Chemical Analysis Report

SO-DIST-2021-04-20-01

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

Event Description: **2021 SMP : Collier County**
Request ID: **RQ-2021-03-29-63**
Customer: **SO-DIST**
Project ID: **SMP**

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FLDEP South District Office
2295 Victoria Ave. Suite 364
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 25-MAY-2021 16:52

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: COCAT41 **Collection Date/Time: 04/19/2021 11:41**

Field ID: COCAT41 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241121	EPA 8321B	Aldicarb	0.020	U	ug/L	P396769	
		Aldicarb Sulfone	0.0020	U	ug/L	P396769	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P396769	MS
		Carbaryl	0.0020	U	ug/L	P396769	
		Carbofuran	0.0020	U	ug/L	P396769	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P396769	
		Methiocarb	0.0020	U	ug/L	P396769	
		Methomyl	0.0020	U	ug/L	P396769	
		Oxamyl	0.0020	U	ug/L	P396769	
		Propoxur	0.0020	U	ug/L	P396769	
2241122		2,4-D	0.039		ug/L	P396769	
		Acesulfame K	0.10	U	ug/L	P396893	MS
		2,4,5-T	0.0040	U	ug/L	P396769	
		AMPA	0.10	UJ	ug/L	P396893	SUR
		Sucralose	0.21		ug/L	P396893	
		Acetaminophen	0.0080	U	ug/L	P396769	MS, RPD
		Endothall	0.25	U	ug/L	P396893	
		Acetamiprid	0.0020	U	ug/L	P396769	
		Glufosinate	0.10	UJ	ug/L	P396893	SUR
		Glyphosate	0.10	UJ	ug/L	P396893	SUR
		Afidopyropen	0.0020	U	ug/L	P396769	
		Bentazon	0.095		ug/L	P396769	
		Benzovindiflupyr	0.0020	U	ug/L	P396769	
		Carbamazepine	8.0E-04	U	ug/L	P396769	
		Clothianidin	0.0020	U	ug/L	P396769	
		Dinotefuran	0.0020	U	ug/L	P396769	
		Diuron	0.0020	U	ug/L	P396769	
		Fenuron	0.016	U	ug/L	P396769	
		Fluridone	0.072		ug/L	P396769	
		Imazapyr	0.24		ug/L	P396769	
		Hydrocodone	0.0020	U	ug/L	P396769	
		Ibuprofen	0.020	U	ug/L	P396769	
		Imidacloprid	0.0063	I	ug/L	P396769	MS
		Linuron	0.0040	U	ug/L	P396769	
		Mandestrobin	0.0020	U	ug/L	P396769	
		MCPP	0.0020	U	ug/L	P396769	MS
		Naproxen	0.0080	U	ug/L	P396769	
		Primidone	0.0040	U	ug/L	P396769	
		Pyraclostrobin	0.0020	U	ug/L	P396769	
		Thiamethoxam	0.0020	U	ug/L	P396769	MS
		Tolfenpyrad	0.0020	U	ug/L	P396769	
		Triclopyr	0.0040	U	ug/L	P396769	RPD
2241123	EPA 8270E	Aldrin	0.71	U	ng/L	P397022	
		Alpha-BHC	0.11	U	ng/L	P397022	

Field ID: COCAT41 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241123	EPA 8270E	Alpha-Chlordane	0.22	U	ng/L	P397022	
		Beta-BHC	0.11	U	ng/L	P397022	
		Beta-Cyfluthrin**	1.4	U	ng/L	P397022	
		Bifenthrin**	0.55	U	ng/L	P397022	
		Chlorothalonil	0.55	UQJ	ng/L	P397768	SUR
		Cis-Nonachlor**	0.22	U	ng/L	P397022	
		Cypermethrin	1.6	U	ng/L	P397022	
		Dacthal**	0.16	U	ng/L	P397022	
		DDD-p,p'	0.27	UQJ	ng/L	P397768	MS, SUR
		DDE-p,p'	0.22	U	ng/L	P397022	
		DDT-p,p'	0.27	UQJ	ng/L	P397768	SUR
		Delta-BHC	0.44	U	ng/L	P397022	
		Deltamethrin**	1.4	UJ	ng/L	P397022	LCS
		Dichlobenil**	0.11	U	ng/L	P397022	
		Dicofol	1.4	U	ng/L	P397022	
		Dieldrin	0.44	U	ng/L	P397022	
		Endosulfan I	0.44	U	ng/L	P397022	
		Endosulfan II	0.44	U	ng/L	P397022	
		Endosulfan Sulfate	0.33	U	ng/L	P397022	
		Endrin	0.44	U	ng/L	P397022	
		Endrin Aldehyde	0.82	U	ng/L	P397022	
		Endrin Ketone	0.44	U	ng/L	P397022	
		Esfenvalerate**	0.82	UJ	ng/L	P397022	LCS
		Ethalfluralin**	0.16	U	ng/L	P397022	
		Fenpropathrin**	0.27	U	ng/L	P397022	
		Gamma-BHC	0.14	U	ng/L	P397022	
		Gamma-Chlordane	0.22	U	ng/L	P397022	
		Heptachlor	0.22	U	ng/L	P397022	
		Heptachlor Epoxide	0.27	U	ng/L	P397022	
		Hexachlorobenzene	1.1	U	ng/L	P397022	
		Kepone**	5.5	U	ng/L	P397022	
		Lambda-Cyhalothrin**	0.82	UJ	ng/L	P397022	LCS, MS
		Methoxychlor	0.33	U	ng/L	P397022	
		MGK-264**	0.22	UJ	ng/L	P397022	LCS, MS, RPD
		Mirex	0.33	UJ	ng/L	P397022	LCS
		Permethrin	1.7	U	ng/L	P397022	
		Phenothrin**	0.98	UJ	ng/L	P397022	RPD
		Piperonyl Butoxide**	1.5		ng/L	P397022	
		Prallethrin**	2.2	U	ng/L	P397022	
		Tau-Fluvalinate**	0.27	U	ng/L	P397022	
		Tetramethrin**	0.82	UJ	ng/L	P397022	RPD
		Trans-Nonachlor**	0.22	U	ng/L	P397022	
		Triclosan Methyl**	0.16	U	ng/L	P397022	
		Trifluralin	0.22	U	ng/L	P397022	

Field ID: COCAT41 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241123	EPA 8276	Chlordane	5.5	U	ng/L	P397022	
		Toxaphene	33	U	ng/L	P397022	
2241124	EPA 8270E	Acetochlor	0.25	U	ng/L	P397049	
		Alachlor	0.25	U	ng/L	P397049	
		Ametryn	0.74	I	ng/L	P397049	
		Atrazine	21		ng/L	P397049	
		Atrazine Desethyl	4.5	I	ng/L	P397049	
		Azinphos Methyl	2.0	U	ng/L	P397049	
		Azoxystrobin**	0.50	U	ng/L	P397049	
		Bromacil	0.50	U	ng/L	P397049	
		Butylate	0.40	U	ng/L	P397049	
		Caffeine**	7.5	UJ	ng/L	P397049	MS, RPD
		Carbophenothion	0.50	U	ng/L	P397049	
		Carfentrazone Ethyl**	0.10	U	ng/L	P397049	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P397049	
		Chlorpyrifos Methyl	0.050	U	ng/L	P397049	
		Cyanazine	3.3	U	ng/L	P397049	
		Demeton	1.5	U	ng/L	P397049	
		Diazinon	0.13	U	ng/L	P397049	
		Difenoconazole**	0.60	U	ng/L	P397049	
		Dimethenamid**	0.10	U	ng/L	P397049	
		Disulfoton	0.50	U	ng/L	P397049	
		Dithiopyr**	0.22	I	ng/L	P397049	
		EPTC	1.3	U	ng/L	P397049	
		Ethion	0.15	U	ng/L	P397049	
		Ethoprop	0.10	U	ng/L	P397049	
		Fenamiphos	0.50	U	ng/L	P397049	
		Fenbuconazole**	0.13	U	ng/L	P397049	
		Fipronil	0.25	U	ng/L	P397049	
		Fipronil Desulfinyl**	0.13	U	ng/L	P397049	
		Fipronil Sulfide	0.15	U	ng/L	P397049	
		Fipronil Sulfone	0.34	I	ng/L	P397049	
		Fluazifop-P-butyl**	0.10	U	ng/L	P397049	
		Fludioxonil**	0.13	U	ng/L	P397049	
		Flumioxazin**	1.8	U	ng/L	P397049	
		Flutolanil**	0.77		ng/L	P397049	
		Fluxapyroxad**	1.2		ng/L	P397049	
		Fonofos	0.20	U	ng/L	P397049	
		Hexazinone	2.7		ng/L	P397049	
		Imazalil**	0.75	U	ng/L	P397049	
		Iprodione**	0.60	U	ng/L	P397049	
		Malathion	0.35	U	ng/L	P397049	
		Metalaxyl	0.75	U	ng/L	P397049	
		Metolachlor	0.35	U	ng/L	P397049	
		Metribuzin	3.3	U	ng/L	P397049	

Field ID: COCAT41 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241124	EPA 8270E	Mevinphos	1.1	U	ng/L	P397049	
		Molinate	0.30	U	ng/L	P397049	
		Myclobutanil**	0.92	I	ng/L	P397049	
		Naled**	1.5	U	ng/L	P397049	
		Norflurazon	0.50	U	ng/L	P397049	
		Oxadiazon	2.6		ng/L	P397049	
		Oxyfluorfen**	0.15	U	ng/L	P397049	
		Parathion Ethyl	0.25	U	ng/L	P397049	
		Parathion Methyl	0.55	U	ng/L	P397049	
		Pendimethalin	1.0	U	ng/L	P397049	
		Phorate	0.53	U	ng/L	P397049	
		Prodiamine**	0.18	UJ	ng/L	P397049	RPD
		Prometon	0.91	U	ng/L	P397049	
		Prometryn	0.20	U	ng/L	P397049	
		Pronamide**	0.15	U	ng/L	P397049	
		Propiconazole**	1.2	I	ng/L	P397049	
		Pyriproxyfen**	0.13	U	ng/L	P397049	
		Simazine	0.50	U	ng/L	P397049	
		Sulfentrazone**	5.7		ng/L	P397049	
		Tebuconazole**	0.50	U	ng/L	P397049	
		Terbufos	0.10	U	ng/L	P397049	
		Terbuthylazine	0.43	U	ng/L	P397049	

Ref. Method and Comment:
EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: Sample expired for some analytes due to need for re-extraction. Reported results qualified with J for those analytes due to surrogate below control limits in the re-extraction; the sample was subsequently re-extracted and re-analyzed one more time (after expiration) with acceptable surrogate recovery and the same analytical results were obtained. Refer to the Lab Analysis Report for an explanation of QC Codes.
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: P397022

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDE-p,p'	0.20	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfluralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.30	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8270E
Batch ID: P397049

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P397049

Component	Result	Code	Units
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
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P397049

Component	Result	Code	Units
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: P397768

Component	Result	Code	Units
Chlorothalonil	0.50	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L

Reference Method: EPA 8276
Batch ID: P397022

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

Reference Method: EPA 8321B
Batch ID: P396769

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	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
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P396769

Component	Result	Code	Units
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P396893

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: P397022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	38.9	33.5	P/P	20 - 150
Alpha-BHC	95.7	91.5	P/P	50 - 150
Alpha-Chlordane	82.3	96.5	P/P	50 - 150
Beta-BHC	103	103	P/P	50 - 150
Beta-Cyfluthrin	149	133	P/P	50 - 150
Bifenthrin	98.1	95.5	P/P	40 - 150
Cis-Nonachlor	87.4	98.0	P/P	50 - 150
Cypermethrin	140	125	P/P	50 - 150
Dacthal	87.0	99.6	P/P	50 - 150
DDE-p,p'	69.5	89.2	P/P	50 - 150
Delta-BHC	102	106	P/P	50 - 150
Deltamethrin	166	128	F/P	50 - 150
Dichlobenil	55.1	61.6	P/P	40 - 150
Dicofol	92.6	96.8	P/P	50 - 150
Dieldrin	77.3	95.5	P/P	50 - 150
Endosulfan I	78.9	89.3	P/P	50 - 150
Endosulfan II	83.1	95.7	P/P	50 - 150
Endosulfan Sulfate	102	99.8	P/P	50 - 150
Endrin	85.6	94.7	P/P	50 - 150
Endrin Aldehyde	93.9	97.8	P/P	50 - 150
Endrin Ketone	96.0	97.2	P/P	50 - 150
Esfenvalerate	190	164	F/F	50 - 150
Ethalfluralin	89.8	90.2	P/P	50 - 150
Fenpropathrin	97.8	94.5	P/P	50 - 150
Gamma-BHC	102	92.6	P/P	50 - 150
Gamma-Chlordane	84.8	95.1	P/P	50 - 150
Heptachlor	74.2	78.9	P/P	50 - 150
Heptachlor Epoxide	90.1	98.7	P/P	50 - 150
Hexachlorobenzene	71.2	78.6	P/P	50 - 150
Kepone	96.2	121	P/P	50 - 150
Lambda-Cyhalothrin	226	192	F/F	50 - 150
Methoxychlor	108	100	P/P	50 - 150
MGK-264	76.3	21.9	P/F	50 - 150
Mirex	147	161	P/F	50 - 150
Permethrin	130	124	P/P	50 - 150
Phenothrin	56.7	41.4	P/P	30 - 150
Piperonyl Butoxide	95.4	93.2	P/P	50 - 150
Prallethrin	49.4	43.3	P/P	40 - 150
Tau-Fluvalinate	105	96.0	P/P	40 - 150
Tetramethrin	81.3	57.5	P/P	40 - 150
Trans-Nonachlor	82.1	98.0	P/P	50 - 150
Triclosan Methyl	76.5	96.1	P/P	50 - 150
Trifluralin	83.3	85.3	P/P	50 - 150

Reference Method: EPA 8270E
Batch ID: P397049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	89.5	85.5	P/P	70 - 121
Alachlor	87.9	83.3	P/P	70 - 119
Ametryn	79.0	85.0	P/P	61 - 135
Atrazine	94.9	87.9	P/P	76 - 123

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P397049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Atrazine Desethyl	94.2	85.4	P/P	35 - 140
Azinphos Methyl	124	114	P/P	57 - 163
Azoxystrobin	177	131	P/P	43 - 231
Bromacil	83.0	71.7	P/P	42 - 123
Butylate	51.6	39.3	P/P	34 - 92.0
Caffeine	76.1	102	P/P	70 - 130
Carbophenothion	91.5	78.5	P/P	61 - 121
Carfentrazone Ethyl	98.8	95.3	P/P	62 - 139
Chlorpyrifos Ethyl	87.2	76.0	P/P	67 - 121
Chlorpyrifos Methyl	93.4	88.6	P/P	67 - 120
Cyanazine	139	118	P/P	20 - 226
Demeton	57.9	57.3	P/P	35 - 125
Diazinon	96.4	91.2	P/P	70 - 122
Difenoconazole	133	116	P/P	56 - 186
Dimethenamid	85.6	83.9	P/P	67 - 119
Disulfoton	76.9	63.2	P/P	47 - 120
Dithiopyr	90.8	85.6	P/P	67 - 118
EPTC	54.3	40.2	P/P	33 - 90.0
Ethion	72.4	82.1	P/P	40 - 133
Ethoprop	82.2	72.9	P/P	61 - 121
Fenamiphos	85.9	79.9	P/P	31 - 139
Fenbuconazole	99.1	97.6	P/P	66 - 141
Fipronil	93.6	88.1	P/P	62 - 129
Fipronil Desulfinyl	88.8	88.5	P/P	59 - 126
Fipronil Sulfide	83.5	79.6	P/P	63 - 117
Fipronil Sulfone	89.2	77.1	P/P	57 - 117
Fluazifop-P-butyl	92.0	90.0	P/P	63 - 124
Fludioxonil	94.1	87.3	P/P	63 - 123
Flumioxazin	137	131	P/P	34 - 245
Flutolanil	83.8	86.4	P/P	56 - 131
Fluxapyroxad	89.8	89.2	P/P	57 - 117
Fonofos	76.3	77.0	P/P	61 - 116
Hexazinone	91.3	89.5	P/P	55 - 138
Imazalil	77.8	89.2	P/P	33 - 143
Iprodione	81.9	82.2	P/P	59 - 118
Malathion	86.6	75.1	P/P	62 - 138
Metalaxyl	93.9	92.0	P/P	24 - 147
Metolachlor	81.2	74.3	P/P	68 - 118
Metribuzin	89.4	97.1	P/P	20 - 239
Mevinphos	78.4	69.6	P/P	46 - 124
Molinate	64.8	52.1	P/P	46 - 100
Myclobutanil	91.0	87.2	P/P	32 - 149
Naled	41.6	35.7	P/P	32 - 95.0
Norflurazon	97.5	92.8	P/P	57 - 127
Oxadiazon	86.6	83.6	P/P	63 - 118
Oxyfluorfen	101	99.7	P/P	69 - 137
Parathion Ethyl	86.7	81.7	P/P	70 - 113
Parathion Methyl	96.5	95.8	P/P	71 - 130
Pendimethalin	83.6	85.0	P/P	55 - 118
Phorate	78.3	66.7	P/P	46 - 125
Prodiamine	49.3	35.8	P/P	20 - 141
Prometon	77.1	80.6	P/P	54 - 122

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P397049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometryn	82.1	81.4	P/P	66 - 124
Pronamide	94.6	82.8	P/P	79 - 122
Propiconazole	89.9	87.5	P/P	61 - 126
Pyriproxyfen	95.5	92.1	P/P	52 - 131
Simazine	101	88.3	P/P	75 - 128
Sulfentrazone	53.5	58.7	P/P	20 - 132
Tebuconazole	60.3	78.1	P/P	20 - 116
Terbufos	77.4	71.5	P/P	61 - 117
Terbuthylazine	91.1	86.8	P/P	74 - 116

Reference Method: EPA 8270E
Batch ID: P397768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorothalonil	97.2	97.9	P/P	20 - 150
DDD-p,p'	75.0	76.1	P/P	50 - 150
DDT-p,p'	79.7	73.2	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P397022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	100	92.4	P/P	56 - 117
Toxaphene	81.0	80.6	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P396769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	127		P	30 - 160
2,4,5-T	119		P	30 - 160
3-Hydroxycarbofuran	90.5		P	30 - 160
Acetaminophen	76.4		P	30 - 150
Acetamiprid	94.3		P	30 - 160
Afidopyropen	73.3		P	30 - 160
Aldicarb	98.8		P	30 - 150
Aldicarb Sulfone	98.6		P	30 - 160
Aldicarb Sulfoxide	69.6		P	30 - 160
Bentazon	37.3		P	30 - 150
Benzovindiflupyr	82.9		P	30 - 160
Carbamazepine	85.9		P	30 - 160
Carbaryl	72.9		P	30 - 160
Carbofuran	75.1		P	30 - 160
Clothianidin	97.4		P	30 - 160
Dinotefuran	87.2		P	30 - 160
Diuron	76.7		P	30 - 160
Fenuron	98.2		P	30 - 160
Fluridone	97.0		P	30 - 160
Hydrocodone	93.0		P	30 - 160
Ibuprofen	82.3		P	30 - 160
Imazapyr	107		P	30 - 160
Imidacloprid	107		P	30 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P396769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	70.9		P	30 - 160
Mandestrobin	90.0		P	30 - 160
MCPP	140		P	30 - 160
Methiocarb	83.8		P	30 - 160
Methomyl	91.0		P	30 - 160
Naproxen	99.3		P	30 - 160
Oxamyl	90.2		P	30 - 160
Primidone	75.4		P	30 - 160
Propoxur	68.8		P	30 - 160
Pyraclostrobin	79.3		P	30 - 160
Thiamethoxam	101		P	30 - 160
Tolfenpyrad	56.7		P	30 - 160
Triclopyr	125		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P396893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	124		P	40 - 150
AMPA	97.8		P	40 - 150
Endothall	143		P	40 - 150
Glufosinate	99.6		P	40 - 150
Glyphosate	89.4		P	40 - 140
Sucralose	105		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P397022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241132	Aldrin	37.2	38.0	P/P	20 - 150
2241132	Alpha-BHC	92.7	88.0	P/P	50 - 150
2241132	Alpha-Chlordane	76.2	60.8	P/P	50 - 150
2241132	Beta-BHC	109	82.7	P/P	50 - 150
2241132	Beta-Cyfluthrin	140	118	P/P	50 - 150
2241132	Bifenthrin	65.6	63.9	P/P	40 - 150
2241132	Cis-Nonachlor	79.3	72.4	P/P	50 - 150
2241132	Cypermethrin	116	102	P/P	50 - 150
2241132	Dacthal	100	79.0	P/P	50 - 150
2241132	DDE-p,p'	62.4	50.0	P/P	50 - 150
2241132	Delta-BHC	112	87.2	P/P	50 - 150
2241132	Deltamethrin	114	147	P/P	50 - 170
2241132	Dichlobenil	46.7	41.6	P/P	40 - 170
2241132	Dicofol	90.1	88.7	P/P	50 - 150
2241132	Dieldrin	81.0	58.8	P/P	50 - 150
2241132	Endosulfan I	81.9	63.3	P/P	50 - 150
2241132	Endosulfan II	87.2	77.5	P/P	50 - 150
2241132	Endosulfan Sulfate	81.3	85.9	P/P	50 - 170
2241132	Endrin	82.2	74.1	P/P	50 - 150
2241132	Endrin Aldehyde	75.9	79.3	P/P	50 - 170
2241132	Endrin Ketone	98.4	82.4	P/P	50 - 150
2241132	Esfenvalerate	122	141	P/P	50 - 170
2241132	Ethalfluralin	78.9	76.5	P/P	50 - 150
2241132	Fenpropathrin	85.8	79.9	P/P	50 - 150
2241132	Gamma-BHC	96.0	91.4	P/P	50 - 150
2241132	Gamma-Chlordane	78.2	61.9	P/P	50 - 150
2241132	Heptachlor	61.5	55.6	P/P	50 - 150
2241132	Heptachlor Epoxide	95.7	77.6	P/P	50 - 150
2241132	Hexachlorobenzene	55.6	52.4	P/P	50 - 150
2241132	Kepone	87.4	71.0	P/P	50 - 170
2241132	Lambda-Cyhalothrin	156	178	P/F	50 - 170
2241132	Methoxychlor	108	100	P/P	50 - 150
2241132	MGK-264	47.7	108	F/P	50 - 150
2241132	Mirex	108	105	P/P	50 - 150
2241132	Permethrin	107	138	P/P	50 - 170
2241132	Phenothrin	128	54.1	P/P	30 - 150
2241132	Piperonyl Butoxide	110	110	P/P	50 - 150
2241132	Prallethrin	81.5	72.9	P/P	40 - 150
2241132	Tau-Fluvalinate	89.7	82.2	P/P	40 - 150
2241132	Tetramethrin	115	103	P/P	40 - 150
2241132	Trans-Nonachlor	72.3	58.0	P/P	50 - 150
2241132	Triclosan Methyl	80.5	63.9	P/P	50 - 150
2241132	Trifluralin	76.4	79.4	P/P	50 - 150

Reference Method: EPA 8270E
Batch ID: P397049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240943	Acetochlor	85.1	91.7	P/P	66 - 122
2240943	Alachlor	86.3	92.2	P/P	65 - 122
2240943	Ametryn	92.4	86.5	P/P	45 - 173
2240943	Atrazine	97.7	96.5	P/P	70 - 134

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P397049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240943	Atrazine Desethyl	80.7	83.9	P/P	25 - 150
2240943	Azinphos Methyl	123	121	P/P	44 - 174
2240943	Azoxystrobin	202	211	P/P	10 - 268
2240943	Bromacil	76.7	81.9	P/P	31 - 145
2240943	Butylate	52.3	51.7	P/P	15 - 97.0
2240943	Caffeine	455	301	F/F	70 - 130
2240943	Carbophenothion	83.1	88.1	P/P	42 - 129
2240943	Carfentrazone Ethyl	102	100	P/P	62 - 145
2240943	Chlorpyrifos Ethyl	86.4	89.4	P/P	60 - 124
2240943	Chlorpyrifos Methyl	87.5	92.1	P/P	66 - 119
2240943	Cyanazine	132	121	P/P	17 - 225
2240943	Demeton	71.5	75.7	P/P	36 - 142
2240943	Diazinon	94.7	99.7	P/P	70 - 128
2240943	Difenoconazole	131	139	P/P	33 - 222
2240943	Dimethenamid	85.1	90.5	P/P	54 - 125
2240943	Disulfoton	80.7	89.4	P/P	49 - 133
2240943	Dithiopyr	94.5	93.7	P/P	55 - 123
2240943	EPTC	46.7	51.8	P/P	19 - 91.0
2240943	Ethion	78.8	89.7	P/P	13 - 143
2240943	Ethoprop	74.9	76.9	P/P	49 - 144
2240943	Fenamiphos	84.5	89.7	P/P	32 - 136
2240943	Fenbuconazole	101	108	P/P	73 - 148
2240943	Fipronil	95.0	99.3	P/P	57 - 129
2240943	Fipronil Desulfinyl	85.2	93.7	P/P	49 - 127
2240943	Fipronil Sulfide	79.1	86.6	P/P	44 - 127
2240943	Fipronil Sulfone	79.1	85.9	P/P	35 - 126
2240943	Fluazifop-P-butyl	93.0	97.2	P/P	67 - 129
2240943	Fludioxonil	87.0	97.0	P/P	61 - 126
2240943	Flumioxazin	156	172	P/P	38 - 279
2240943	Flutolanil	88.7	93.4	P/P	55 - 136
2240943	Fluxapyroxad	89.8	96.7	P/P	33 - 140
2240943	Fonofos	79.2	79.3	P/P	58 - 125
2240943	Hexazinone	86.5	88.6	P/P	57 - 148
2240943	Imazalil	90.3	109	P/P	10 - 221
2240943	Iprodione	82.3	92.3	P/P	32 - 140
2240943	Malathion	76.2	83.0	P/P	52 - 138
2240943	Metalaxyl	93.5	95.9	P/P	46 - 134
2240943	Metolachlor	78.8	86.8	P/P	58 - 122
2240943	Metribuzin	97.4	104	P/P	16 - 272
2240943	Mevinphos	65.6	70.8	P/P	45 - 140
2240943	Molinate	55.9	61.6	P/P	41 - 103
2240943	Myclobutanil	88.4	95.9	P/P	60 - 134
2240943	Naled	37.0	43.6	P/P	20 - 113
2240943	Norflurazon	97.4	98.3	P/P	51 - 123
2240943	Oxadiazon	91.5	93.4	P/P	44 - 125
2240943	Oxyfluorfen	107	110	P/P	66 - 176
2240943	Parathion Ethyl	82.2	91.3	P/P	57 - 132
2240943	Parathion Methyl	95.7	96.6	P/P	59 - 156
2240943	Pendimethalin	90.5	93.2	P/P	59 - 129
2240943	Phorate	69.3	75.9	P/P	47 - 136
2240943	Prodiamine	40.9	83.2	P/P	10 - 159
2240943	Prometon	74.6	80.4	P/P	59 - 127

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P397049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240943	Prometryn	83.6	91.1	P/P	59 - 129
2240943	Pronamide	82.6	93.6	P/P	65 - 145
2240943	Propiconazole	93.9	94.9	P/P	28 - 165
2240943	Pyriproxyfen	95.2	102	P/P	21 - 180
2240943	Simazine	92.2	96.7	P/P	63 - 147
2240943	Sulfentrazone	86.3	96.3	P/P	32 - 136
2240943	Tebuconazole	69.1	67.2	P/P	10 - 117
2240943	Terbufos	75.6	80.3	P/P	61 - 131
2240943	Terbuthylazine	86.6	95.8	P/P	62 - 126

Reference Method: EPA 8270E
Batch ID: P397768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241744	Chlorothalonil	113	108	P/P	20 - 170
2241744	DDD-p,p'	49.9	49.2	F/F	50 - 170
2241744	DDT-p,p'	51.5	61.2	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P397022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241684	Chlordane	109	115	P/P	47 - 128
2241684	Toxaphene	75.7	79.0	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P396769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2239430	3-Hydroxycarbofuran	79.0	82.5	P/P	30 - 160
2239430	Aldicarb	87.2	102	P/P	30 - 150
2239430	Aldicarb Sulfone	103	111	P/P	30 - 160
2239430	Aldicarb Sulfoxide	31.0	29.9	P/F	30 - 160
2239430	Carbaryl	54.3	64.3	P/P	30 - 160
2239430	Carbofuran	62.8	62.3	P/P	30 - 160
2239430	Methiocarb	73.1	72.2	P/P	30 - 160
2239430	Methomyl	80.4	83.5	P/P	30 - 160
2239430	Oxamyl	85.4	91.9	P/P	30 - 160
2239430	Propoxur	56.3	61.1	P/P	30 - 160
2240190	2,4-D	130	149	P/P	30 - 160
2240190	2,4,5-T	97.7	132	P/P	30 - 160
2240190	Acetaminophen	96.0	237	P/F	30 - 150
2240190	Acetamiprid	106	109	P/P	30 - 160
2240190	Afidopyropen	80.6	79.3	P/P	30 - 160
2240190	Bentazon	33.0	41.8	P/P	30 - 150
2240190	Benzovindiflupyr	85.2	96.8	P/P	30 - 160
2240190	Carbamazepine	84.5	95.2	P/P	30 - 160
2240190	Clothianidin	120	129	P/P	30 - 160
2240190	Dinotefuran	114	118	P/P	30 - 160
2240190	Diuron	74.4	70.0	P/P	30 - 160
2240190	Fenuron	112	122	P/P	30 - 160
2240190	Fluridone	103	106	P/P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P396769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240190	Hydrocodone	115	125	P/P	30 - 160
2240190	Ibuprofen	69.9	90.7	P/P	30 - 160
2240190	Imazapyr	129	149	P/P	30 - 160
2240190	Imidacloprid	149	185	P/F	30 - 160
2240190	Linuron	89.4	94.7	P/P	30 - 160
2240190	Mandestrobin	88.6	94.9	P/P	30 - 160
2240190	MCPP	152	177	P/F	30 - 160
2240190	Naproxen	90.5	99.2	P/P	30 - 160
2240190	Primidone	108	112	P/P	30 - 160
2240190	Pyraclostrobin	77.8	87.0	P/P	30 - 160
2240190	Thiamethoxam	146	170	P/F	30 - 160
2240190	Tolfenpyrad	62.1	57.3	P/P	30 - 160
2240190	Triclopyr	98.0	149	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P396893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240988	Acesulfame K	152	137	F/P	40 - 150
2240988	AMPA	99.5	102	P/P	40 - 150
2240988	Endothall	98.4	90.0	P/P	40 - 150
2240988	Glufosinate	101	94.4	P/P	40 - 150
2240988	Glyphosate	63.8	80.9	P/P	40 - 140
2240988	Sucralose	108	107	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P397022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241132	Aldrin	1.97	Spike	P	0 - 30
2241132	Alpha-BHC	5.22	Spike	P	0 - 30
2241132	Alpha-Chlordane	22.4	Spike	P	0 - 30
2241132	Beta-BHC	27.8	Spike	P	0 - 30
2241132	Beta-Cyfluthrin	17.5	Spike	P	0 - 30
2241132	Bifenthrin	2.61	Spike	P	0 - 30
2241132	Cis-Nonachlor	9.01	Spike	P	0 - 30
2241132	Cypermethrin	12.7	Spike	P	0 - 30
2241132	Dacthal	23.7	Spike	P	0 - 30
2241132	DDE-p,p'	22.1	Spike	P	0 - 30
2241132	Delta-BHC	24.6	Spike	P	0 - 30
2241132	Deltamethrin	25.5	Spike	P	0 - 30
2241132	Dichlobenil	11.5	Spike	P	0 - 30
2241132	Dicofol	1.60	Spike	P	0 - 30
2241132	Dieldrin	26.2	Spike	P	0 - 30
2241132	Endosulfan I	25.6	Spike	P	0 - 30
2241132	Endosulfan II	11.8	Spike	P	0 - 30
2241132	Endosulfan Sulfate	5.48	Spike	P	0 - 30
2241132	Endrin	10.3	Spike	P	0 - 30
2241132	Endrin Aldehyde	4.35	Spike	P	0 - 30
2241132	Endrin Ketone	17.7	Spike	P	0 - 30
2241132	Esfenvalerate	14.9	Spike	P	0 - 30
2241132	Ethalfluralin	2.99	Spike	P	0 - 30
2241132	Fenpropathrin	7.02	Spike	P	0 - 30
2241132	Gamma-BHC	4.97	Spike	P	0 - 30
2241132	Gamma-Chlordane	23.4	Spike	P	0 - 30
2241132	Heptachlor	10.1	Spike	P	0 - 30
2241132	Heptachlor Epoxide	20.9	Spike	P	0 - 30
2241132	Hexachlorobenzene	5.90	Spike	P	0 - 30
2241132	Kepone	20.7	Spike	P	0 - 30
2241132	Lambda-Cyhalothrin	12.8	Spike	P	0 - 30
2241132	Methoxychlor	7.60	Spike	P	0 - 30
2241132	MGK-264	77.8	Spike	F	0 - 30
2241132	Mirex	2.78	Spike	P	0 - 30
2241132	Permethrin	25.9	Spike	P	0 - 30
2241132	Phenothrin	51.6	Spike	F	0 - 30
2241132	Piperonyl Butoxide	0.425	Spike	P	0 - 30
2241132	Prallethrin	11.1	Spike	P	0 - 30
2241132	Tau-Fluvalinate	8.64	Spike	P	0 - 30
2241132	Tetramethrin	10.6	Spike	P	0 - 30
2241132	Trans-Nonachlor	21.9	Spike	P	0 - 30
2241132	Triclosan Methyl	23.0	Spike	P	0 - 30
2241132	Trifluralin	3.90	Spike	P	0 - 30
LFB	Aldrin	15.0	LCS	P	0 - 30
LFB	Alpha-BHC	4.57	LCS	P	0 - 30
LFB	Alpha-Chlordane	15.9	LCS	P	0 - 30
LFB	Beta-BHC	0.612	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	11.6	LCS	P	0 - 30
LFB	Bifenthrin	2.75	LCS	P	0 - 30
LFB	Cis-Nonachlor	11.4	LCS	P	0 - 30
LFB	Cypermethrin	11.7	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P397022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Dacthal	13.5	LCS	P	0 - 30
LFB	DDE-p,p'	24.9	LCS	P	0 - 30
LFB	Delta-BHC	3.62	LCS	P	0 - 30
LFB	Deltamethrin	26.1	LCS	P	0 - 30
LFB	Dichlobenil	11.1	LCS	P	0 - 30
LFB	Dicofol	4.38	LCS	P	0 - 30
LFB	Dieldrin	21.0	LCS	P	0 - 30
LFB	Endosulfan I	12.3	LCS	P	0 - 30
LFB	Endosulfan II	14.1	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.18	LCS	P	0 - 30
LFB	Endrin	10.1	LCS	P	0 - 30
LFB	Endrin Aldehyde	4.04	LCS	P	0 - 30
LFB	Endrin Ketone	1.27	LCS	P	0 - 30
LFB	Esfenvalerate	14.3	LCS	P	0 - 30
LFB	Ethalfluralin	0.363	LCS	P	0 - 30
LFB	Fenpropathrin	3.47	LCS	P	0 - 30
LFB	Gamma-BHC	9.30	LCS	P	0 - 30
LFB	Gamma-Chlordane	11.4	LCS	P	0 - 30
LFB	Heptachlor	6.17	LCS	P	0 - 30
LFB	Heptachlor Epoxide	9.09	LCS	P	0 - 30
LFB	Hexachlorobenzene	9.94	LCS	P	0 - 30
LFB	Kepone	22.8	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	16.1	LCS	P	0 - 30
LFB	Methoxychlor	7.73	LCS	P	0 - 30
LFB	MGK-264	111	LCS	F	0 - 30
LFB	Mirex	8.94	LCS	P	0 - 30
LFB	Permethrin	4.97	LCS	P	0 - 30
LFB	Phenothrin	31.2	LCS	F	0 - 30
LFB	Piperonyl Butoxide	2.38	LCS	P	0 - 30
LFB	Prallethrin	13.1	LCS	P	0 - 30
LFB	Tau-Fluvalinate	9.41	LCS	P	0 - 30
LFB	Tetramethrin	34.2	LCS	F	0 - 30
LFB	Trans-Nonachlor	17.7	LCS	P	0 - 30
LFB	Triclosan Methyl	22.7	LCS	P	0 - 30
LFB	Trifluralin	2.32	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P397049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240943	Acetochlor	7.50	Spike	P	0 - 30
2240943	Alachlor	6.61	Spike	P	0 - 30
2240943	Ametryn	6.64	Spike	P	0 - 30
2240943	Atrazine	0.989	Spike	P	0 - 30
2240943	Atrazine Desethyl	3.29	Spike	P	0 - 30
2240943	Azinphos Methyl	1.63	Spike	P	0 - 30
2240943	Azoxystrobin	3.92	Spike	P	0 - 30
2240943	Bromacil	6.55	Spike	P	0 - 30
2240943	Butylate	1.23	Spike	P	0 - 30
2240943	Caffeine	36.1	Spike	F	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P397049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240943	Carbophenothion	5.76	Spike	P	0 - 30
2240943	Carfentrazone Ethyl	2.36	Spike	P	0 - 30
2240943	Chlorpyrifos Ethyl	3.31	Spike	P	0 - 30
2240943	Chlorpyrifos Methyl	5.15	Spike	P	0 - 30
2240943	Cyanazine	9.36	Spike	P	0 - 30
2240943	Demeton	5.72	Spike	P	0 - 30
2240943	Diazinon	5.19	Spike	P	0 - 30
2240943	Difenoconazole	5.91	Spike	P	0 - 30
2240943	Dimethenamid	6.16	Spike	P	0 - 30
2240943	Disulfoton	10.3	Spike	P	0 - 30
2240943	Dithiopyr	0.859	Spike	P	0 - 30
2240943	EPTC	10.4	Spike	P	0 - 30
2240943	Ethion	12.9	Spike	P	0 - 30
2240943	Ethoprop	2.60	Spike	P	0 - 30
2240943	Fenamiphos	5.93	Spike	P	0 - 30
2240943	Fenbuconazole	6.98	Spike	P	0 - 30
2240943	Fipronil	4.52	Spike	P	0 - 30
2240943	Fipronil Desulfinyl	9.51	Spike	P	0 - 30
2240943	Fipronil Sulfide	8.97	Spike	P	0 - 30
2240943	Fipronil Sulfone	8.27	Spike	P	0 - 30
2240943	Fluazifop-P-butyl	4.44	Spike	P	0 - 30
2240943	Fludioxonil	10.9	Spike	P	0 - 30
2240943	Flumioxazin	9.66	Spike	P	0 - 30
2240943	Flutolanil	5.16	Spike	P	0 - 30
2240943	Fluxapyroxad	7.31	Spike	P	0 - 30
2240943	Fonofos	0.0820	Spike	P	0 - 30
2240943	Hexazinone	2.20	Spike	P	0 - 30
2240943	Imazalil	19.1	Spike	P	0 - 30
2240943	Iprodione	11.5	Spike	P	0 - 30
2240943	Malathion	8.50	Spike	P	0 - 30
2240943	Metalaxyl	2.51	Spike	P	0 - 30
2240943	Metolachlor	9.68	Spike	P	0 - 30
2240943	Metribuzin	6.33	Spike	P	0 - 30
2240943	Mevinphos	7.64	Spike	P	0 - 30
2240943	Molinate	9.65	Spike	P	0 - 30
2240943	Myclobutanil	8.16	Spike	P	0 - 30
2240943	Naled	16.3	Spike	P	0 - 30
2240943	Norflurazon	0.993	Spike	P	0 - 30
2240943	Oxadiazon	2.05	Spike	P	0 - 30
2240943	Oxyfluorfen	2.82	Spike	P	0 - 30
2240943	Parathion Ethyl	10.5	Spike	P	0 - 30
2240943	Parathion Methyl	0.892	Spike	P	0 - 30
2240943	Pendimethalin	3.01	Spike	P	0 - 30
2240943	Phorate	9.10	Spike	P	0 - 30
2240943	Prodiamine	68.2	Spike	F	0 - 30
2240943	Prometon	7.45	Spike	P	0 - 30
2240943	Prometryn	8.56	Spike	P	0 - 30
2240943	Pronamide	12.5	Spike	P	0 - 30
2240943	Propiconazole	1.06	Spike	P	0 - 30
2240943	Pyriproxyfen	7.17	Spike	P	0 - 30
2240943	Simazine	2.51	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P397049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240943	Sulfentrazone	11.0	Spike	P	0 - 30
2240943	Tebuconazole	2.77	Spike	P	0 - 30
2240943	Terbufos	6.04	Spike	P	0 - 30
2240943	Terbuthylazine	10.1	Spike	P	0 - 30
LFB	Acetochlor	4.54	LCS	P	0 - 30
LFB	Alachlor	5.36	LCS	P	0 - 30
LFB	Ametryn	7.27	LCS	P	0 - 30
LFB	Atrazine	7.65	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.71	LCS	P	0 - 30
LFB	Azinphos Methyl	8.62	LCS	P	0 - 30
LFB	Azoxystrobin	29.5	LCS	P	0 - 30
LFB	Bromacil	14.7	LCS	P	0 - 30
LFB	Butylate	27.0	LCS	P	0 - 30
LFB	Caffeine	28.8	LCS	P	0 - 30
LFB	Carbophenothion	15.3	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	3.60	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	13.8	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.33	LCS	P	0 - 30
LFB	Cyanazine	16.4	LCS	P	0 - 30
LFB	Demeton	1.05	LCS	P	0 - 30
LFB	Diazinon	5.51	LCS	P	0 - 30
LFB	Difenoconazole	13.9	LCS	P	0 - 30
LFB	Dimethenamid	2.02	LCS	P	0 - 30
LFB	Disulfoton	19.6	LCS	P	0 - 30
LFB	Dithiopyr	5.87	LCS	P	0 - 30
LFB	EPTC	30.0	LCS	P	0 - 30
LFB	Ethion	12.5	LCS	P	0 - 30
LFB	Ethoprop	11.9	LCS	P	0 - 30
LFB	Fenamiphos	7.22	LCS	P	0 - 30
LFB	Fenbuconazole	1.55	LCS	P	0 - 30
LFB	Fipronil	6.11	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	0.308	LCS	P	0 - 30
LFB	Fipronil Sulfide	4.82	LCS	P	0 - 30
LFB	Fipronil Sulfone	14.4	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	2.09	LCS	P	0 - 30
LFB	Fludioxonil	7.52	LCS	P	0 - 30
LFB	Flumioxazin	4.42	LCS	P	0 - 30
LFB	Flutolanil	3.15	LCS	P	0 - 30
LFB	Fluxapyroxad	0.644	LCS	P	0 - 30
LFB	Fonofos	0.932	LCS	P	0 - 30
LFB	Hexazinone	2.02	LCS	P	0 - 30
LFB	Imazalil	13.7	LCS	P	0 - 30
LFB	Iprodione	0.324	LCS	P	0 - 30
LFB	Malathion	14.3	LCS	P	0 - 30
LFB	Metalaxyl	1.99	LCS	P	0 - 30
LFB	Metolachlor	8.83	LCS	P	0 - 30
LFB	Metribuzin	8.19	LCS	P	0 - 30
LFB	Mevinphos	11.9	LCS	P	0 - 30
LFB	Molinate	21.6	LCS	P	0 - 30
LFB	Myclobutanil	4.34	LCS	P	0 - 30
LFB	Naled	15.3	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P397049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Norflurazon	4.93	LCS	P	0 - 30
LFB	Oxadiazon	3.54	LCS	P	0 - 30
LFB	Oxyfluorfen	1.45	LCS	P	0 - 30
LFB	Parathion Ethyl	5.95	LCS	P	0 - 30
LFB	Parathion Methyl	0.727	LCS	P	0 - 30
LFB	Pendimethalin	1.70	LCS	P	0 - 30
LFB	Phorate	15.9	LCS	P	0 - 30
LFB	Prodiamine	31.7	LCS	F	0 - 30
LFB	Prometon	4.42	LCS	P	0 - 30
LFB	Prometryn	0.817	LCS	P	0 - 30
LFB	Pronamide	13.3	LCS	P	0 - 30
LFB	Propiconazole	2.72	LCS	P	0 - 30
LFB	Pyriproxyfen	3.61	LCS	P	0 - 30
LFB	Simazine	13.1	LCS	P	0 - 30
LFB	Sulfentrazone	9.16	LCS	P	0 - 30
LFB	Tebuconazole	25.8	LCS	P	0 - 30
LFB	Terbufos	7.93	LCS	P	0 - 30
LFB	Terbuthylazine	4.85	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P397768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241744	Chlorothalonil	4.41	Spike	P	0 - 50
2241744	DDD-p,p'	1.43	Spike	P	0 - 30
2241744	DDT-p,p'	17.3	Spike	P	0 - 30
LFB	Chlorothalonil	0.692	LCS	P	0 - 50
LFB	DDD-p,p'	1.37	LCS	P	0 - 30
LFB	DDT-p,p'	8.50	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P397022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241684	Chlordane	5.91	Spike	P	0 - 30
2241684	Toxaphene	4.30	Spike	P	0 - 30
LFB	Chlordane	8.04	LCS	P	0 - 30
LFB	Toxaphene	0.462	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P396769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2239430	3-Hydroxycarbofuran	4.35	Spike	P	0 - 30
2239430	Aldicarb	15.4	Spike	P	0 - 30
2239430	Aldicarb Sulfone	7.43	Spike	P	0 - 30
2239430	Aldicarb Sulfoxide	3.48	Spike	P	0 - 30
2239430	Carbaryl	16.9	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P396769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2239430	Carbofuran	0.767	Spike	P	0 - 30
2239430	Methiocarb	1.31	Spike	P	0 - 30
2239430	Methomyl	3.76	Spike	P	0 - 30
2239430	Oxamyl	5.82	Spike	P	0 - 30
2239430	Propoxur	8.16	Spike	P	0 - 30
2240190	2,4-D	13.6	Spike	P	0 - 30
2240190	2,4,5-T	29.7	Spike	P	0 - 30
2240190	Acetaminophen	84.5	Spike	F	0 - 30
2240190	Acetamiprid	2.55	Spike	P	0 - 30
2240190	Afidopyropen	1.68	Spike	P	0 - 30
2240190	Bentazon	17.0	Spike	P	0 - 30
2240190	Benzovindiflupyr	12.8	Spike	P	0 - 30
2240190	Carbamazepine	11.0	Spike	P	0 - 30
2240190	Clothianidin	7.28	Spike	P	0 - 30
2240190	Dinotefuran	3.60	Spike	P	0 - 30
2240190	Diuron	6.08	Spike	P	0 - 30
2240190	Fenuron	8.32	Spike	P	0 - 30
2240190	Fluridone	2.87	Spike	P	0 - 30
2240190	Hydrocodone	8.23	Spike	P	0 - 30
2240190	Ibuprofen	25.9	Spike	P	0 - 30
2240190	Imazapyr	14.4	Spike	P	0 - 30
2240190	Imidacloprid	19.2	Spike	P	0 - 30
2240190	Linuron	5.80	Spike	P	0 - 30
2240190	Mandestrobin	6.94	Spike	P	0 - 30
2240190	MCPP	14.7	Spike	P	0 - 30
2240190	Naproxen	9.23	Spike	P	0 - 30
2240190	Primidone	2.91	Spike	P	0 - 30
2240190	Pyraclostrobin	11.1	Spike	P	0 - 30
2240190	Thiamethoxam	15.5	Spike	P	0 - 30
2240190	Tolfenpyrad	8.09	Spike	P	0 - 30
2240190	Triclopyr	41.0	Spike	F	0 - 30

Reference Method: EPA 8321B
Batch ID: P396893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240988	Acesulfame K	10.0	Spike	P	0 - 30
2240988	AMPA	2.79	Spike	P	0 - 30
2240988	Endothall	8.93	Spike	P	0 - 30
2240988	Glufosinate	6.28	Spike	P	0 - 30
2240988	Glyphosate	23.7	Spike	P	0 - 30
2240988	Sucralose	0.828	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2241121
Field Sample ID: COCAT41

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	79.1	P	30 - 160

Lab Sample ID: 2241122
Field Sample ID: COCAT41

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	144	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	77.1	P	30 - 160
EPA 8321B	Endothall-d6	84.8	P	40 - 160
EPA 8321B	Endothall-d6	84.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	16.9	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	16.9	F	40 - 160
EPA 8321B	Ibuprofen-d3	74.8	P	30 - 160
EPA 8321B	Primidone-d5	134	P	30 - 160
EPA 8321B	Sucralose-d6	82.3	P	30 - 160
EPA 8321B	Sucralose-d6	82.3	P	30 - 160

Lab Sample ID: 2241123
Field Sample ID: COCAT41

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	71.2	P	35 - 120
EPA 8270E	Decachlorobiphenyl	65.1	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	26.0	F	30 - 110
EPA 8270E	Tetrachloro-m-xylene	49.9	P	30 - 110
EPA 8276	Decachlorobiphenyl	58.1	P	29 - 92.0
EPA 8276	PCNB	70.8	P	43 - 134

Lab Sample ID: 2241124
Field Sample ID: COCAT41

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	89.8	P	20 - 200
EPA 8270E	Simazine-d10	133	P	73 - 135
EPA 8270E	Terbufos-d10	109	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A104895
Included Lab Sample IDs: 2241122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	96.0	86.3	P/P	40 - 160
AMPA	102	95.0	P/P	40 - 160
Endothall	104	78.5	P/P	40 - 160
Glufosinate	103	90.9	P/P	40 - 160
Glyphosate	86.0	74.4	P/P	40 - 160

Reference Method: EPA 8276
Run ID: A105045
Included Lab Sample IDs: 2241123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	95.7		P	80 - 120

Reference Method: EPA 8321B
Run ID: A105083
Included Lab Sample IDs: 2241122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	110	105	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A105097
Included Lab Sample IDs: 2241123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.6		P	80 - 120
Alpha-BHC	97.9		P	80 - 120
Alpha-Chlordane	95.0		P	80 - 120
Beta-BHC	97.6		P	80 - 120
Beta-Cyfluthrin	92.8		P	80 - 120
Bifenthrin	95.8		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	99.0		P	80 - 120
Dacthal	96.7		P	80 - 120
DDE-p,p'	96.6		P	80 - 120
Delta-BHC	96.0		P	80 - 120
Deltamethrin	92.4		P	80 - 120
Dichlobenil	98.6		P	80 - 120
Dicofol	89.0		P	80 - 120
Dieldrin	97.6		P	80 - 120
Endosulfan I	97.7		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	108		P	80 - 120
Endrin	104		P	80 - 120
Endrin Aldehyde	105		P	80 - 120
Endrin Ketone	113		P	80 - 120
Esfenvalerate	92.6		P	80 - 120
Ethalfluralin	99.0		P	80 - 120
Fenpropathrin	96.8		P	80 - 120
Gamma-BHC	97.7		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A105097
Included Lab Sample IDs: 2241123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Gamma-Chlordane	97.0		P	80 - 120
Heptachlor	96.0		P	80 - 120
Heptachlor Epoxide	98.4		P	80 - 120
Hexachlorobenzene	96.8		P	80 - 120
Kepone	96.3		P	80 - 120
Lambda-Cyhalothrin	96.7		P	80 - 120
Methoxychlor	94.3		P	80 - 120
MGK-264	114		P	80 - 120
Mirex	102		P	80 - 120
Permethrin	98.6		P	80 - 120
Phenothrin	99.9		P	80 - 120
Piperonyl Butoxide	99.6		P	80 - 120
Prallethrin	97.2		P	80 - 120
Tau-Fluvalinate	92.5		P	80 - 120
Tetramethrin	97.4		P	80 - 120
Trans-Nonachlor	99.2		P	80 - 120
Triclosan Methyl	94.2		P	80 - 120
Trifluralin	99.1		P	80 - 120

Reference Method: EPA 8321B
Run ID: A105098
Included Lab Sample IDs: 2241122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.4	116	P/P	50 - 150
2,4,5-T	118	109	P/P	50 - 150
3-Hydroxycarbofuran	112	113	P/P	60 - 150
Acetaminophen	93.2	125	P/P	60 - 160
Acetamiprid	116	122	P/P	50 - 150
Afidopyropen	108	133	P/P	50 - 150
Aldicarb	116	121	P/P	60 - 150
Aldicarb Sulfone	113	114	P/P	50 - 150
Aldicarb Sulfoxide	106	106	P/P	50 - 150
Bentazon	130	127	P/P	50 - 160
Benzovindiflupyr	101	114	P/P	50 - 160
Carbamazepine	104	119	P/P	60 - 150
Carbaryl	117	129	P/P	60 - 150
Carbofuran	110	113	P/P	50 - 150
Clothianidin	107	108	P/P	60 - 150
Dinotefuran	111	135	P/P	50 - 150
Diuron	88.3	110	P/P	60 - 160
Fenuron	107	116	P/P	60 - 150
Fluridone	117	129	P/P	60 - 160
Hydrocodone	113	130	P/P	60 - 150
Ibuprofen	86.0	89.7	P/P	50 - 160
Imazapyr	126	129	P/P	50 - 150
Imidacloprid	102	124	P/P	60 - 150
Linuron	100	122	P/P	60 - 150
Mandestrobin	109	117	P/P	50 - 150
MCPP	112	113	P/P	50 - 150
Methiocarb	111	122	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A105098
Included Lab Sample IDs: 2241121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methomyl	110	112	P/P	50 - 150
Naproxen	113	116	P/P	50 - 160
Oxamyl	109	109	P/P	50 - 150
Primidone	95.8	110	P/P	60 - 150
Propoxur	103	113	P/P	50 - 150
Pyraclostrobin	116	120	P/P	60 - 150
Thiamethoxam	116	131	P/P	50 - 150
Tolfenpyrad	116	127	P/P	60 - 150
Triclopyr	98.7	115	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A105102
Included Lab Sample IDs: 2241124

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	91.9		P	80 - 120
Alachlor	94.4		P	80 - 120
Ametryn	87.6		P	80 - 120
Atrazine	94.5		P	80 - 120
Atrazine Desethyl	97.5		P	80 - 120
Azinphos Methyl	97.2		P	80 - 120
Azoxystrobin	91.0		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	107		P	80 - 120
Caffeine	102		P	80 - 120
Carbophenothion	96.1		P	80 - 120
Carfentrazone Ethyl	96.4		P	80 - 120
Chlorpyrifos Ethyl	95.3		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	103		P	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	97.9		P	80 - 120
Difenoconazole	91.0		P	80 - 120
Dimethenamid	95.2		P	80 - 120
Disulfoton	92.3		P	80 - 120
Dithiopyr	97.3		P	80 - 120
EPTC	95.7		P	80 - 120
Ethion	96.2		P	80 - 120
Ethoprop	99.3		P	80 - 120
Fenamiphos	97.7		P	80 - 120
Fenbuconazole	93.4		P	80 - 120
Fipronil	93.7		P	80 - 120
Fipronil Desulfinyl	93.4		P	80 - 120
Fipronil Sulfide	102		P	80 - 120
Fipronil Sulfone	98.5		P	80 - 120
Fluazifop-P-butyl	94.7		P	80 - 120
Fludioxonil	97.4		P	80 - 120
Flumioxazin	93.3		P	80 - 120
Flutolanil	92.6		P	80 - 120
Fluxapyroxad	98.4		P	80 - 120
Fonofos	103		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A105102
Included Lab Sample IDs: 2241124

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hexazinone	103		P	80 - 120
Imazalil	92.6		P	80 - 120
Iprodione	95.8		P	80 - 120
Malathion	94.8		P	80 - 120
Metalaxyl	99.4		P	80 - 120
Metolachlor	91.6		P	80 - 120
Metribuzin	101		P	80 - 120
Mevinphos	96.7		P	80 - 120
Molinate	99.0		P	80 - 120
Myclobutanil	93.2		P	80 - 120
Naled	101		P	80 - 120
Norflurazon	94.1		P	80 - 120
Oxadiazon	93.4		P	80 - 120
Oxyfluorfen	91.5		P	80 - 120
Parathion Ethyl	98.5		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	101		P	80 - 120
Phorate	96.5		P	80 - 120
Prodiamine	92.1		P	80 - 120
Prometon	96.2		P	80 - 120
Prometryn	95.0		P	80 - 120
Pronamide	91.7		P	80 - 120
Propiconazole	94.6		P	80 - 120
Pyriproxyfen	95.7		P	80 - 120
Simazine	91.5		P	80 - 120
Sulfentrazone	94.4		P	80 - 120
Tebuconazole	94.3		P	80 - 120
Terbufos	99.5		P	80 - 120
Terbuthylazine	98.3		P	80 - 120

Reference Method: EPA 8270E
Run ID: A105223
Included Lab Sample IDs: 2241123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorothalonil	93.3		P	80 - 120
DDD-p,p'	95.6		P	80 - 120
DDT-p,p'	104		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	MS
EPA 8270E	Acetochlor	89.5	85.5	85.1	91.7	4.54		7.50
	Alachlor	87.9	83.3	86.3	92.2	5.36		6.61
	Aldrin	38.9	33.5	37.2	38.0	15.0		1.97
	Alpha-BHC	95.7	91.5	92.7	88.0	4.57		5.22
	Alpha-Chlordane	82.3	96.5	76.2	60.8	15.9		22.4
	Ametryn	79.0	85.0	92.4	86.5	7.27		6.64
	Atrazine	94.9	87.9	97.7	96.5	7.65		0.989
	Atrazine Desethyl	94.2	85.4	80.7	83.9	9.71		3.29
	Azinphos Methyl	124	114	123	121	8.62		1.63
	Azoxystrobin	177	131	202	211	29.5		3.92
	Beta-BHC	103	103	109	82.7	0.612		27.8
	Beta-Cyfluthrin	149	133	140	118	11.6		17.5
	Bifenthrin	98.1	95.5	65.6	63.9	2.75		2.61
	Bromacil	83.0	71.7	76.7	81.9	14.7		6.55
	Butylate	51.6	39.3	52.3	51.7	27.0		1.23
	Caffeine	76.1	102	455	301	28.8		36.1
	Carbophenothion	91.5	78.5	83.1	88.1	15.3		5.76
	Carfentrazone Ethyl	98.8	95.3	102	100	3.60		2.36
	Chlorothalonil	97.2	97.9	113	108	0.692		4.41
	Chlorpyrifos Ethyl	87.2	76.0	86.4	89.4	13.8		3.31
	Chlorpyrifos Methyl	93.4	88.6	87.5	92.1	5.33		5.15
	Cis-Nonachlor	87.4	98.0	79.3	72.4	11.4		9.01
	Cyanazine	139	118	132	121	16.4		9.36
	Cypermethrin	140	125	116	102	11.7		12.7
	Dacthal	87.0	99.6	100	79.0	13.5		23.7
	DDD-p,p'	75.0	76.1	49.9	49.2	1.37		1.43
	DDE-p,p'	69.5	89.2	62.4	50.0	24.9		22.1
	DDT-p,p'	79.7	73.2	51.5	61.2	8.50		17.3
	Delta-BHC	102	106	112	87.2	3.62		24.6
	Deltamethrin	166	128	114	147	26.1		25.5
	Demeton	57.9	57.3	71.5	75.7	1.05		5.72
	Diazinon	96.4	91.2	94.7	99.7	5.51		5.19
	Dichlobenil	55.1	61.6	46.7	41.6	11.1		11.5
	Dicofol	92.6	96.8	90.1	88.7	4.38		1.60
	Dieldrin	77.3	95.5	81.0	58.8	21.0		26.2
	Difenoconazole	133	116	131	139	13.9		5.91
	Dimethenamid	85.6	83.9	85.1	90.5	2.02		6.16
	Disulfoton	76.9	63.2	80.7	89.4	19.6		10.3
	Dithiopyr	90.8	85.6	94.5	93.7	5.87		0.859
	Endosulfan I	78.9	89.3	81.9	63.3	12.3		25.6
	Endosulfan II	83.1	95.7	87.2	77.5	14.1		11.8
	Endosulfan Sulfate	102	99.8	81.3	85.9	2.18		5.48
	Endrin	85.6	94.7	82.2	74.1	10.1		10.3
	Endrin Aldehyde	93.9	97.8	75.9	79.3	4.04		4.35
	Endrin Ketone	96.0	97.2	98.4	82.4	1.27		17.7
	EPTC	54.3	40.2	46.7	51.8	30.0		10.4
	Esfenvalerate	190	164	122	141	14.3		14.9
	Ethalfluralin	89.8	90.2	78.9	76.5	0.363		2.99
	Ethion	72.4	82.1	78.8	89.7	12.5		12.9
	Ethoprop	82.2	72.9	74.9	76.9	11.9		2.60
	Fenamiphos	85.9	79.9	84.5	89.7	7.22		5.93
	Fenbuconazole	99.1	97.6	101	108	1.55		6.98
	Fenpropathrin	97.8	94.5	85.8	79.9	3.47		7.02
	Fipronil	93.6	88.1	95.0	99.3	6.11		4.52

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Fipronil Desulfinyl	88.8	88.5	85.2	93.7	0.308		9.51
	Fipronil Sulfide	83.5	79.6	79.1	86.6	4.82		8.97
	Fipronil Sulfone	89.2	77.1	79.1	85.9	14.4		8.27
	Fluazifop-P-butyl	92.0	90.0	93.0	97.2	2.09		4.44
	Fludioxonil	94.1	87.3	87.0	97.0	7.52		10.9
	Flumioxazin	137	131	156	172	4.42		9.66
	Flutolanil	83.8	86.4	88.7	93.4	3.15		5.16
	Fluxapyroxad	89.8	89.2	89.8	96.7	0.644		7.31
	Fonofos	76.3	77.0	79.2	79.3	0.932		0.0820
	Gamma-BHC	102	92.6	96.0	91.4	9.30		4.97
	Gamma-Chlordane	84.8	95.1	78.2	61.9	11.4		23.4
	Heptachlor	74.2	78.9	61.5	55.6	6.17		10.1
	Heptachlor Epoxide	90.1	98.7	95.7	77.6	9.09		20.9
	Hexachlorobenzene	71.2	78.6	55.6	52.4	9.94		5.90
	Hexazinone	91.3	89.5	86.5	88.6	2.02		2.20
	Imazalil	77.8	89.2	90.3	109	13.7		19.1
	Iprodione	81.9	82.2	82.3	92.3	0.324		11.5
	Kepone	96.2	121	87.4	71.0	22.8		20.7
	Lambda-Cyhalothrin	226	192	156	178	16.1		12.8
	Malathion	86.6	75.1	76.2	83.0	14.3		8.50
	Metalaxyl	93.9	92.0	93.5	95.9	1.99		2.51
	Methoxychlor	108	100	108	100	7.73		7.60
	Metolachlor	81.2	74.3	78.8	86.8	8.83		9.68
	Metribuzin	89.4	97.1	97.4	104	8.19		6.33
	Mevinphos	78.4	69.6	65.6	70.8	11.9		7.64
	MGK-264	76.3	21.9	47.7	108	111		77.8
	Mirex	147	161	108	105	8.94		2.78
	Molinate	64.8	52.1	55.9	61.6	21.6		9.65
	Myclobutanil	91.0	87.2	88.4	95.9	4.34		8.16
	Naled	41.6	35.7	37.0	43.6	15.3		16.3
	Norflurazon	97.5	92.8	97.4	98.3	4.93		0.993
	Oxadiazon	86.6	83.6	91.5	93.4	3.54		2.05
	Oxyfluorfen	101	99.7	107	110	1.45		2.82
	Parathion Ethyl	86.7	81.7	82.2	91.3	5.95		10.5
	Parathion Methyl	96.5	95.8	95.7	96.6	0.727		0.892
	Pendimethalin	83.6	85.0	90.5	93.2	1.70		3.01
	Permethrin	130	124	107	138	4.97		25.9
	Phenothrin	56.7	41.4	128	54.1	31.2		51.6
	Phorate	78.3	66.7	69.3	75.9	15.9		9.10
	Piperonyl Butoxide	95.4	93.2	110	110	2.38		0.425
	Prallethrin	49.4	43.3	81.5	72.9	13.1		11.1
	Prodiamine	49.3	35.8	40.9	83.2	31.7		68.2
	Prometon	77.1	80.6	74.6	80.4	4.42		7.45
	Prometryn	82.1	81.4	83.6	91.1	0.817		8.56
	Pronamide	94.6	82.8	82.6	93.6	13.3		12.5
	Propiconazole	89.9	87.5	93.9	94.9	2.72		1.06
	Pyriproxyfen	95.5	92.1	95.2	102	3.61		7.17
	Simazine	101	88.3	92.2	96.7	13.1		2.51
	Sulfentrazone	53.5	58.7	86.3	96.3	9.16		11.0
	Tau-Fluvalinate	105	96.0	89.7	82.2	9.41		8.64
	Tebuconazole	60.3	78.1	69.1	67.2	25.8		2.77
	Terbufos	77.4	71.5	75.6	80.3	7.93		6.04
	Terbuthylazine	91.1	86.8	86.6	95.8	4.85		10.1
	Tetramethrin	81.3	57.5	115	103	34.2		10.6

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Trans-Nonachlor	82.1	98.0	72.3	58.0	17.7		21.9
	Triclosan Methyl	76.5	96.1	80.5	63.9	22.7		23.0
	Trifluralin	83.3	85.3	76.4	79.4	2.32		3.90
EPA 8276	Chlordane	100	92.4	109	115	8.04		5.91
	Toxaphene	81.0	80.6	75.7	79.0	0.462		4.30
EPA 8321B	2,4-D	127		130	149			13.6
	2,4,5-T	119		97.7	132			29.7
	3-Hydroxycarbofuran	90.5		79.0	82.5			4.35
	Acesulfame K	124		152	137			10.0
	Acetaminophen	76.4		96.0	237			84.5
	Acetamiprid	94.3		106	109			2.55
	Afidopyropen	73.3		80.6	79.3			1.68
	Aldicarb	98.8		87.2	102			15.4
	Aldicarb Sulfone	98.6		103	111			7.43
	Aldicarb Sulfoxide	69.6		31.0	29.9			3.48
	AMPA	97.8		102	99.5			2.79
	Bentazon	37.3		33.0	41.8			17.0
	Benzovindiflupyr	82.9		85.2	96.8			12.8
	Carbamazepine	85.9		84.5	95.2			11.0
	Carbaryl	72.9		54.3	64.3			16.9
	Carbofuran	75.1		62.8	62.3			0.767
	Clothianidin	97.4		120	129			7.28
	Dinotefuran	87.2		114	118			3.60
	Diuron	76.7		74.4	70.0			6.08
	Endothall	143		98.4	90.0			8.93
	Fenuron	98.2		112	122			8.32
	Fluridone	97.0		103	106			2.87
	Glufosinate	99.6		94.4	101			6.28
	Glyphosate	89.4		63.8	80.9			23.7
	Hydrocodone	93.0		115	125			8.23
	Ibuprofen	82.3		69.9	90.7			25.9
	Imazapyr	107		129	149			14.4
	Imidacloprid	107		149	185			19.2
	Linuron	70.9		89.4	94.7			5.80
	Mandestrobin	90.0		88.6	94.9			6.94
	MCPP	140		152	177			14.7
	Methiocarb	83.8		73.1	72.2			1.31
	Methomyl	91.0		80.4	83.5			3.76
	Naproxen	99.3		90.5	99.2			9.23
	Oxamyl	90.2		85.4	91.9			5.82
	Primidone	75.4		108	112			2.91
	Propoxur	68.8		56.3	61.1			8.16
	Pyraclostrobin	79.3		77.8	87.0			11.1
	Sucralose	105		108	107			0.828
	Thiamethoxam	101		146	170			15.5
	Tolfenpyrad	56.7		62.1	57.3			8.09
	Triclopyr	125		98.0	149			41.0

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2241123
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2241124

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2241123
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2241121
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2241122
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2241122

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	04/20/2021	04/23/2021 08:00	Fe-Val Siddell	04/26/2021 20:56	Vandana T. Nagar	2241123
	04/20/2021	04/23/2021 08:00	Rasheda Ghaffari	04/27/2021 15:48	Michael Poppell	2241124
	04/20/2021	04/30/2021 09:00	Julie Wi	05/05/2021 17:31	Vandana T. Nagar	2241123
EPA 8276	04/20/2021	04/23/2021 08:00	Fe-Val Siddell	04/27/2021 01:38	Michael Poppell	2241123
EPA 8321B	04/20/2021	04/20/2021 14:00	Hoor Shaik	04/30/2021 01:49	Juyoung Kim	2241121
	04/20/2021	04/20/2021 14:00	Hoor Shaik	04/30/2021 16:43	Juyoung Kim	2241122
	04/20/2021	04/20/2021 14:00	Hoor Shaik	05/03/2021 10:38	Juyoung Kim	2241122
	04/20/2021	04/21/2021 12:00	Rebecca Ware	04/21/2021 14:53	Rebecca Ware	2241122
	04/20/2021	04/21/2021 12:00	Rebecca Ware	04/28/2021 22:29	Rebecca Ware	2241122