	Triclopyr	121		108	110		2.15

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2230481
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2230482

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2230481
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2230479
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2230480
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2230480

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	03/10/2021	03/12/2021 08:30	Rasheda Ghaffari	03/16/2021 20:55	Vandana T. Nagar	2230482
	03/10/2021	03/12/2021 08:30	Rasheda Ghaffari	03/19/2021 18:46	Vandana T. Nagar	2230482
	03/10/2021	03/16/2021 08:00	Rasheda Ghaffari	03/18/2021 19:01	Arthur Maknenko	2230481
EPA 8276	03/10/2021	03/16/2021 08:00	Rasheda Ghaffari	03/19/2021 01:19	Julie Wi	2230481
EPA 8321B	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/11/2021 14:26	Rebecca Ware	2230480
	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/11/2021 14:53	Rebecca Ware	2230480
	03/10/2021	03/11/2021 10:00	Rebecca Ware	03/13/2021 01:23	Rebecca Ware	2230480
	03/10/2021	03/12/2021 14:30	Hoor Shaik	03/13/2021 03:24	Juyoung Kim	2230480
	03/10/2021	03/15/2021 09:00	Hoor Shaik	03/15/2021 18:42	Juyoung Kim	2230479