

Chemical Analysis Report

NW-DIST-2021-07-21-02

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

Event Description: **Defuniak Run**
Request ID: **RQ-2021-07-19-18**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Myranda Butler

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

Date Certified: 10-AUG-2021 18:26



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: Shoal River above Laird Road

Collection Date/Time: 07/20/2021 09:55

Field ID: G4NW0375

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2264037	EPA 8321B	Aldicarb	0.020	U	ug/L	P401194	
		Aldicarb Sulfone	0.0020	U	ug/L	P401194	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P401194	
		Carbaryl	0.0020	U	ug/L	P401194	
		Carbofuran	0.0020	U	ug/L	P401194	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P401194	
		Methiocarb	0.0020	U	ug/L	P401194	
		Methomyl	0.0020	U	ug/L	P401194	
		Oxamyl	0.0020	U	ug/L	P401194	
		Propoxur	0.0020	U	ug/L	P401194	
2264038		2,4-D	0.075		ug/L	P401377	
		Acesulfame K	0.10	U	ug/L	P401371	
		2,4,5-T	0.0040	U	ug/L	P401377	
		AMPA	0.10	U	ug/L	P401371	
		Acetaminophen	0.0084	I	ug/L	P401377	
		Acetamiprid	0.0020	U	ug/L	P401377	
		Endothall	0.25	U	ug/L	P401371	
		Glufosinate	0.10	U	ug/L	P401371	
		Glyphosate	0.10	U	ug/L	P401371	
		Afidopyropen	0.0020	U	ug/L	P401377	
		Bentazon	0.0046		ug/L	P401377	
		Sucralose	0.065		ug/L	P401371	
		Benzovindiflupyr	0.0020	U	ug/L	P401377	
		Carbamazepine	8.0E-04	U	ug/L	P401377	
		Clothianidin	0.0020	U	ug/L	P401377	
		Dinotefuran	0.0020	U	ug/L	P401377	
		Diuron	0.0020	U	ug/L	P401377	
		Fenuron	0.016	U	ug/L	P401377	
		Fluridone	8.0E-04	U	ug/L	P401377	
		Imazapyr	0.0085	I	ug/L	P401377	
		Hydrocodone	0.0020	U	ug/L	P401377	
		Ibuprofen	0.020	U	ug/L	P401377	
		Imidacloprid	0.011		ug/L	P401377	
		Linuron	0.0040	U	ug/L	P401377	
		Mandestrobin	0.0020	U	ug/L	P401377	
		MCPP	0.0020	U	ug/L	P401377	
		Naproxen	0.0080	U	ug/L	P401377	
		Primidone	0.0040	U	ug/L	P401377	
		Pyraclostrobin	0.0020	U	ug/L	P401377	
		Thiamethoxam	0.0020	U	ug/L	P401377	
		Tolfenpyrad	0.0020	U	ug/L	P401377	
		Triclopyr	0.0040	U	ug/L	P401377	
2264039	EPA 8270E	Aldrin	0.70	U	ng/L	P401370	
		Alpha-BHC	0.11	U	ng/L	P401370	

Field ID: G4NW0375

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2264039	EPA 8270E	Alpha-Chlordane	0.22	U	ng/L	P401370	
		Beta-BHC	0.11	U	ng/L	P401370	
		Beta-Cyfluthrin**	1.4	I	ng/L	P401370	
		Bifenthrin**	0.54	U	ng/L	P401370	
		Chlorothalonil	0.54	U	ng/L	P401370	
		Cis-Nonachlor**	0.22	U	ng/L	P401370	
		Cypermethrin	2.0	I	ng/L	P401370	
		Dacthal**	0.16	U	ng/L	P401370	
		DDD-p,p'	0.27	U	ng/L	P401370	
		DDE-p,p'	0.22	U	ng/L	P401370	
		DDT-p,p'	0.27	U	ng/L	P401370	
		Delta-BHC	0.43	U	ng/L	P401370	
		Deltamethrin**	1.9	I	ng/L	P401370	
		Dichlobenil**	0.11	U	ng/L	P401370	
		Dicofol	1.3	U	ng/L	P401370	
		Dieldrin	0.65	I	ng/L	P401370	
		Endosulfan I	0.43	U	ng/L	P401370	
		Endosulfan II	0.43	U	ng/L	P401370	
		Endosulfan Sulfate	0.32	U	ng/L	P401370	
		Endrin	0.43	U	ng/L	P401370	
		Endrin Aldehyde	0.81	U	ng/L	P401370	
		Endrin Ketone	0.43	U	ng/L	P401370	
		Esfenvalerate**	0.81	U	ng/L	P401370	
		Ethalfuralin**	0.16	U	ng/L	P401370	
		Fenpropathrin**	0.27	U	ng/L	P401370	
		Gamma-BHC	0.13	U	ng/L	P401370	
		Gamma-Chlordane	0.28	I	ng/L	P401370	
		Heptachlor	0.22	U	ng/L	P401370	
		Heptachlor Epoxide	0.27	U	ng/L	P401370	
		Hexachlorobenzene	1.1	U	ng/L	P401370	
		Kepone**	5.4	U	ng/L	P401370	
		Lambda-Cyhalothrin**	1.5	I	ng/L	P401370	
		Methoxychlor	0.32	U	ng/L	P401370	
		MGK-264**	0.22	U	ng/L	P401370	
		Mirex	0.75	U	ng/L	P401370	MS
		Permethrin	2.1	I	ng/L	P401370	
		Phenothrin**	0.97	U	ng/L	P401370	
		Piperonyl Butoxide**	0.16	U	ng/L	P401370	
		Prallethrin**	2.2	U	ng/L	P401370	
		Tau-Fluvalinate**	0.27	U	ng/L	P401370	
		Tetramethrin**	0.81	U	ng/L	P401370	
		Trans-Nonachlor**	0.23	I	ng/L	P401370	
		Triclosan Methyl**	0.16	U	ng/L	P401370	
		Trifluralin	0.22	U	ng/L	P401370	
	EPA 8276	Chlordane	5.4	U	ng/L	P401370	

Field ID: G4NW0375

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2264039	EPA 8276	Toxaphene	32	U	ng/L	P401370	
2264040	EPA 8270E	Acetochlor	0.26	U	ng/L	P401366	
		Alachlor	0.26	U	ng/L	P401366	
		Ametryn	0.61	U	ng/L	P401366	
		Atrazine	9.8		ng/L	P401366	
		Atrazine Desethyl	1.5	U	ng/L	P401366	
		Azinphos Methyl	2.0	UJ	ng/L	P401366	RPD
		Azoxystrobin**	2.5	J	ng/L	P401366	
		Bromacil	0.51	U	ng/L	P401366	
		Butylate	0.41	UJ	ng/L	P401366	LCS, RPD
		Caffeine**	19	I	ng/L	P401366	
		Carbophenothion	0.51	U	ng/L	P401366	
		Carfentrazone Ethyl**	0.10	U	ng/L	P401366	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P401366	
		Chlorpyrifos Methyl	0.051	UJ	ng/L	P401366	LCS, RPD
		Cyanazine	3.3	U	ng/L	P401366	
		Demeton	1.5	UJ	ng/L	P401366	RPD
		Diazinon	0.13	UJ	ng/L	P401366	
		Difenoconazole**	0.61	UJ	ng/L	P401366	RPD
		Dimethenamid**	0.10	UJ	ng/L	P401366	LCS
		Disulfoton	0.51	UJ	ng/L	P401366	RPD
		Dithiopyr**	0.18	U	ng/L	P401366	
		EPTC	1.3	UJ	ng/L	P401366	LCS, RPD
		Ethion	0.15	U	ng/L	P401366	
		Ethoprop	0.10	UJ	ng/L	P401366	LCS, RPD
		Fenamiphos	0.51	U	ng/L	P401366	
		Fenbuconazole**	0.13	U	ng/L	P401366	
		Fipronil	0.26	U	ng/L	P401366	
		Fipronil Desulfinyl**	0.13	U	ng/L	P401366	
		Fipronil Sulfide	0.15	U	ng/L	P401366	
		Fipronil Sulfone	0.15	U	ng/L	P401366	
		Fluazifop-P-butyl**	0.10	U	ng/L	P401366	
		Fludioxonil**	0.13	U	ng/L	P401366	
		Flumioxazin**	5.6	I	ng/L	P401366	
		Flutolanil**	0.55		ng/L	P401366	
		Fluxapyroxad**	0.57		ng/L	P401366	
		Fonofos	0.20	UJ	ng/L	P401366	LCS, RPD
		Hexazinone	1.7	I	ng/L	P401366	
		Imazalil**	0.77	U	ng/L	P401366	
		Iprodione**	0.61	UJ	ng/L	P401366	LCS
		Malathion	0.36	U	ng/L	P401366	
		Metalaxyl	0.77	U	ng/L	P401366	
		Metolachlor	13		ng/L	P401366	
		Metribuzin	3.3	U	ng/L	P401366	
		Mevinphos	1.1	UJ	ng/L	P401366	LCS, RPD

Field ID: G4NW0375

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2264040	EPA 8270E	Molinate	0.31	UJ	ng/L	P401366	LCS, RPD
		Myclobutanil**	0.26	U	ng/L	P401366	
		Naled**	1.5	UJ	ng/L	P401366	LCS, RPD
		Norflurazon	0.51	U	ng/L	P401366	
		Oxadiazon	0.31	U	ng/L	P401366	
		Oxyfluorfen**	0.15	U	ng/L	P401366	
		Parathion Ethyl	0.26	U	ng/L	P401366	
		Parathion Methyl	0.56	U	ng/L	P401366	
		Pendimethalin	1.0	U	ng/L	P401366	
		Phorate	0.54	UJ	ng/L	P401366	LCS, RPD
		Prodiamine**	0.18	U	ng/L	P401366	
		Prometon	0.92	U	ng/L	P401366	
		Prometryn	0.20	U	ng/L	P401366	
		Pronamide**	0.15	U	ng/L	P401366	
		Propiconazole**	0.78	I	ng/L	P401366	
		Pyriproxyfen**	0.13	UJ	ng/L	P401366	CCV
		Simazine	0.51	U	ng/L	P401366	
		Sulfentrazone**	0.51	UJ	ng/L	P401366	RPD
		Tebuconazole**	3.1		ng/L	P401366	
		Terbufos	0.10	UJ	ng/L	P401366	LCS, RPD
		Terbuthylazine	0.44	U	ng/L	P401366	

Ref. Method and Comment:

EPA 8270E: MS accuracy for atrazine and metolachlor not assessed due to high content of these parameters in the sample spiked. Reported results for azoxystrobin J qualified due to the internal standard recoveries exceeding control limits; Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P401366

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P401366

Component	Result	Code	Units
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P401366

Component	Result	Code	Units
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270E

Batch ID: P401370

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P401370

Component	Result	Code	Units
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P401370

Component	Result	Code	Units
Mirex	0.70	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P401370

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

Reference Method: EPA 8321B

Batch ID: P401194

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: P401371

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P401371

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

Reference Method: EPA 8321B
Batch ID: P401377

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

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P401366

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	72.1	91.4	P/P	70 - 121
Alachlor	77.1	103	P/P	70 - 119
Ametryn	106	93.3	P/P	61 - 135
Atrazine	84.4	95.9	P/P	76 - 123
Atrazine Desethyl	56.3	60.1	P/P	35 - 140
Azinphos Methyl	93.5	128	P/P	57 - 163
Azoxystrobin	87.3	89.8	P/P	43 - 231
Bromacil	84.3	80.1	P/P	42 - 123
Butylate	28.9	40.2	F/P	34 - 92.0
Caffeine	93.7	93.4	P/P	70 - 130
Carbophenothion	104	108	P/P	61 - 121
Carfentrazone Ethyl	105	91.4	P/P	62 - 139
Chlorpyrifos Ethyl	86.5	113	P/P	67 - 121
Chlorpyrifos Methyl	58.9	92.3	F/P	67 - 120
Cyanazine	91.3	106	P/P	20 - 226
Demeton	44.1	77.7	P/P	35 - 125
Diazinon	72.3	85.5	P/P	70 - 122
Difenoconazole	97.3	64.9	P/P	56 - 186
Dimethenamid	59.6	78.7	F/P	67 - 119
Disulfoton	56.7	98.0	P/P	47 - 120
Dithiopyr	81.2	79.6	P/P	67 - 118
EPTC	27.8	40.1	F/P	33 - 90.0
Ethion	97.4	108	P/P	40 - 133
Ethoprop	42.5	90.2	F/P	61 - 121
Fenamiphos	105	127	P/P	31 - 139
Fenbuconazole	122	139	P/P	66 - 141
Fipronil	92.2	83.8	P/P	62 - 129
Fipronil Desulfinyl	113	89.9	P/P	59 - 126
Fipronil Sulfide	100	95.1	P/P	63 - 117
Fipronil Sulfone	101	112	P/P	57 - 117
Fluazifop-P-butyl	97.4	84.2	P/P	63 - 124
Fludioxonil	101	89.1	P/P	63 - 123
Flumioxazin	154	206	P/P	34 - 245
Flutolanil	106	92.5	P/P	56 - 131
Fluxapyroxad	103	96.5	P/P	57 - 117
Fonofos	43.7	79.2	F/P	61 - 116
Hexazinone	94.2	105	P/P	55 - 138
Imazalil	95.3	95.6	P/P	33 - 143
Iprodione	96.2	119	P/F	59 - 118
Malathion	81.3	102	P/P	62 - 138
Metalaxyl	81.1	83.3	P/P	24 - 147
Metolachlor	81.5	89.4	P/P	68 - 118
Metribuzin	87.2	97.7	P/P	20 - 239
Mevinphos	34.9	80.8	F/P	46 - 124
Molinate	32.4	59.5	F/P	46 - 100
Myclobutanil	93.8	84.3	P/P	32 - 149
Naled	16.7	31.2	F/F	32 - 95.0
Norflurazon	102	92.8	P/P	57 - 127
Oxadiazon	91.5	78.1	P/P	63 - 118
Oxyfluorfen	95.6	81.3	P/P	69 - 137
Parathion Ethyl	84.9	94.3	P/P	70 - 113
Parathion Methyl	76.4	102	P/P	71 - 130

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P401366

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pendimethalin	66.0	68.9	P/P	55 - 118
Phorate	40.1	97.6	F/P	46 - 125
Prodiamine	90.6	90.4	P/P	20 - 141
Prometon	90.0	94.8	P/P	54 - 122
Prometryn	92.9	85.8	P/P	66 - 124
Pronamide	80.1	87.1	P/P	79 - 122
Propiconazole	106	101	P/P	61 - 126
Pyriproxyfen	103	100	P/P	52 - 131
Simazine	80.9	89.6	P/P	75 - 128
Sulfentrazone	72.4	95.8	P/P	20 - 132
Tebuconazole	104	85.9	P/P	20 - 116
Terbufos	57.3	105	F/P	61 - 117
Terbuthylazine	82.2	87.6	P/P	74 - 116

Reference Method: EPA 8270E
 Batch ID: P401370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.7	57.8	P/P	20 - 150
Alpha-BHC	98.3	96.0	P/P	50 - 150
Alpha-Chlordane	88.5	91.0	P/P	50 - 150
Beta-BHC	114	110	P/P	50 - 150
Beta-Cyfluthrin	92.2	83.6	P/P	50 - 150
Bifenthrin	53.4	52.3	P/P	40 - 150
Chlorothalonil	139	127	P/P	20 - 150
Cis-Nonachlor	74.4	68.6	P/P	50 - 150
Cypermethrin	81.3	74.9	P/P	50 - 150
Dacthal	101	102	P/P	50 - 150
DDD-p,p'	78.0	71.8	P/P	50 - 150
DDE-p,p'	84.3	87.1	P/P	50 - 150
DDT-p,p'	85.0	91.1	P/P	50 - 150
Delta-BHC	129	131	P/P	50 - 150
Deltamethrin	91.4	83.4	P/P	50 - 150
Dichlobenil	88.8	89.9	P/P	40 - 150
Dicofol	86.6	87.1	P/P	50 - 150
Dieldrin	90.4	92.8	P/P	50 - 150
Endosulfan I	92.2	92.6	P/P	50 - 150
Endosulfan II	90.6	84.1	P/P	50 - 150
Endosulfan Sulfate	87.2	81.1	P/P	50 - 150
Endrin	80.2	72.7	P/P	50 - 150
Endrin Aldehyde	75.6	66.3	P/P	50 - 150
Endrin Ketone	96.0	86.2	P/P	50 - 150
Esfenvalerate	74.2	65.9	P/P	50 - 180
Ethalfuralin	80.9	78.8	P/P	50 - 150
Fenpropathrin	74.6	71.4	P/P	50 - 150
Gamma-BHC	108	106	P/P	50 - 150
Gamma-Chlordane	81.5	81.7	P/P	50 - 150
Heptachlor	77.6	77.8	P/P	50 - 150
Heptachlor Epoxide	85.1	86.0	P/P	50 - 150
Hexachlorobenzene	78.0	79.9	P/P	50 - 150
Kepone	124	113	P/P	30 - 180
Lambda-Cyhalothrin	76.1	69.6	P/P	50 - 200

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P401370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Methoxychlor	97.6	97.5	P/P	50 - 150
MGK-264	94.5	101	P/P	30 - 150
Mirex	57.1	53.0	P/P	50 - 180
Permethrin	77.7	71.2	P/P	50 - 150
Phenothrin	54.8	48.5	P/P	20 - 150
Piperonyl Butoxide	98.7	90.6	P/P	50 - 150
Prallethrin	78.1	78.7	P/P	30 - 150
Tau-Fluvalinate	58.7	53.6	P/P	40 - 150
Tetramethrin	85.6	84.2	P/P	30 - 150
Trans-Nonachlor	81.3	81.8	P/P	50 - 150
Triclosan Methyl	92.9	96.0	P/P	50 - 150
Trifluralin	80.6	80.4	P/P	50 - 150

Reference Method: EPA 8276

Batch ID: P401370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	94.0	92.1	P/P	56 - 117
Toxaphene	87.4	88.9	P/P	45 - 116

Reference Method: EPA 8321B

Batch ID: P401194

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	90.7		P	30 - 160
Aldicarb	74.0		P	30 - 160
Aldicarb Sulfone	103		P	30 - 160
Aldicarb Sulfoxide	102		P	30 - 160
Carbaryl	93.5		P	30 - 160
Carbofuran	96.4		P	30 - 160
Methiocarb	95.3		P	30 - 160
Methomyl	106		P	30 - 160
Oxamyl	96.0		P	30 - 160
Propoxur	96.9		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P401371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	81.5		P	40 - 150
AMPA	97.5		P	40 - 150
Endothall	80.8		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	103		P	40 - 150
Sucralose	84.1		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P401377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	138		P	30 - 160
2,4,5-T	146		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
 Batch ID: P401377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	94.2		P	30 - 160
Acetamiprid	99.1		P	30 - 160
Afidopyropen	64.8		P	30 - 160
Bentazon	98.9		P	30 - 160
Benzovindiflupyr	107		P	30 - 160
Carbamazepine	112		P	30 - 160
Clothianidin	116		P	30 - 160
Dinotefuran	114		P	30 - 160
Diuron	110		P	30 - 160
Fenuron	112		P	30 - 160
Fluridone	99.1		P	30 - 160
Hydrocodone	115		P	30 - 160
Ibuprofen	116		P	30 - 160
Imazapyr	146		P	30 - 160
Imidacloprid	114		P	30 - 160
Linuron	99.5		P	30 - 160
Mandestrobin	105		P	30 - 160
MCPPP	143		P	30 - 160
Naproxen	92.4		P	30 - 160
Primidone	121		P	30 - 160
Pyraclostrobin	95.9		P	30 - 160
Thiamethoxam	116		P	30 - 160
Tolfenpyrad	56.9		P	30 - 160
Triclopyr	149		P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P401366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264040	Acetochlor	83.9	91.5	P/P	66 - 122
2264040	Alachlor	74.9	85.4	P/P	65 - 122
2264040	Ametryn	85.6	90.3	P/P	45 - 173
2264040	Atrazine Desethyl	60.3	45.3	P/P	25 - 150
2264040	Azinphos Methyl	109	122	P/P	44 - 174
2264040	Azoxystrobin	104	92.2	P/P	10 - 268
2264040	Bromacil	82.6	74.5	P/P	31 - 145
2264040	Butylate	35.0	45.7	P/P	15 - 97.0
2264040	Caffeine	97.4	92.8	P/P	70 - 130
2264040	Carbophenothion	106	101	P/P	42 - 129
2264040	Carfentrazone Ethyl	81.4	90.7	P/P	62 - 145
2264040	Chlorpyrifos Ethyl	120	119	P/P	60 - 124
2264040	Chlorpyrifos Methyl	111	106	P/P	66 - 119
2264040	Cyanazine	119	94.5	P/P	17 - 225
2264040	Demeton	83.6	89.4	P/P	36 - 142
2264040	Diazinon	75.1	91.2	P/P	70 - 128
2264040	Difenoconazole	72.3	71.6	P/P	33 - 222
2264040	Dimethenamid	70.7	79.5	P/P	54 - 125
2264040	Disulfoton	95.5	97.4	P/P	49 - 133
2264040	Dithiopyr	77.1	85.1	P/P	55 - 123
2264040	EPTC	31.0	39.5	P/P	19 - 91.0
2264040	Ethion	106	96.9	P/P	13 - 143
2264040	Ethoprop	83.5	91.4	P/P	49 - 144
2264040	Fenamiphos	113	105	P/P	32 - 136
2264040	Fenbuconazole	124	146	P/P	73 - 148
2264040	Fipronil	94.4	93.6	P/P	57 - 129
2264040	Fipronil Desulfinyl	80.3	92.6	P/P	49 - 127
2264040	Fipronil Sulfide	112	95.5	P/P	44 - 127
2264040	Fipronil Sulfone	125	106	P/P	35 - 126
2264040	Fluazifop-P-butyl	72.3	83.9	P/P	67 - 129
2264040	Fludioxonil	77.7	85.6	P/P	61 - 126
2264040	Flumioxazin	264	269	P/P	38 - 279
2264040	Flutolanil	83.2	91.9	P/P	55 - 136
2264040	Fluxapyroxad	83.2	87.8	P/P	33 - 140
2264040	Fonofos	95.1	76.2	P/P	58 - 125
2264040	Hexazinone	95.3	102	P/P	57 - 148
2264040	Imazalil	101	91.2	P/P	10 - 221
2264040	Iprodione	100	110	P/P	32 - 140
2264040	Malathion	85.2	88.7	P/P	52 - 138
2264040	Metalaxyl	68.6	82.2	P/P	46 - 134
2264040	Metribuzin	101	95.5	P/P	16 - 272
2264040	Mevinphos	88.9	85.4	P/P	45 - 140
2264040	Molinate	60.1	66.3	P/P	41 - 103
2264040	Myclobutanil	93.5	86.2	P/P	60 - 134
2264040	Naled	26.8	26.5	P/P	20 - 113
2264040	Norflurazon	82.7	87.6	P/P	51 - 123
2264040	Oxadiazon	65.7	74.9	P/P	44 - 125
2264040	Oxyfluorfen	83.6	92.1	P/P	66 - 176
2264040	Parathion Ethyl	93.0	95.0	P/P	57 - 132
2264040	Parathion Methyl	112	110	P/P	59 - 156
2264040	Pendimethalin	80.2	86.1	P/P	59 - 129
2264040	Phorate	85.1	92.1	P/P	47 - 136

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P401366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264040	Prodiamine	99.2	126	P/P	10 - 159
2264040	Prometon	79.9	91.5	P/P	59 - 127
2264040	Prometryn	69.9	85.0	P/P	59 - 129
2264040	Pronamide	87.9	84.1	P/P	65 - 145
2264040	Propiconazole	87.4	90.3	P/P	28 - 165
2264040	Pyriproxyfen	44.7	46.7	P/P	21 - 180
2264040	Simazine	90.6	87.2	P/P	63 - 147
2264040	Sulfentrazone	96.5	132	P/P	32 - 136
2264040	Tebuconazole	63.2	72.7	P/P	10 - 117
2264040	Terbufos	100	113	P/P	61 - 131
2264040	Terbutylazine	81.5	88.0	P/P	62 - 126

Reference Method: EPA 8270E

Batch ID: P401370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264092	Aldrin	48.3	47.3	P/P	20 - 170
2264092	Alpha-BHC	91.2	87.6	P/P	50 - 170
2264092	Alpha-Chlordane	80.4	77.3	P/P	50 - 170
2264092	Beta-BHC	114	113	P/P	50 - 170
2264092	Beta-Cyfluthrin	94.3	93.6	P/P	50 - 170
2264092	Bifenthrin	57.7	54.0	P/P	40 - 170
2264092	Chlorothalonil	140	145	P/P	20 - 170
2264092	Cis-Nonachlor	63.7	60.9	P/P	50 - 170
2264092	Cypermethrin	80.8	81.0	P/P	50 - 170
2264092	Dacthal	89.1	86.3	P/P	50 - 170
2264092	DDD-p,p'	66.2	65.2	P/P	50 - 170
2264092	DDE-p,p'	74.8	73.3	P/P	50 - 170
2264092	DDT-p,p'	70.2	68.2	P/P	50 - 170
2264092	Delta-BHC	127	125	P/P	50 - 170
2264092	Deltamethrin	102	103	P/P	50 - 170
2264092	Dichlobenil	77.2	77.8	P/P	40 - 170
2264092	Dicofol	84.0	78.0	P/P	50 - 170
2264092	Dieldrin	79.9	78.7	P/P	50 - 170
2264092	Endosulfan I	80.7	80.7	P/P	50 - 170
2264092	Endosulfan II	75.0	74.0	P/P	50 - 170
2264092	Endosulfan Sulfate	72.8	71.2	P/P	50 - 170
2264092	Endrin	66.6	67.3	P/P	50 - 170
2264092	Endrin Aldehyde	61.6	57.0	P/P	50 - 170
2264092	Endrin Ketone	80.1	76.5	P/P	50 - 170
2264092	Esfenvalerate	80.8	80.8	P/P	50 - 180
2264092	Ethalfuralin	70.4	70.3	P/P	50 - 170
2264092	Fenpropathrin	68.7	65.5	P/P	50 - 170
2264092	Gamma-BHC	101	102	P/P	50 - 170
2264092	Gamma-Chlordane	71.8	70.1	P/P	50 - 170
2264092	Heptachlor	68.2	67.1	P/P	50 - 170
2264092	Heptachlor Epoxide	76.5	71.7	P/P	50 - 170
2264092	Hexachlorobenzene	74.5	74.6	P/P	50 - 170
2264092	Kepone	103	102	P/P	30 - 180
2264092	Lambda-Cyhalothrin	82.7	80.8	P/P	50 - 200
2264092	Methoxychlor	94.8	90.9	P/P	50 - 170
2264092	MGK-264	83.6	81.1	P/P	30 - 170

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P401370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264092	Mirex	47.1	47.9	F/F	50 - 180
2264092	Permethrin	83.5	83.7	P/P	50 - 170
2264092	Phenothrin	57.8	53.2	P/P	20 - 170
2264092	Piperonyl Butoxide	89.8	89.6	P/P	50 - 170
2264092	Prallethrin	65.5	68.4	P/P	30 - 170
2264092	Tau-Fluvalinate	66.8	66.1	P/P	40 - 170
2264092	Tetramethrin	83.5	71.9	P/P	30 - 170
2264092	Trans-Nonachlor	72.3	70.8	P/P	50 - 170
2264092	Triclosan Methyl	84.4	83.0	P/P	50 - 170
2264092	Trifluralin	69.4	68.8	P/P	50 - 170

Reference Method: EPA 8276

Batch ID: P401370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264084	Chlordane	94.5	103	P/P	47 - 128
2264084	Toxaphene	91.3	97.5	P/P	11 - 163

Reference Method: EPA 8321B

Batch ID: P401194

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262363	3-Hydroxycarbofuran	104	103	P/P	30 - 160
2262363	Aldicarb	81.3	71.1	P/P	30 - 160
2262363	Aldicarb Sulfone	121	124	P/P	30 - 160
2262363	Aldicarb Sulfoxide	39.6	40.4	P/P	30 - 160
2262363	Carbaryl	84.1	82.1	P/P	30 - 160
2262363	Carbofuran	88.9	88.2	P/P	30 - 160
2262363	Methiocarb	88.0	95.2	P/P	30 - 160
2262363	Methomyl	101	102	P/P	30 - 160
2262363	Oxamyl	96.0	97.6	P/P	30 - 160
2262363	Propoxur	89.2	90.4	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P401371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264038	Acesulfame K	112	109	P/P	40 - 150
2264038	AMPA	90.3	92.0	P/P	40 - 150
2264038	Endothall	97.8	98.1	P/P	40 - 150
2264038	Glufosinate	112	115	P/P	40 - 150
2264038	Glyphosate	87.5	91.3	P/P	40 - 150
2264038	Sucralose	85.9	85.5	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P401377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264038	2,4-D	99.6	111	P/P	30 - 160
2264038	2,4,5-T	114	114	P/P	30 - 160
2264038	Acetaminophen	83.6	78.2	P/P	30 - 160
2264038	Acetamiprid	93.7	92.0	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P401377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264038	Afidopyropen	58.8	58.4	P/P	30 - 160
2264038	Bentazon	71.1	75.1	P/P	30 - 160
2264038	Benzovindiflupyr	94.9	92.4	P/P	30 - 160
2264038	Carbamazepine	101	106	P/P	30 - 160
2264038	Clothianidin	111	109	P/P	30 - 160
2264038	Dinotefuran	115	113	P/P	30 - 160
2264038	Diuron	87.5	86.7	P/P	30 - 160
2264038	Fenuron	90.9	89.3	P/P	30 - 160
2264038	Fluridone	82.7	83.1	P/P	30 - 160
2264038	Hydrocodone	114	112	P/P	30 - 160
2264038	Ibuprofen	100	96.0	P/P	30 - 160
2264038	Imazapyr	104	102	P/P	30 - 160
2264038	Imidacloprid	132	133	P/P	30 - 160
2264038	Linuron	85.4	85.7	P/P	30 - 160
2264038	Mandestrobin	94.6	92.8	P/P	30 - 160
2264038	MCP	119	122	P/P	30 - 160
2264038	Naproxen	81.4	81.9	P/P	30 - 160
2264038	Primidone	119	119	P/P	30 - 160
2264038	Pyraclostrobin	85.0	82.3	P/P	30 - 160
2264038	Thiamethoxam	136	132	P/P	30 - 160
2264038	Tolfenpyrad	56.1	55.3	P/P	30 - 160
2264038	Triclopyr	119	120	P/P	30 - 160

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P401366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264040	Acetochlor	8.69	Spike	P	0 - 30
2264040	Alachlor	13.0	Spike	P	0 - 30
2264040	Ametryn	5.32	Spike	P	0 - 30
2264040	Atrazine	10.4	Spike	P	0 - 30
2264040	Atrazine Desethyl	24.1	Spike	P	0 - 30
2264040	Azinphos Methyl	11.4	Spike	P	0 - 30
2264040	Azoxystrobin	7.35	Spike	P	0 - 30
2264040	Bromacil	10.3	Spike	P	0 - 30
2264040	Butylate	26.6	Spike	P	0 - 30
2264040	Caffeine	3.22	Spike	P	0 - 30
2264040	Carbophenothion	4.51	Spike	P	0 - 30
2264040	Carfentrazone Ethyl	10.8	Spike	P	0 - 30
2264040	Chlorpyrifos Ethyl	0.533	Spike	P	0 - 30
2264040	Chlorpyrifos Methyl	3.93	Spike	P	0 - 30
2264040	Cyanazine	23.4	Spike	P	0 - 30
2264040	Demeton	6.69	Spike	P	0 - 30
2264040	Diazinon	19.3	Spike	P	0 - 30
2264040	Difenoconazole	0.920	Spike	P	0 - 30
2264040	Dimethenamid	11.7	Spike	P	0 - 30
2264040	Disulfoton	1.96	Spike	P	0 - 30
2264040	Dithiopyr	9.88	Spike	P	0 - 30
2264040	EPTC	23.9	Spike	P	0 - 30
2264040	Ethion	8.56	Spike	P	0 - 30
2264040	Ethoprop	9.04	Spike	P	0 - 30
2264040	Fenamiphos	7.00	Spike	P	0 - 30
2264040	Fenbuconazole	15.9	Spike	P	0 - 30
2264040	Fipronil	0.831	Spike	P	0 - 30
2264040	Fipronil Desulfinyl	14.2	Spike	P	0 - 30
2264040	Fipronil Sulfide	16.3	Spike	P	0 - 30
2264040	Fipronil Sulfone	16.6	Spike	P	0 - 30
2264040	Fluazifop-P-butyl	14.8	Spike	P	0 - 30
2264040	Fludioxonil	9.71	Spike	P	0 - 30
2264040	Flumioxazin	1.44	Spike	P	0 - 30
2264040	Flutolanil	8.59	Spike	P	0 - 30
2264040	Fluxapyroxad	4.61	Spike	P	0 - 30
2264040	Fonofos	22.1	Spike	P	0 - 30
2264040	Hexazinone	6.05	Spike	P	0 - 30
2264040	Imazalil	10.3	Spike	P	0 - 30
2264040	Iprodione	9.91	Spike	P	0 - 30
2264040	Malathion	4.07	Spike	P	0 - 30
2264040	Metalaxyl	18.0	Spike	P	0 - 30
2264040	Metolachlor	16.6	Spike	P	0 - 30
2264040	Metribuzin	5.11	Spike	P	0 - 30
2264040	Mevinphos	4.01	Spike	P	0 - 30
2264040	Molinate	9.79	Spike	P	0 - 30
2264040	Myclobutanil	8.07	Spike	P	0 - 30
2264040	Naled	1.34	Spike	P	0 - 30
2264040	Norflurazon	5.74	Spike	P	0 - 30
2264040	Oxadiazon	13.1	Spike	P	0 - 30
2264040	Oxyfluorfen	9.69	Spike	P	0 - 30
2264040	Parathion Ethyl	2.12	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P401366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264040	Parathion Methyl	2.26	Spike	P	0 - 30
2264040	Pendimethalin	7.11	Spike	P	0 - 30
2264040	Phorate	7.91	Spike	P	0 - 30
2264040	Prodiamine	24.0	Spike	P	0 - 30
2264040	Prometon	13.6	Spike	P	0 - 30
2264040	Prometryn	19.5	Spike	P	0 - 30
2264040	Pronamide	4.40	Spike	P	0 - 30
2264040	Propiconazole	2.62	Spike	P	0 - 30
2264040	Pyriproxyfen	4.31	Spike	P	0 - 30
2264040	Simazine	3.80	Spike	P	0 - 30
2264040	Sulfentrazone	31.0	Spike	F	0 - 30
2264040	Tebuconazole	10.2	Spike	P	0 - 30
2264040	Terbufos	11.8	Spike	P	0 - 30
2264040	Terbuthylazine	7.72	Spike	P	0 - 30
LFB	Acetochlor	23.7	LCS	P	0 - 30
LFB	Alachlor	28.5	LCS	P	0 - 30
LFB	Ametryn	12.7	LCS	P	0 - 30
LFB	Atrazine	12.8	LCS	P	0 - 30
LFB	Atrazine Desethyl	6.52	LCS	P	0 - 30
LFB	Azinphos Methyl	31.2	LCS	F	0 - 30
LFB	Azoxystrobin	2.86	LCS	P	0 - 30
LFB	Bromacil	5.11	LCS	P	0 - 30
LFB	Butylate	32.6	LCS	F	0 - 30
LFB	Caffeine	0.351	LCS	P	0 - 30
LFB	Carbophenothion	3.81	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	13.5	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	26.2	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	44.2	LCS	F	0 - 30
LFB	Cyanazine	14.7	LCS	P	0 - 30
LFB	Demeton	55.2	LCS	F	0 - 30
LFB	Diazinon	16.8	LCS	P	0 - 30
LFB	Difenoconazole	40.0	LCS	F	0 - 30
LFB	Dimethenamid	27.6	LCS	P	0 - 30
LFB	Disulfoton	53.4	LCS	F	0 - 30
LFB	Dithiopyr	1.92	LCS	P	0 - 30
LFB	EPTC	36.4	LCS	F	0 - 30
LFB	Ethion	9.92	LCS	P	0 - 30
LFB	Ethoprop	71.9	LCS	F	0 - 30
LFB	Fenamiphos	19.3	LCS	P	0 - 30
LFB	Fenbuconazole	13.4	LCS	P	0 - 30
LFB	Fipronil	9.55	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	22.8	LCS	P	0 - 30
LFB	Fipronil Sulfide	5.07	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.98	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	14.5	LCS	P	0 - 30
LFB	Fludioxonil	12.8	LCS	P	0 - 30
LFB	Flumioxazin	28.6	LCS	P	0 - 30
LFB	Flutolanil	13.7	LCS	P	0 - 30
LFB	Fluxapyroxad	6.59	LCS	P	0 - 30
LFB	Fonofos	57.7	LCS	F	0 - 30
LFB	Hexazinone	11.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P401366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Imazalil	0.296	LCS	P	0 - 30
LFB	Iprodione	21.4	LCS	P	0 - 30
LFB	Malathion	22.4	LCS	P	0 - 30
LFB	Metalaxyl	2.74	LCS	P	0 - 30
LFB	Metolachlor	9.22	LCS	P	0 - 30
LFB	Metribuzin	11.4	LCS	P	0 - 30
LFB	Mevinphos	79.4	LCS	F	0 - 30
LFB	Molinate	59.2	LCS	F	0 - 30
LFB	Myclobutanil	10.7	LCS	P	0 - 30
LFB	Naled	60.6	LCS	F	0 - 30
LFB	Norflurazon	9.61	LCS	P	0 - 30
LFB	Oxadiazon	15.8	LCS	P	0 - 30
LFB	Oxyfluorfen	16.2	LCS	P	0 - 30
LFB	Parathion Ethyl	10.5	LCS	P	0 - 30
LFB	Parathion Methyl	28.3	LCS	P	0 - 30
LFB	Pendimethalin	4.28	LCS	P	0 - 30
LFB	Phorate	83.5	LCS	F	0 - 30
LFB	Prodiamine	0.213	LCS	P	0 - 30
LFB	Prometon	5.24	LCS	P	0 - 30
LFB	Prometryn	7.97	LCS	P	0 - 30
LFB	Pronamide	8.37	LCS	P	0 - 30
LFB	Propiconazole	4.21	LCS	P	0 - 30
LFB	Pyriproxyfen	2.32	LCS	P	0 - 30
LFB	Simazine	10.2	LCS	P	0 - 30
LFB	Sulfentrazone	27.8	LCS	P	0 - 30
LFB	Tebuconazole	18.8	LCS	P	0 - 30
LFB	Terbufos	58.9	LCS	F	0 - 30
LFB	Terbutylazine	6.36	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P401370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264092	Aldrin	2.14	Spike	P	0 - 30
2264092	Alpha-BHC	4.01	Spike	P	0 - 30
2264092	Alpha-Chlordane	3.96	Spike	P	0 - 30
2264092	Beta-BHC	1.41	Spike	P	0 - 30
2264092	Beta-Cyfluthrin	0.724	Spike	P	0 - 30
2264092	Bifenthrin	6.57	Spike	P	0 - 30
2264092	Chlorothalonil	3.52	Spike	P	0 - 50
2264092	Cis-Nonachlor	4.51	Spike	P	0 - 30
2264092	Cypermethrin	0.318	Spike	P	0 - 30
2264092	Dacthal	3.10	Spike	P	0 - 30
2264092	DDD-p,p'	1.54	Spike	P	0 - 30
2264092	DDE-p,p'	2.07	Spike	P	0 - 30
2264092	DDT-p,p'	2.71	Spike	P	0 - 30
2264092	Delta-BHC	1.87	Spike	P	0 - 30
2264092	Deltamethrin	1.05	Spike	P	0 - 30
2264092	Dichlobenil	0.710	Spike	P	0 - 30
2264092	Dicofol	7.35	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P401370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264092	Dieldrin	1.51	Spike	P	0 - 30
2264092	Endosulfan I	0.0528	Spike	P	0 - 30
2264092	Endosulfan II	1.30	Spike	P	0 - 30
2264092	Endosulfan Sulfate	2.23	Spike	P	0 - 30
2264092	Endrin	0.979	Spike	P	0 - 30
2264092	Endrin Aldehyde	7.77	Spike	P	0 - 30
2264092	Endrin Ketone	4.52	Spike	P	0 - 30
2264092	Esfenvalerate	0.0696	Spike	P	0 - 30
2264092	Ethalfuralin	0.158	Spike	P	0 - 30
2264092	Fenpropathrin	4.83	Spike	P	0 - 30
2264092	Gamma-BHC	0.268	Spike	P	0 - 30
2264092	Gamma-Chlordane	2.46	Spike	P	0 - 30
2264092	Heptachlor	1.61	Spike	P	0 - 30
2264092	Heptachlor Epoxide	6.43	Spike	P	0 - 30
2264092	Hexachlorobenzene	0.102	Spike	P	0 - 30
2264092	Kepone	0.616	Spike	P	0 - 30
2264092	Lambda-Cyhalothrin	2.43	Spike	P	0 - 30
2264092	Methoxychlor	4.22	Spike	P	0 - 30
2264092	MGK-264	3.06	Spike	P	0 - 30
2264092	Mirex	1.61	Spike	P	0 - 30
2264092	Permethrin	0.340	Spike	P	0 - 30
2264092	Phenothrin	8.36	Spike	P	0 - 30
2264092	Piperonyl Butoxide	0.251	Spike	P	0 - 30
2264092	Prallethrin	4.25	Spike	P	0 - 30
2264092	Tau-Fluvalinate	1.03	Spike	P	0 - 30
2264092	Tetramethrin	14.9	Spike	P	0 - 30
2264092	Trans-Nonachlor	2.08	Spike	P	0 - 30
2264092	Triclosan Methyl	1.69	Spike	P	0 - 30
2264092	Trifluralin	0.909	Spike	P	0 - 30
LFB	Aldrin	0.157	LCS	P	0 - 30
LFB	Alpha-BHC	2.36	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.77	LCS	P	0 - 30
LFB	Beta-BHC	3.84	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	9.81	LCS	P	0 - 30
LFB	Bifenthrin	2.16	LCS	P	0 - 30
LFB	Chlorothalonil	9.37	LCS	P	0 - 50
LFB	Cis-Nonachlor	8.02	LCS	P	0 - 30
LFB	Cypermethrin	8.21	LCS	P	0 - 30
LFB	Dacthal	0.775	LCS	P	0 - 30
LFB	DDD-p,p'	8.20	LCS	P	0 - 30
LFB	DDE-p,p'	3.21	LCS	P	0 - 30
LFB	DDT-p,p'	6.94	LCS	P	0 - 30
LFB	Delta-BHC	1.65	LCS	P	0 - 30
LFB	Deltamethrin	9.21	LCS	P	0 - 30
LFB	Dichlobenil	1.22	LCS	P	0 - 30
LFB	Dicofol	0.582	LCS	P	0 - 30
LFB	Dieldrin	2.58	LCS	P	0 - 30
LFB	Endosulfan I	0.438	LCS	P	0 - 30
LFB	Endosulfan II	7.53	LCS	P	0 - 30
LFB	Endosulfan Sulfate	7.34	LCS	P	0 - 30
LFB	Endrin	9.83	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P401370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endrin Aldehyde	13.1	LCS	P	0 - 30
LFB	Endrin Ketone	10.8	LCS	P	0 - 30
LFB	Esfenvalerate	11.9	LCS	P	0 - 30
LFB	Ethalfuralin	2.59	LCS	P	0 - 30
LFB	Fenpropathrin	4.28	LCS	P	0 - 30
LFB	Gamma-BHC	1.27	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.228	LCS	P	0 - 30
LFB	Heptachlor	0.288	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.961	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.38	LCS	P	0 - 30
LFB	Kepone	9.27	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	8.95	LCS	P	0 - 30
LFB	Methoxychlor	0.0801	LCS	P	0 - 30
LFB	MGK-264	6.91	LCS	P	0 - 30
LFB	Mirex	7.42	LCS	P	0 - 30
LFB	Permethrin	8.69	LCS	P	0 - 30
LFB	Phenothrin	12.2	LCS	P	0 - 30
LFB	Piperonyl Butoxide	8.62	LCS	P	0 - 30
LFB	Prallethrin	0.731	LCS	P	0 - 30
LFB	Tau-Fluvalinate	9.11	LCS	P	0 - 30
LFB	Tetramethrin	1.58	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.611	LCS	P	0 - 30
LFB	Triclosan Methyl	3.28	LCS	P	0 - 30
LFB	Trifluralin	0.171	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P401370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264084	Chlordane	9.05	Spike	P	0 - 30
2264084	Toxaphene	6.59	Spike	P	0 - 30
LFB	Chlordane	2.07	LCS	P	0 - 30
LFB	Toxaphene	1.65	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P401194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262363	3-Hydroxycarbofuran	0.724	Spike	P	0 - 30
2262363	Aldicarb	13.4	Spike	P	0 - 30
2262363	Aldicarb Sulfone	2.81	Spike	P	0 - 30
2262363	Aldicarb Sulfoxide	1.94	Spike	P	0 - 30
2262363	Carbaryl	2.40	Spike	P	0 - 30
2262363	Carbofuran	0.833	Spike	P	0 - 30
2262363	Methiocarb	7.86	Spike	P	0 - 30
2262363	Methomyl	1.04	Spike	P	0 - 30
2262363	Oxamyl	1.64	Spike	P	0 - 30
2262363	Propoxur	1.36	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P401371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264038	Acesulfame K	2.68	Spike	P	0 - 30
2264038	AMPA	1.84	Spike	P	0 - 30
2264038	Endothall	0.314	Spike	P	0 - 30
2264038	Glufosinate	2.69	Spike	P	0 - 30
2264038	Glyphosate	4.33	Spike	P	0 - 30
2264038	Sucralose	0.381	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P401377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264038	2,4-D	5.86	Spike	P	0 - 30
2264038	2,4,5-T	0.503	Spike	P	0 - 30
2264038	Acetaminophen	5.92	Spike	P	0 - 30
2264038	Acetamiprid	1.83	Spike	P	0 - 30
2264038	Afidopyropen	0.745	Spike	P	0 - 30
2264038	Bentazon	3.06	Spike	P	0 - 30
2264038	Benzovindiflupyr	2.64	Spike	P	0 - 30
2264038	Carbamazepine	4.13	Spike	P	0 - 30
2264038	Clothianidin	1.83	Spike	P	0 - 30
2264038	Dinotefuran	1.78	Spike	P	0 - 30
2264038	Diuron	0.999	Spike	P	0 - 30
2264038	Fenuron	1.70	Spike	P	0 - 30
2264038	Fluridone	0.469	Spike	P	0 - 30
2264038	Hydrocodone	1.43	Spike	P	0 - 30
2264038	Ibuprofen	4.29	Spike	P	0 - 30
2264038	Imazapyr	2.08	Spike	P	0 - 30
2264038	Imidacloprid	0.413	Spike	P	0 - 30
2264038	Linuron	0.437	Spike	P	0 - 30
2264038	Mandestrobin	1.83	Spike	P	0 - 30
2264038	MCPP	2.97	Spike	P	0 - 30
2264038	Naproxen	0.566	Spike	P	0 - 30
2264038	Primidone	0.407	Spike	P	0 - 30
2264038	Pyraclostrobin	3.16	Spike	P	0 - 30
2264038	Thiamethoxam	3.15	Spike	P	0 - 30
2264038	Tolfenpyrad	1.47	Spike	P	0 - 30
2264038	Triclopyr	1.13	Spike	P	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2264037
Field Sample ID: G4NW0375

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	66.0	P	30 - 160

Lab Sample ID: 2264038
Field Sample ID: G4NW0375

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	85.9	P	30 - 160
EPA 8321B	Endothall-d6	92.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	100	P	30 - 160
EPA 8321B	Primidone-d5	121	P	30 - 160
EPA 8321B	Sucralose-d6	79.1	P	30 - 160

Lab Sample ID: 2264039
Field Sample ID: G4NW0375

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	83.4	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	65.1	P	30 - 110
EPA 8276	Decachlorobiphenyl	64.6	P	29 - 92.0
EPA 8276	PCNB	76.8	P	43 - 134

Lab Sample ID: 2264040
Field Sample ID: G4NW0375

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	50.6	P	20 - 200
EPA 8270E	Simazine-d10	89.7	P	73 - 135
EPA 8270E	Terbufos-d10	91.1	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A106768
Included Lab Sample IDs: 2264038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	90.6	97.6	P/P	50 - 150
2,4,5-T	101	106	P/P	50 - 150
3-Hydroxycarbofuran	105	105	P/P	60 - 150
Acetaminophen	111	123	P/P	60 - 160
Acetamiprid	102	108	P/P	50 - 150
Afidopyropen	93.7	97.9	P/P	50 - 150
Aldicarb	115	114	P/P	60 - 150
Aldicarb Sulfone	105	107	P/P	50 - 150
Aldicarb Sulfoxide	108	109	P/P	50 - 150
Bentazon	99.2	98.3	P/P	50 - 160
Benzovindiflupyr	105	110	P/P	50 - 160
Carbamazepine	105	112	P/P	60 - 150
Carbaryl	117	114	P/P	60 - 150
Carbofuran	109	108	P/P	50 - 150
Clothianidin	106	114	P/P	60 - 150
Dinotefuran	107	114	P/P	50 - 150
Diuron	120	126	P/P	60 - 160
Fenuron	107	108	P/P	60 - 150
Fluridone	102	102	P/P	60 - 160
Hydrocodone	109	115	P/P	60 - 150
Ibuprofen	103	108	P/P	50 - 160
Imazapyr	112	125	P/P	50 - 160
Imidacloprid	102	104	P/P	60 - 150
Linuron	111	109	P/P	60 - 150
Mandestrobin	107	111	P/P	50 - 150
MCPP	94.4	108	P/P	50 - 150
Methiocarb	110	115	P/P	50 - 150
Methomyl	109	107	P/P	50 - 150
Naproxen	92.1	99.3	P/P	50 - 160
Oxamyl	106	103	P/P	50 - 150
Primidone	108	108	P/P	60 - 150
Propoxur	110	111	P/P	50 - 150
Pyraclostrobin	103	109	P/P	60 - 150
Thiamethoxam	105	111	P/P	50 - 150
Tolfenpyrad	102	106	P/P	60 - 150
Triclopyr	101	111	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A106799
Included Lab Sample IDs: 2264038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	104	104	P/P	60 - 160
Glufosinate	93.9	102	P/P	60 - 160
Glyphosate	103	111	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A106812
Included Lab Sample IDs: 2264038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A106812
Included Lab Sample IDs: 2264038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	95.6	78.3	P/P	60 - 160
Endothall	87.0	79.4	P/P	60 - 160
Sucralose	80.8	81.3	P/P	60 - 160

Reference Method: EPA 8276
Run ID: A106866
Included Lab Sample IDs: 2264039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	93.1		P	80 - 120
Toxaphene	98.1		P	80 - 120

Reference Method: EPA 8270E
Run ID: A106867
Included Lab Sample IDs: 2264039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.8		P	80 - 120
Alpha-BHC	97.8		P	80 - 120
Alpha-Chlordane	102		P	80 - 120
Beta-BHC	98.3		P	80 - 120
Beta-Cyfluthrin	93.6		P	80 - 120
Bifenthrin	99.0		P	80 - 120
Chlorothalonil	99.0		P	80 - 120
Cis-Nonachlor	90.7		P	80 - 120
Cypermethrin	92.5		P	80 - 120
Dacthal	95.6		P	80 - 120
DDD-p,p'	88.7		P	80 - 120
DDE-p,p'	95.3		P	80 - 120
DDT-p,p'	95.0		P	80 - 120
Delta-BHC	101		P	80 - 120
Deltamethrin	89.3		P	80 - 120
Dichlobenil	99.5		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	99.0		P	80 - 120
Endosulfan I	93.2		P	80 - 120
Endosulfan II	99.2		P	80 - 120
Endosulfan Sulfate	89.8		P	80 - 120
Endrin	89.7		P	80 - 120
Endrin Aldehyde	87.5		P	80 - 120
Endrin Ketone	94.3		P	80 - 120
Esfenvalerate	92.1		P	80 - 120
Ethalfuralin	96.8		P	80 - 120
Fenpropathrin	93.8		P	80 - 120
Gamma-BHC	97.7		P	80 - 120
Gamma-Chlordane	93.9		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	93.7		P	80 - 120
Hexachlorobenzene	99.6		P	80 - 120
Kepone	80.6		P	80 - 120
Lambda-Cyhalothrin	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A106867
 Included Lab Sample IDs: 2264039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methoxychlor	107		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	86.5		P	80 - 120
Permethrin	93.8		P	80 - 120
Phenothrin	91.6		P	80 - 120
Piperonyl Butoxide	91.3		P	80 - 120
Prallethrin	99.3		P	80 - 120
Tau-Fluvalinate	90.5		P	80 - 120
Tetramethrin	99.8		P	80 - 120
Trans-Nonachlor	94.6		P	80 - 120
Triclosan Methyl	96.0		P	80 - 120
Trifluralin	93.8		P	80 - 120

Reference Method: EPA 8270E
 Run ID: A106935
 Included Lab Sample IDs: 2264040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	93.0		P	80 - 120
Atrazine	103		P	80 - 120
Atrazine Desethyl	102		P	80 - 120
Azoxystrobin	97.6		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	97.5		P	80 - 120
Caffeine	96.2		P	80 - 120
Carbophenothion	102		P	80 - 120
Carfentrazone Ethyl	105		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	104		P	80 - 120
Cyanazine	97.7		P	80 - 120
Diazinon	99.9		P	80 - 120
Difenoconazole	110		P	80 - 120
Dimethenamid	101		P	80 - 120
Disulfoton	99.8		P	80 - 120
Dithiopyr	98.9		P	80 - 120
EPTC	97.6		P	80 - 120
Ethion	99.9		P	80 - 120
Ethoprop	104		P	80 - 120
Fenamiphos	98.9		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	98.6		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	103		P	80 - 120
Fluazifop-P-butyl	103		P	80 - 120
Fludioxonil	109		P	80 - 120
Flumioxazin	87.1		P	80 - 120
Flutolanil	98.1		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A106935
 Included Lab Sample IDs: 2264040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazalil	112		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	98.5		P	80 - 120
Mevinphos	100		P	80 - 120
Molinate	102		P	80 - 120
Myclobutanil	105		P	80 - 120
Naled	101		P	80 - 120
Norflurazon	97.1		P	80 - 120
Oxadiazon	103		P	80 - 120
Oxyfluorfen	98.2		P	80 - 120
Parathion Ethyl	103		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	99.7		P	80 - 120
Phorate	103		P	80 - 120
Prodiamine	95.8		P	80 - 120
Prometon	93.9		P	80 - 120
Prometryn	94.3		P	80 - 120
Pronamide	92.2		P	80 - 120
Propiconazole	98.4		P	80 - 120
Pyriproxyfen	126*		F	80 - 120
Simazine	103		P	80 - 120
Terbufos	98.1		P	80 - 120
Terbuthylazine	97.8		P	80 - 120

Reference Method: EPA 8270E
 Run ID: A106996
 Included Lab Sample IDs: 2264040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Azinphos Methyl	98.3		P	80 - 120
Demeton	99.4		P	80 - 120
Fenbuconazole	97.6		P	80 - 120
Fluxapyroxad	96.5		P	80 - 120
Iprodione	100		P	80 - 120
Malathion	96.5		P	80 - 120
Sulfentrazone	100		P	80 - 120
Tebuconazole	99.7		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	SMP
EPA 8270E	Acetochlor	72.1	91.4	83.9	91.5	23.7	8.69
	Alachlor	77.1	103	74.9	85.4	28.5	13.0
	Aldrin	57.7	57.8	48.3	47.3	0.157	2.14
	Alpha-BHC	98.3	96.0	91.2	87.6	2.36	4.01
	Alpha-Chlordane	88.5	91.0	80.4	77.3	2.77	3.96
	Ametryn	106	93.3	85.6	90.3	12.7	5.32
	Atrazine	84.4	95.9			12.8	10.4
	Atrazine Desethyl	56.3	60.1	60.3	45.3	6.52	24.1
	Azinphos Methyl	93.5	128	109	122	31.2	11.4
	Azoxystrobin	87.3	89.8	104	92.2	2.86	7.35
	Beta-BHC	114	110	114	113	3.84	1.41
	Beta-Cyfluthrin	92.2	83.6	94.3	93.6	9.81	0.724
	Bifenthrin	53.4	52.3	57.7	54.0	2.16	6.57
	Bromacil	84.3	80.1	82.6	74.5	5.11	10.3
	Butylate	28.9	40.2	35.0	45.7	32.6	26.6
	Caffeine	93.7	93.4	97.4	92.8	0.351	3.22
	Carbophenothion	104	108	106	101	3.81	4.51
	Carfentrazone Ethyl	105	91.4	81.4	90.7	13.5	10.8
	Chlorothalonil	139	127	140	145	9.37	3.52
	Chlorpyrifos Ethyl	86.5	113	120	119	26.2	0.533
	Chlorpyrifos Methyl	58.9	92.3	111	106	44.2	3.93
	Cis-Nonachlor	74.4	68.6	63.7	60.9	8.02	4.51
	Cyanazine	91.3	106	119	94.5	14.7	23.4
	Cypermethrin	81.3	74.9	80.8	81.0	8.21	0.318
	Dacthal	101	102	89.1	86.3	0.775	3.10
	DDD-p,p'	78.0	71.8	66.2	65.2	8.20	1.54
	DDE-p,p'	84.3	87.1	74.8	73.3	3.21	2.07
	DDT-p,p'	85.0	91.1	70.2	68.2	6.94	2.71
	Delta-BHC	129	131	127	125	1.65	1.87
	Deltamethrin	91.4	83.4	102	103	9.21	1.05
	Demeton	44.1	77.7	83.6	89.4	55.2	6.69
	Diazinon	72.3	85.5	75.1	91.2	16.8	19.3
	Dichlobenil	88.8	89.9	77.2	77.8	1.22	0.710
	Dicofol	86.6	87.1	84.0	78.0	0.582	7.35
	Dieldrin	90.4	92.8	79.9	78.7	2.58	1.51
	Difenoconazole	97.3	64.9	72.3	71.6	40.0	0.920
	Dimethenamid	59.6	78.7	70.7	79.5	27.6	11.7
	Disulfoton	56.7	98.0	95.5	97.4	53.4	1.96
	Dithiopyr	81.2	79.6	77.1	85.1	1.92	9.88
	Endosulfan I	92.2	92.6	80.7	80.7	0.438	0.0528
	Endosulfan II	90.6	84.1	75.0	74.0	7.53	1.30
	Endosulfan Sulfate	87.2	81.1	72.8	71.2	7.34	2.23
	Endrin	80.2	72.7	66.6	67.3	9.83	0.979
	Endrin Aldehyde	75.6	66.3	61.6	57.0	13.1	7.77
	Endrin Ketone	96.0	86.2	80.1	76.5	10.8	4.52
	EPTC	27.8	40.1	31.0	39.5	36.4	23.9
	Esfenvalerate	74.2	65.9	80.8	80.8	11.9	0.0696
	Ethalfuralin	80.9	78.8	70.4	70.3	2.59	0.158
	Ethion	97.4	108	106	96.9	9.92	8.56
	Ethoprop	42.5	90.2	83.5	91.4	71.9	9.04
	Fenamiphos	105	127	113	105	19.3	7.00
	Fenbuconazole	122	139	124	146	13.4	15.9
	Fenpropathrin	74.6	71.4	68.7	65.5	4.28	4.83
	Fipronil	92.2	83.8	94.4	93.6	9.55	0.831

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Fipronil Desulfinyl	113	89.9	80.3	92.6	22.8	14.2
	Fipronil Sulfide	100	95.1	112	95.5	5.07	16.3
	Fipronil Sulfone	101	112	125	106	9.98	16.6
	Fluazifop-P-butyl	97.4	84.2	72.3	83.9	14.5	14.8
	Fludioxonil	101	89.1	77.7	85.6	12.8	9.71
	Flumioxazin	154	206	264	269	28.6	1.44
	Flutolanil	106	92.5	83.2	91.9	13.7	8.59
	Fluxapyroxad	103	96.5	83.2	87.8	6.59	4.61
	Fonofos	43.7	79.2	95.1	76.2	57.7	22.1
	Gamma-BHC	108	106	101	102	1.27	0.268
	Gamma-Chlordane	81.5	81.7	71.8	70.1	0.228	2.46
	Heptachlor	77.6	77.8	68.2	67.1	0.288	1.61
	Heptachlor Epoxide	85.1	86.0	76.5	71.7	0.961	6.43
	Hexachlorobenzene	78.0	79.9	74.5	74.6	2.38	0.102
	Hexazinone	94.2	105	95.3	102	11.2	6.05
	Imazalil	95.3	95.6	101	91.2	0.296	10.3
	Iprodione	96.2	119	100	110	21.4	9.91
	Kepone	124	113	103	102	9.27	0.616
	Lambda-Cyhalothrin	76.1	69.6	82.7	80.8	8.95	2.43
	Malathion	81.3	102	85.2	88.7	22.4	4.07
	Metalaxyl	81.1	83.3	68.6	82.2	2.74	18.0
	Methoxychlor	97.6	97.5	94.8	90.9	0.0801	4.22
	Metolachlor	81.5	89.4			9.22	16.6
	Metribuzin	87.2	97.7	101	95.5	11.4	5.11
	Mevinphos	34.9	80.8	88.9	85.4	79.4	4.01
	MGK-264	94.5	101	83.6	81.1	6.91	3.06
	Mirex	57.1	53.0	47.1	47.9	7.42	1.61
	Molinate	32.4	59.5	60.1	66.3	59.2	9.79
	Myclobutanil	93.8	84.3	93.5	86.2	10.7	8.07
	Naled	16.7	31.2	26.8	26.5	60.6	1.34
	Norflurazon	102	92.8	82.7	87.6	9.61	5.74
	Oxadiazon	91.5	78.1	65.7	74.9	15.8	13.1
	Oxyfluorfen	95.6	81.3	83.6	92.1	16.2	9.69
	Parathion Ethyl	84.9	94.3	93.0	95.0	10.5	2.12
	Parathion Methyl	76.4	102	112	110	28.3	2.26
	Pendimethalin	66.0	68.9	80.2	86.1	4.28	7.11
	Permethrin	77.7	71.2	83.5	83.7	8.69	0.340
	Phenothrin	54.8	48.5	57.8	53.2	12.2	8.36
	Phorate	40.1	97.6	85.1	92.1	83.5	7.91
	Piperonyl Butoxide	98.7	90.6	89.8	89.6	8.62	0.251
	Prallethrin	78.1	78.7	65.5	68.4	0.731	4.25
	Prodiamine	90.6	90.4	99.2	126	0.213	24.0
	Prometon	90.0	94.8	79.9	91.5	5.24	13.6
	Prometryn	92.9	85.8	69.9	85.0	7.97	19.5
	Pronamide	80.1	87.1	87.9	84.1	8.37	4.40
	Propiconazole	106	101	87.4	90.3	4.21	2.62
	Pyriproxyfen	103	100	44.7	46.7	2.32	4.31
	Simazine	80.9	89.6	90.6	87.2	10.2	3.80
	Sulfentrazone	72.4	95.8	96.5	132	27.8	31.0
	Tau-Fluvalinate	58.7	53.6	66.8	66.1	9.11	1.03
	Tebuconazole	104	85.9	63.2	72.7	18.8	10.2
	Terbufos	57.3	105	100	113	58.9	11.8
	Terbuthylazine	82.2	87.6	81.5	88.0	6.36	7.72
	Tetramethrin	85.6	84.2	83.5	71.9	1.58	14.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Trans-Nonachlor	81.3	81.8	72.3	70.8	0.611	2.08
	Triclosan Methyl	92.9	96.0	84.4	83.0	3.28	1.69
	Trifluralin	80.6	80.4	69.4	68.8	0.171	0.909
EPA 8276	Chlordane	94.0	92.1	94.5	103	2.07	9.05
	Toxaphene	87.4	88.9	91.3	97.5	1.65	6.59
EPA 8321B	2,4-D	138		99.6	111		5.86
	2,4,5-T	146		114	114		0.503
	3-Hydroxycarbofuran	90.7		104	103		0.724
	Acesulfame K	81.5		112	109		2.68
	Acetaminophen	94.2		83.6	78.2		5.92
	Acetamiprid	99.1		93.7	92.0		1.83
	Afidopyropen	64.8		58.8	58.4		0.745
	Aldicarb	74.0		81.3	71.1		13.4
	Aldicarb Sulfone	103		121	124		2.81
	Aldicarb Sulfoxide	102		39.6	40.4		1.94
	AMPA	97.5		90.3	92.0		1.84
	Bentazon	98.9		71.1	75.1		3.06
	Benzovindiflupyr	107		94.9	92.4		2.64
	Carbamazepine	112		101	106		4.13
	Carbaryl	93.5		84.1	82.1		2.40
	Carbofuran	96.4		88.9	88.2		0.833
	Clothianidin	116		111	109		1.83
	Dinotefuran	114		115	113		1.78
	Diuron	110		87.5	86.7		0.999
	Endothall	80.8		97.8	98.1		0.314
	Fenuron	112		90.9	89.3		1.70
	Fluridone	99.1		82.7	83.1		0.469
	Glufosinate	101		112	115		2.69
	Glyphosate	103		87.5	91.3		4.33
	Hydrocodone	115		114	112		1.43
	Ibuprofen	116		100	96.0		4.29
	Imazapyr	146		104	102		2.08
	Imidacloprid	114		132	133		0.413
	Linuron	99.5		85.4	85.7		0.437
	Mandestrobin	105		94.6	92.8		1.83
	MCPP	143		119	122		2.97
	Methiocarb	95.3		88.0	95.2		7.86
	Methomyl	106		101	102		1.04
	Naproxen	92.4		81.4	81.9		0.566
	Oxamyl	96.0		96.0	97.6		1.64
	Primidone	121		119	119		0.407
	Propoxur	96.9		89.2	90.4		1.36
	Pyraclostrobin	95.9		85.0	82.3		3.16
	Sucralose	84.1		85.9	85.5		0.381
	Thiamethoxam	116		136	132		3.15
	Tolfenpyrad	56.9		56.1	55.3		1.47
	Triclopyr	149		119	120		1.13

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2264039
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2264040

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2264039
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2264037
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2264038

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	07/21/2021	07/23/2021 08:00	Fe-Val Siddell	07/29/2021 15:50	Vandana T. Nagar	2264040
	07/21/2021	07/23/2021 08:00	Fe-Val Siddell	07/30/2021 21:42	Vandana T. Nagar	2264040
	07/21/2021	07/23/2021 08:30	Rasheda Ghaffari	07/27/2021 22:10	Arthur Maknenko	2264039
EPA 8276	07/21/2021	07/23/2021 08:30	Rasheda Ghaffari	07/27/2021 13:24	Julie Wi	2264039
EPA 8321B	07/21/2021	07/21/2021 13:00	Hoor Shaik	07/22/2021 12:56	Juyoung Kim	2264037
	07/21/2021	07/23/2021 09:00	Pramila Ghimire	07/23/2021 10:38	Juyoung Kim	2264038
	07/21/2021	07/23/2021 09:00	Pramila Ghimire	07/23/2021 17:45	Pramila Ghimire	2264038
	07/21/2021	07/23/2021 13:00	Hoor Shaik	07/23/2021 17:49	Juyoung Kim	2264038