Chemical Analysis Report

SE-DIST-2021-08-31-01

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

Event Description: **SMP - Palm Beach West Pickup**
Request ID: **RQ-2021-08-30-46**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Drew Liddick

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

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 27-SEP-2021 10:42

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: West Palm Beach Canal @ Twenty-mile Bend **Collection Date/Time: 08/30/2021 13:20**

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2272764	EPA 8321B	Aldicarb	0.020	U	ug/L	P403290	
		Aldicarb Sulfone	0.0020	U	ug/L	P403290	
		Aldicarb Sulfoxide	0.0020	UJ	ug/L	P403290	MS
		Carbaryl	0.0020	U	ug/L	P403290	
		Carbofuran	0.0020	U	ug/L	P403290	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P403290	
		Methiocarb	0.0020	U	ug/L	P403290	
		Methomyl	0.0020	U	ug/L	P403290	
		Oxamyl	0.0020	U	ug/L	P403290	
		Propoxur	0.0020	U	ug/L	P403290	
2272765		2,4-D	0.55		ug/L	P403290	
		Acesulfame K	0.10	U	ug/L	P403327	
		2,4,5-T	0.0040	U	ug/L	P403290	
		AMPA	0.50		ug/L	P403327	
		Acetaminophen	0.0080	U	ug/L	P403290	
		Acetamiprid	0.0020	U	ug/L	P403290	
		Endothall	0.25	U	ug/L	P403327	
		Glufosinate	0.10	U	ug/L	P403327	
		Glyphosate	2.1		ug/L	P403327	
		Afidopyropen	0.0020	U	ug/L	P403290	
		Sucralose	0.045		ug/L	P403327	
		Bentazon	0.087	I	ug/L	P403290	MS
		Benzovindiflupyr	0.0020	U	ug/L	P403290	
		Carbamazepine	8.0E-04	U	ug/L	P403290	
		Clothianidin	0.0020	U	ug/L	P403290	
		Dinotefuran	0.0020	U	ug/L	P403290	
		Diuron	0.0020	U	ug/L	P403290	
		Fenuron	0.016	U	ug/L	P403290	
		Fluridone	8.0E-04	U	ug/L	P403290	
		Imazapyr	0.20		ug/L	P403290	
		Hydrocodone	0.0020	U	ug/L	P403290	
		Ibuprofen	0.020	U	ug/L	P403290	
		Imidacloprid	0.0020	U	ug/L	P403290	
		Linuron	0.0040	U	ug/L	P403290	
		Mandestrobin	0.0020	U	ug/L	P403290	
		MCPP	0.0020	U	ug/L	P403290	
		Naproxen	0.0080	U	ug/L	P403290	
		Primidone	0.0040	U	ug/L	P403290	MS
		Pyraclostrobin	0.0020	U	ug/L	P403290	
		Thiamethoxam	0.0020	U	ug/L	P403290	
		Tolfenpyrad	0.0020	U	ug/L	P403290	
		Triclopyr	0.0040	U	ug/L	P403290	
2272766	EPA 8270E	Aldrin	0.67	U	ng/L	P403259	
		Alpha-BHC	0.10	U	ng/L	P403259	

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2272766	EPA 8270E	Alpha-Chlordane	0.21	U	ng/L	P403259	
		Beta-BHC	0.10	U	ng/L	P403259	
		Beta-Cyfluthrin**	1.3	U	ng/L	P403259	
		Bifenthrin**	0.51	U	ng/L	P403259	
		Chlorothalonil	0.51	U	ng/L	P403259	
		Cis-Nonachlor**	0.21	U	ng/L	P403259	
		Cypermethrin	1.5	U	ng/L	P403259	
		Dacthal**	0.15	U	ng/L	P403259	
		DDD-p,p'	0.26	U	ng/L	P403259	
		DDE-p,p'	0.44	I	ng/L	P403259	
		DDT-p,p'	0.27	I	ng/L	P403259	
		Delta-BHC	0.41	U	ng/L	P403259	
		Deltamethrin**	1.3	U	ng/L	P403259	
		Dichlobenil**	0.10	U	ng/L	P403259	
		Dicofol	1.3	U	ng/L	P403259	
		Dieldrin	1.1	I	ng/L	P403259	
		Endosulfan I	0.41	U	ng/L	P403259	
		Endosulfan II	0.41	U	ng/L	P403259	MS
		Endosulfan Sulfate	0.31	U	ng/L	P403259	
		Endrin	0.41	U	ng/L	P403259	
		Endrin Aldehyde	0.77	U	ng/L	P403259	
		Endrin Ketone	0.41	U	ng/L	P403259	
		Esfenvalerate**	0.77	U	ng/L	P403259	
		Ethalfluralin**	0.15	U	ng/L	P403259	
		Fenpropathrin**	0.26	U	ng/L	P403259	
		Gamma-BHC	0.13	U	ng/L	P403259	
		Gamma-Chlordane	0.23	I J	ng/L	P403259	LCS, MS
		Heptachlor	0.21	U	ng/L	P403259	
		Heptachlor Epoxide	0.26	U	ng/L	P403259	
		Hexachlorobenzene	1.0	U	ng/L	P403259	
		Kepone**	5.1	UJ	ng/L	P403259	CCV
		Lambda-Cyhalothrin**	0.77	U	ng/L	P403259	
		Methoxychlor	0.31	U	ng/L	P403259	
		MGK-264**	0.21	U	ng/L	P403259	
		Mirex	0.72	U	ng/L	P403259	
		Permethrin	1.6	U	ng/L	P403259	
		Phenothrin**	0.93	U	ng/L	P403259	
		Piperonyl Butoxide**	0.69	I	ng/L	P403259	
		Prallethrin**	2.1	U	ng/L	P403259	
		Tau-Fluvalinate**	0.26	U	ng/L	P403259	
		Tetramethrin**	0.77	U	ng/L	P403259	
		Trans-Nonachlor**	0.21	UJ	ng/L	P403259	LCS, MS
		Triclosan Methyl**	0.15	U	ng/L	P403259	
		Trifluralin	0.21	U	ng/L	P403259	
	EPA 8276	Chlordane	5.1	U	ng/L	P403259	

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2272766	EPA 8276	Toxaphene	31	U	ng/L	P403259	
2272767	EPA 8270E	Acetochlor	0.24	UJ	ng/L	P403292	SUR
		Alachlor	0.24	UJ	ng/L	P403292	SUR
		Ametryn	86	J	ng/L	P403292	SUR
		Atrazine	44	J	ng/L	P403292	SUR
		Atrazine Desethyl	10	J	ng/L	P403292	SUR
		Azinphos Methyl	1.9	UJ	ng/L	P403292	SUR
		Azoxystrobin**	120	J	ng/L	P403292	SUR
		Bromacil	0.48	UJ	ng/L	P403292	SUR
		Butylate	0.38	UJ	ng/L	P403292	SUR
		Caffeine**	7.2	U	ng/L	P403292	
		Carbophenothion	0.48	UJ	ng/L	P403292	SUR
		Carfentrazone Ethyl**	0.096	UJ	ng/L	P403292	SUR
		Chlorpyrifos Ethyl	0.28	I J	ng/L	P403292	SUR
		Chlorpyrifos Methyl	0.048	UJ	ng/L	P403292	SUR
		Cyanazine	3.1	UJ	ng/L	P403292	SUR
		Demeton	1.4	UJ	ng/L	P403292	SUR
		Diazinon	0.12	UJ	ng/L	P403292	SUR
		Difenoconazole**	0.57	UJ	ng/L	P403292	SUR
		Dimethenamid**	0.096	UJ	ng/L	P403292	SUR
		Disulfoton	0.48	UJ	ng/L	P403292	LCS, MS, SUR
		Dithiopyr**	0.17	UJ	ng/L	P403292	SUR
		EPTC	1.2	UJ	ng/L	P403292	SUR
		Ethion	0.14	UJ	ng/L	P403292	SUR
		Ethoprop	0.096	UJ	ng/L	P403292	SUR
		Fenamiphos	0.48	UJ	ng/L	P403292	SUR
		Fenbuconazole**	0.12	UJ	ng/L	P403292	SUR
		Fipronil	0.24	UJ	ng/L	P403292	SUR
		Fipronil Desulfinyl**	0.12	UJ	ng/L	P403292	SUR
		Fipronil Sulfide	0.14	UJ	ng/L	P403292	SUR
		Fipronil Sulfone	0.14	UJ	ng/L	P403292	SUR
		Fluazifop-P-butyl**	0.096	UJ	ng/L	P403292	SUR
		Fludioxonil**	0.12	UJ	ng/L	P403292	SUR
		Flumioxazin**	1.7	UJ	ng/L	P403292	SUR
		Flutolanil**	0.096	UJ	ng/L	P403292	SUR
		Fluxapyroxad**	9.6	J	ng/L	P403292	SUR
		Fonofos	0.19	UJ	ng/L	P403292	SUR
		Hexazinone	24	J	ng/L	P403292	SUR
		Imazalil**	0.72	UJ	ng/L	P403292	SUR
		Iprodione**	0.57	UJ	ng/L	P403292	SUR
		Malathion	0.33	UJ	ng/L	P403292	SUR
		Metalaxyl	94	J	ng/L	P403292	SUR
		Metolachlor	24	J	ng/L	P403292	SUR
		Metribuzin	5.1	I J	ng/L	P403292	SUR

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2272767	EPA 8270E	Mevinphos	1.0	UJ	ng/L	P403292	SUR
		Molinate	0.29	UJ	ng/L	P403292	SUR
		Myclobutanil**	0.24	UJ	ng/L	P403292	SUR
		Naled**	1.4	UJ	ng/L	P403292	SUR
		Norflurazon	0.48	UJ	ng/L	P403292	SUR
		Oxadiazon	0.46	I J	ng/L	P403292	SUR
		Oxyfluorfen**	0.14	UJ	ng/L	P403292	SUR
		Parathion Ethyl	0.24	UJ	ng/L	P403292	SUR
		Parathion Methyl	0.53	UJ	ng/L	P403292	SUR
		Pendimethalin	0.96	UJ	ng/L	P403292	SUR
		Phorate	0.50	UJ	ng/L	P403292	SUR
		Prodiamine**	0.17	UJ	ng/L	P403292	SUR
		Prometon	0.86	UJ	ng/L	P403292	SUR
		Prometryn	1.3	J	ng/L	P403292	SUR
		Pronamide**	0.14	UJ	ng/L	P403292	SUR
		Propiconazole**	150	J	ng/L	P403292	SUR
		Pyriproxyfen**	0.12	UJ	ng/L	P403292	SUR
		Simazine	0.48	UJ	ng/L	P403292	SUR
		Sulfentrazone**	0.58	I J	ng/L	P403292	SUR
		Tebuconazole**	0.49	I J	ng/L	P403292	SUR
		Terbufos	0.096	UJ	ng/L	P403292	SUR
		Terbuthylazine	0.41	UJ	ng/L	P403292	SUR

Ref. Method and Comment:
EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for Glyphosate could not be assessed due to a high concentration of parameter in the spiked sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for multiple parameters not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403259

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
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
Ethalfluralin	0.15	U	ng/L
Ethalfluralin	0.15	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403259

Component	Result	Code	Units
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
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 8270E
Batch ID: P403292

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403292

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403292

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403292

Component	Result	Code	Units
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
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P403259

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: P403290

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P403290

Component	Result	Code	Units
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
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: P403327

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: P403259

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	50.0	53.5	P/P	10 - 94.0
Alpha-BHC	86.6	86.9	P/P	71 - 108
Alpha-Chlordane	89.9	96.8	P/P	42 - 115
Beta-BHC	83.6	82.7	P/P	56 - 161
Beta-Cyfluthrin	69.5	87.8	P/P	46 - 190
Bifenthrin	46.9	55.2	P/P	19 - 126
Chlorothalonil	103	105	P/P	10 - 262
Cis-Nonachlor	68.5	73.2	P/P	44 - 112
Cypermethrin	60.0	69.7	P/P	40 - 178
Dacthal	81.7	84.1	P/P	60 - 119
DDD-p,p'	52.2	56.9	P/P	40 - 114
DDE-p,p'	65.9	71.1	P/P	22 - 125
DDT-p,p'	66.8	76.8	P/P	39 - 110
Delta-BHC	84.0	82.9	P/P	64 - 174
Deltamethrin	62.4	73.1	P/P	10 - 227
Dichlobenil	72.1	84.2	P/P	20 - 99.0
Dicofol	67.1	76.3	P/P	43 - 115
Dieldrin	66.1	70.3	P/P	31 - 131
Endosulfan I	68.2	76.7	P/P	52 - 110
Endosulfan II	55.9	60.7	P/P	53 - 127
Endosulfan Sulfate	61.4	66.9	P/P	44 - 135
Endrin	53.8	57.5	P/P	36 - 122
Endrin Aldehyde	52.7	66.3	P/P	23 - 115
Endrin Ketone	83.3	81.6	P/P	46 - 147
Esfenvalerate	54.1	66.3	P/P	25 - 217
Ethalfluralin	64.1	72.3	P/P	46 - 99.0
Fenpropathrin	61.0	69.9	P/P	42 - 121
Gamma-BHC	82.6	80.6	P/P	63 - 131
Gamma-Chlordane	125	134	F/F	40 - 108
Heptachlor	83.4	89.5	P/P	38 - 98.0
Heptachlor Epoxide	63.7	69.5	P/P	39 - 124
Hexachlorobenzene	62.2	73.1	P/P	37 - 96.0
Kepone	26.6	30.0	P/P	10 - 216
Lambda-Cyhalothrin	59.9	72.9	P/P	21 - 220
Methoxychlor	81.1	85.5	P/P	56 - 118
MGK-264	74.7	82.4	P/P	28 - 125
Mirex	42.9	48.5	P/P	10 - 203
Permethrin	60.8	65.8	P/P	42 - 173
Phenothrin	43.8	50.4	P/P	10 - 140
Piperonyl Butoxide	92.1	99.7	P/P	10 - 158
Prallethrin	54.4	67.4	P/P	19 - 119
Tau-Fluvalinate	49.7	64.7	P/P	27 - 164
Tetramethrin	70.3	58.5	P/P	16 - 130
Trans-Nonachlor	113	126	F/F	43 - 105
Triclosan Methyl	67.4	72.2	P/P	50 - 113
Trifluralin	62.7	69.9	P/P	48 - 98.0

Reference Method: EPA 8270E
Batch ID: P403292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	98.0	101	P/P	70 - 121

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alachlor	92.0	93.5	P/P	70 - 119
Ametryn	88.0	94.5	P/P	61 - 135
Atrazine	94.4	99.0	P/P	76 - 123
Atrazine Desethyl	89.7	104	P/P	35 - 140
Azinphos Methyl	128	129	P/P	57 - 163
Azoxystrobin	104	118	P/P	43 - 231
Bromacil	83.9	86.8	P/P	42 - 123
Butylate	37.6	40.8	P/P	34 - 92.0
Caffeine	74.3	70.8	P/P	70 - 130
Carbophenothion	96.3	102	P/P	61 - 121
Carfentrazone Ethyl	106	109	P/P	62 - 139
Chlorpyrifos Ethyl	89.9	93.0	P/P	67 - 121
Chlorpyrifos Methyl	91.6	95.7	P/P	67 - 120
Cyanazine	124	139	P/P	20 - 226
Demeton	105	107	P/P	35 - 125
Diazinon	94.8	102	P/P	70 - 122
Difenoconazole	123	122	P/P	56 - 186
Dimethenamid	77.2	76.7	P/P	67 - 119
Disulfoton	191	203	F/F	47 - 120
Dithiopyr	88.9	94.5	P/P	67 - 118
EPTC	42.0	48.5	P/P	33 - 90.0
Ethion	64.9	55.9	P/P	40 - 133
Ethoprop	81.2	84.2	P/P	61 - 121
Fenamiphos	93.4	91.7	P/P	31 - 139
Fenbuconazole	99.1	99.3	P/P	66 - 141
Fipronil	105	108	P/P	62 - 129
Fipronil Desulfinyl	99.9	105	P/P	59 - 126
Fipronil Sulfide	89.0	94.2	P/P	63 - 117
Fipronil Sulfone	74.6	77.5	P/P	57 - 117
Fluazifop-P-butyl	101	105	P/P	63 - 124
Fludioxonil	119	116	P/P	63 - 123
Flumioxazin	133	123	P/P	34 - 245
Flutolanil	97.3	100	P/P	56 - 131
Fluxapyroxad	89.2	89.6	P/P	57 - 117
Fonofos	87.3	97.1	P/P	61 - 116
Hexazinone	96.0	95.7	P/P	55 - 138
Imazalil	91.4	87.5	P/P	33 - 143
Iprodione	96.3	97.3	P/P	59 - 118
Malathion	84.9	90.5	P/P	62 - 138
Metalaxyl	89.9	96.1	P/P	24 - 147
Metolachlor	90.9	88.6	P/P	68 - 118
Metribuzin	93.9	99.0	P/P	20 - 239
Mevinphos	81.6	93.4	P/P	46 - 124
Molinate	50.7	55.2	P/P	46 - 100
Myclobutanil	95.7	96.6	P/P	32 - 149
Naled	34.0	32.9	P/P	32 - 95.0
Norflurazon	88.1	92.7	P/P	57 - 127
Oxadiazon	83.9	87.9	P/P	63 - 118
Oxyfluorfen	90.5	85.6	P/P	69 - 137
Parathion Ethyl	83.6	93.1	P/P	70 - 113
Parathion Methyl	105	112	P/P	71 - 130
Pendimethalin	75.4	73.9	P/P	55 - 118

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Phorate	68.1	65.6	P/P	46 - 125
Prodiamine	31.1	29.6	P/P	20 - 141
Prometon	83.4	81.8	P/P	54 - 122
Prometryn	94.5	99.4	P/P	66 - 124
Pronamide	98.1	101	P/P	79 - 122
Propiconazole	91.5	92.6	P/P	61 - 126
Pyriproxyfen	86.3	81.9	P/P	52 - 131
Simazine	91.5	97.6	P/P	75 - 128
Sulfentrazone	84.6	86.4	P/P	20 - 132
Tebuconazole	74.2	64.8	P/P	20 - 116
Terbufos	99.0	107	P/P	61 - 117
Terbuthylazine	84.7	87.8	P/P	74 - 116

Reference Method: EPA 8276
Batch ID: P403259

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	96.4	89.1	P/P	56 - 117
Toxaphene	100	86.2	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P403290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.6		P	40 - 150
2,4,5-T	86.4		P	40 - 150
3-Hydroxycarbofuran	84.0		P	40 - 150
Acetaminophen	78.0		P	30 - 150
Acetamiprid	80.5		P	40 - 150
Afidopyropen	74.5		P	40 - 150
Aldicarb	62.1		P	30 - 150
Aldicarb Sulfone	93.8		P	40 - 150
Aldicarb Sulfoxide	103		P	40 - 150
Bentazon	98.4		P	30 - 150
Benzovindiflupyr	86.4		P	40 - 150
Carbamazepine	80.4		P	40 - 150
Carbaryl	89.2		P	40 - 150
Carbofuran	90.0		P	40 - 150
Clothianidin	86.3		P	40 - 150
Dinotefuran	80.5		P	40 - 150
Diuron	81.8		P	40 - 150
Fenuron	89.0		P	40 - 150
Fluridone	92.3		P	40 - 150
Hydrocodone	85.3		P	40 - 150
Ibuprofen	54.2		P	40 - 150
Imazapyr	86.5		P	40 - 150
Imidacloprid	97.7		P	40 - 150
Linuron	86.3		P	40 - 150
Mandestrobin	86.4		P	40 - 150
MCPP	82.6		P	40 - 150
Methiocarb	77.9		P	40 - 150
Methomyl	91.9		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P403290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Naproxen	76.6		P	40 - 150
Oxamyl	87.1		P	40 - 150
Primidone	99.3		P	40 - 150
Propoxur	92.4		P	40 - 150
Pyraclostrobin	72.0		P	40 - 150
Thiamethoxam	90.9		P	40 - 150
Tolfenpyrad	50.7		P	30 - 150
Triclopyr	91.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P403327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	105		P	40 - 150
AMPA	71.1		P	40 - 150
Endothall	125		P	40 - 150
Glufosinate	97.7		P	40 - 150
Glyphosate	101		P	40 - 150
Sucralose	89.1		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P403259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273060	Aldrin	47.0	47.9	P/P	10 - 94.0
2273060	Alpha-BHC	81.5	82.8	P/P	71 - 108
2273060	Alpha-Chlordane	82.1	84.4	P/P	42 - 115
2273060	Beta-BHC	74.2	82.7	P/P	56 - 161
2273060	Beta-Cyfluthrin	94.2	101	P/P	46 - 190
2273060	Bifenthrin	60.3	61.0	P/P	19 - 126
2273060	Chlorothalonil	86.3	66.8	P/P	10 - 262
2273060	Cis-Nonachlor	54.2	57.5	P/P	44 - 112
2273060	Cypermethrin	74.2	75.0	P/P	40 - 178
2273060	Dacthal	75.0	74.3	P/P	60 - 119
2273060	DDD-p,p'	41.2	42.6	P/P	40 - 114
2273060	DDE-p,p'	60.3	58.1	P/P	22 - 125
2273060	DDT-p,p'	67.3	66.0	P/P	39 - 110
2273060	Delta-BHC	76.7	82.3	P/P	64 - 174
2273060	Deltamethrin	86.5	90.1	P/P	10 - 227
2273060	Dichlobenil	62.8	74.6	P/P	20 - 99.0
2273060	Dicofol	68.1	68.6	P/P	43 - 115
2273060	Dieldrin	56.9	52.3	P/P	31 - 131
2273060	Endosulfan I	63.1	63.7	P/P	52 - 110
2273060	Endosulfan II	44.3	45.1	F/F	53 - 127
2273060	Endosulfan Sulfate	50.7	54.1	P/P	44 - 135
2273060	Endrin	43.6	46.2	P/P	36 - 122
2273060	Endrin Aldehyde	45.2	54.9	P/P	23 - 115
2273060	Endrin Ketone	69.8	75.1	P/P	46 - 147
2273060	Esfenvalerate	68.3	73.0	P/P	25 - 217
2273060	Ethalfluralin	65.6	64.3	P/P	46 - 99.0
2273060	Fenpropathrin	67.1	71.9	P/P	42 - 121
2273060	Gamma-BHC	72.3	77.0	P/P	63 - 131
2273060	Gamma-Chlordane	117	117	F/F	40 - 108
2273060	Heptachlor	81.6	82.0	P/P	38 - 98.0
2273060	Heptachlor Epoxide	58.8	57.6	P/P	39 - 124
2273060	Hexachlorobenzene	65.4	65.5	P/P	37 - 96.0
2273060	Kepone	25.6	27.3	P/P	10 - 216
2273060	Lambda-Cyhalothrin	83.0	81.1	P/P	21 - 220
2273060	Methoxychlor	81.5	81.2	P/P	56 - 118
2273060	MGK-264	69.9	70.8	P/P	28 - 125
2273060	Mirex	43.3	44.3	P/P	10 - 203
2273060	Permethrin	80.8	76.1	P/P	42 - 173
2273060	Phenothrin	61.1	60.0	P/P	10 - 140
2273060	Piperonyl Butoxide	99.1	98.2	P/P	10 - 158
2273060	Prallethrin	59.0	56.4	P/P	19 - 119
2273060	Tau-Fluvalinate	65.4	71.0	P/P	27 - 164
2273060	Tetramethrin	61.2	56.2	P/P	16 - 130
2273060	Trans-Nonachlor	108	105	F/F	43 - 105
2273060	Triclosan Methyl	61.4	60.1	P/P	50 - 113
2273060	Trifluralin	64.4	64.7	P/P	48 - 98.0

Reference Method: EPA 8270E
Batch ID: P403292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272767	Acetochlor	112	102	P/P	66 - 122

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272767	Alachlor	102	86.4	P/P	65 - 122
2272767	Atrazine Desethyl	101	71.3	P/P	25 - 150
2272767	Azinphos Methyl	115	115	P/P	44 - 174
2272767	Bromacil	100	89.7	P/P	31 - 145
2272767	Butylate	46.6	37.1	P/P	15 - 97.0
2272767	Caffeine	72.8	73.9	P/P	70 - 130
2272767	Carbophenothion	97.5	91.0	P/P	42 - 129
2272767	Carfentrazone Ethyl	110	90.2	P/P	62 - 145
2272767	Chlorpyrifos Ethyl	91.3	81.9	P/P	60 - 124
2272767	Chlorpyrifos Methyl	102	94.5	P/P	66 - 119
2272767	Cyanazine	152	117	P/P	17 - 225
2272767	Demeton	126	122	P/P	36 - 142
2272767	Diazinon	116	111	P/P	70 - 128
2272767	Difenoconazole	136	130	P/P	33 - 222
2272767	Dimethenamid	83.2	79.1	P/P	54 - 125
2272767	Disulfoton	242	228	F/F	49 - 133
2272767	Dithiopyr	98.2	92.1	P/P	55 - 123
2272767	EPTC	47.6	40.4	P/P	19 - 91.0
2272767	Ethion	69.4	63.5	P/P	13 - 143
2272767	Ethoprop	108	102	P/P	49 - 144
2272767	Fenamiphos	95.3	102	P/P	32 - 136
2272767	Fenbuconazole	107	90.4	P/P	73 - 148
2272767	Fipronil	110	103	P/P	57 - 129
2272767	Fipronil Desulfinyl	125	101	P/P	49 - 127
2272767	Fipronil Sulfide	96.8	94.9	P/P	44 - 127
2272767	Fipronil Sulfone	77.7	76.9	P/P	35 - 126
2272767	Fluazifop-P-butyl	115	101	P/P	67 - 129
2272767	Fludioxonil	119	118	P/P	61 - 126
2272767	Flumioxazin	160	161	P/P	38 - 279
2272767	Flutolanil	90.2	90.6	P/P	55 - 136
2272767	Fonofos	99.8	96.1	P/P	58 - 125
2272767	Imazalil	194	175	P/P	10 - 221
2272767	Iprodione	98.5	90.3	P/P	32 - 140
2272767	Malathion	86.7	86.1	P/P	52 - 138
2272767	Metribuzin	103	95.0	P/P	16 - 272
2272767	Mevinphos	116	112	P/P	45 - 140
2272767	Molinate	61.4	57.7	P/P	41 - 103
2272767	Myclobutanil	102	97.2	P/P	60 - 134
2272767	Naled	35.5	30.4	P/P	20 - 113
2272767	Norflurazon	86.9	81.7	P/P	51 - 123
2272767	Oxadiazon	84.3	77.9	P/P	44 - 125
2272767	Oxyfluorfen	123	108	P/P	66 - 176
2272767	Parathion Ethyl	93.4	88.1	P/P	57 - 132
2272767	Parathion Methyl	126	115	P/P	59 - 156
2272767	Pendimethalin	87.6	87.8	P/P	59 - 129
2272767	Phorate	88.5	83.5	P/P	47 - 136
2272767	Prodiamine	51.0	53.5	P/P	10 - 159
2272767	Prometon	99.1	90.2	P/P	59 - 127
2272767	Prometryn	101	83.3	P/P	59 - 129
2272767	Pronamide	93.3	87.1	P/P	65 - 145
2272767	Pyriproxyfen	79.1	69.8	P/P	21 - 180
2272767	Simazine	106	105	P/P	63 - 147

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272767	Sulfentrazone	90.7	88.4	P/P	32 - 136
2272767	Tebuconazole	71.0	69.6	P/P	10 - 117
2272767	Terbufos	127	119	P/P	61 - 131
2272767	Terbuthylazine	96.6	90.8	P/P	62 - 126

Reference Method: EPA 8276
Batch ID: P403259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272899	Chlordane	66.2	78.4	P/P	47 - 128
2272899	Toxaphene	74.5	77.1	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P403290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272764	3-Hydroxycarbofuran	59.9	47.8	P/P	40 - 150
2272764	Aldicarb	60.5	56.7	P/P	30 - 150
2272764	Aldicarb Sulfone	59.4	61.5	P/P	40 - 150
2272764	Aldicarb Sulfoxide	34.5	31.3	F/F	40 - 150
2272764	Carbaryl	69.1	67.1	P/P	40 - 150
2272764	Carbofuran	68.6	68.0	P/P	40 - 150
2272764	Methiocarb	72.7	78.6	P/P	40 - 150
2272764	Methomyl	74.9	75.8	P/P	40 - 150
2272764	Oxamyl	67.6	66.0	P/P	40 - 150
2272764	Propoxur	69.2	69.6	P/P	40 - 150
2273120	2,4,5-T	119	118	P/P	40 - 150
2273120	Acetaminophen	70.0	64.7	P/P	30 - 150
2273120	Acetamiprid	74.3	69.4	P/P	40 - 150
2273120	Afidopyropen	92.4	79.4	P/P	40 - 150
2273120	Bentazon	227	206	F/F	30 - 150
2273120	Benzovindiflupyr	87.3	92.3	P/P	40 - 150
2273120	Carbamazepine	75.6	71.7	P/P	40 - 150
2273120	Clothianidin	46.4	43.7	P/P	40 - 150
2273120	Dinotefuran	74.6	75.9	P/P	40 - 150
2273120	Diuron	83.2	74.1	P/P	40 - 150
2273120	Fenuron	94.6	89.3	P/P	40 - 150
2273120	Fluridone	91.1	89.2	P/P	40 - 150
2273120	Hydrocodone	106	112	P/P	40 - 150
2273120	Ibuprofen	75.3	64.4	P/P	40 - 150
2273120	Imazapyr	106	111	P/P	40 - 150
2273120	Imidacloprid	88.2	82.7	P/P	40 - 150
2273120	Linuron	85.1	91.6	P/P	40 - 150
2273120	Mandestrobin	98.4	98.5	P/P	40 - 150
2273120	MCPP	123	114	P/P	40 - 150
2273120	Naproxen	93.1	71.6	P/P	40 - 150
2273120	Primidone	25.0	23.9	F/F	40 - 150
2273120	Pyraclostrobin	90.2	91.2	P/P	40 - 150
2273120	Thiamethoxam	75.0	79.4	P/P	40 - 150
2273120	Tolfenpyrad	48.7	52.4	P/P	30 - 150
2273120	Triclopyr	110	113	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P403327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273120	Acesulfame K	148	148	P/P	40 - 150
2273120	AMPA	101	99.9	P/P	40 - 150
2273120	Endothall	113	109	P/P	40 - 150
2273120	Glufosinate	108	109	P/P	40 - 150
2273120	Sucralose	90.1	92.2	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273060	Aldrin	1.94	Spike	P	0 - 30
2273060	Alpha-BHC	1.58	Spike	P	0 - 30
2273060	Alpha-Chlordane	2.67	Spike	P	0 - 30
2273060	Beta-BHC	10.8	Spike	P	0 - 30
2273060	Beta-Cyfluthrin	7.12	Spike	P	0 - 30
2273060	Bifenthrin	1.25	Spike	P	0 - 30
2273060	Chlorothalonil	25.5	Spike	P	0 - 50
2273060	Cis-Nonachlor	5.88	Spike	P	0 - 30
2273060	Cypermethrin	1.07	Spike	P	0 - 30
2273060	Dacthal	0.829	Spike	P	0 - 30
2273060	DDD-p,p'	3.42	Spike	P	0 - 30
2273060	DDE-p,p'	3.66	Spike	P	0 - 30
2273060	DDT-p,p'	2.03	Spike	P	0 - 30
2273060	Delta-BHC	7.06	Spike	P	0 - 30
2273060	Deltamethrin	4.12	Spike	P	0 - 30
2273060	Dichlobenil	17.2	Spike	P	0 - 30
2273060	Dicofol	0.723	Spike	P	0 - 30
2273060	Dieldrin	7.46	Spike	P	0 - 30
2273060	Endosulfan I	1.02	Spike	P	0 - 30
2273060	Endosulfan II	1.72	Spike	P	0 - 30
2273060	Endosulfan Sulfate	6.56	Spike	P	0 - 30
2273060	Endrin	5.77	Spike	P	0 - 30
2273060	Endrin Aldehyde	19.4	Spike	P	0 - 30
2273060	Endrin Ketone	7.33	Spike	P	0 - 30
2273060	Esfenvalerate	6.66	Spike	P	0 - 30
2273060	Ethalfluralin	2.03	Spike	P	0 - 30
2273060	Fenpropathrin	6.85	Spike	P	0 - 30
2273060	Gamma-BHC	6.24	Spike	P	0 - 30
2273060	Gamma-Chlordane	0.0937	Spike	P	0 - 30
2273060	Heptachlor	0.401	Spike	P	0 - 30
2273060	Heptachlor Epoxide	1.94	Spike	P	0 - 30
2273060	Hexachlorobenzene	0.168	Spike	P	0 - 30
2273060	Kepone	6.07	Spike	P	0 - 30
2273060	Lambda-Cyhalothrin	2.31	Spike	P	0 - 30
2273060	Methoxychlor	0.290	Spike	P	0 - 30
2273060	MGK-264	1.25	Spike	P	0 - 30
2273060	Mirex	2.31	Spike	P	0 - 30
2273060	Permethrin	6.08	Spike	P	0 - 30
2273060	Phenothrin	1.86	Spike	P	0 - 30
2273060	Piperonyl Butoxide	0.928	Spike	P	0 - 30
2273060	Prallethrin	4.51	Spike	P	0 - 30
2273060	Tau-Fluvalinate	8.19	Spike	P	0 - 30
2273060	Tetramethrin	8.62	Spike	P	0 - 30
2273060	Trans-Nonachlor	2.79	Spike	P	0 - 30
2273060	Triclosan Methyl	2.12	Spike	P	0 - 30
2273060	Trifluralin	0.525	Spike	P	0 - 30
LFB	Aldrin	6.80	LCS	P	0 - 30
LFB	Alpha-BHC	0.306	LCS	P	0 - 30
LFB	Alpha-Chlordane	7.39	LCS	P	0 - 30
LFB	Beta-BHC	1.10	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	23.4	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Bifenthrin	16.1	LCS	P	0 - 30
LFB	Chlorothalonil	1.92	LCS	P	0 - 50
LFB	Cis-Nonachlor	6.61	LCS	P	0 - 30
LFB	Cypermethrin	14.9	LCS	P	0 - 30
LFB	Dacthal	2.93	LCS	P	0 - 30
LFB	DDD-p,p'	8.61	LCS	P	0 - 30
LFB	DDE-p,p'	7.58	LCS	P	0 - 30
LFB	DDT-p,p'	13.9	LCS	P	0 - 30
LFB	Delta-BHC	1.34	LCS	P	0 - 30
LFB	Deltamethrin	15.9	LCS	P	0 - 30
LFB	Dichlobenil	15.5	LCS	P	0 - 30
LFB	Dicofol	12.9	LCS	P	0 - 30
LFB	Dieldrin	6.25	LCS	P	0 - 30
LFB	Endosulfan I	11.7	LCS	P	0 - 30
LFB	Endosulfan II	8.12	LCS	P	0 - 30
LFB	Endosulfan Sulfate	8.59	LCS	P	0 - 30
LFB	Endrin	6.58	LCS	P	0 - 30
LFB	Endrin Aldehyde	22.8	LCS	P	0 - 30
LFB	Endrin Ketone	2.07	LCS	P	0 - 30
LFB	Esfenvalerate	20.2	LCS	P	0 - 30
LFB	Ethalfluralin	11.9	LCS	P	0 - 30
LFB	Fenpropathrin	13.6	LCS	P	0 - 30
LFB	Gamma-BHC	2.54	LCS	P	0 - 30
LFB	Gamma-Chlordane	6.82	LCS	P	0 - 30
LFB	Heptachlor	7.07	LCS	P	0 - 30
LFB	Heptachlor Epoxide	8.70	LCS	P	0 - 30
LFB	Hexachlorobenzene	16.1	LCS	P	0 - 30
LFB	Kepone	12.0	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	19.5	LCS	P	0 - 30
LFB	Methoxychlor	5.28	LCS	P	0 - 30
LFB	MGK-264	9.76	LCS	P	0 - 30
LFB	Mirex	12.1	LCS	P	0 - 30
LFB	Permethrin	7.88	LCS	P	0 - 30
LFB	Phenothrin	13.9	LCS	P	0 - 30
LFB	Piperonyl Butoxide	7.92	LCS	P	0 - 30
LFB	Prallethrin	21.3	LCS	P	0 - 30
LFB	Tau-Fluvalinate	26.2	LCS	P	0 - 30
LFB	Tetramethrin	18.2	LCS	P	0 - 30
LFB	Trans-Nonachlor	10.6	LCS	P	0 - 30
LFB	Triclosan Methyl	6.89	LCS	P	0 - 30
LFB	Trifluralin	10.9	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P403292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272767	Acetochlor	8.61	Spike	P	0 - 30
2272767	Alachlor	16.1	Spike	P	0 - 30
2272767	Ametryn	0.271	Spike	P	0 - 30
2272767	Atrazine	8.90	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272767	Atrazine Desethyl	19.4	Spike	P	0 - 30
2272767	Azinphos Methyl	0.161	Spike	P	0 - 30
2272767	Azoxystrobin	6.81	Spike	P	0 - 30
2272767	Bromacil	11.3	Spike	P	0 - 30
2272767	Butylate	22.9	Spike	P	0 - 30
2272767	Caffeine	1.54	Spike	P	0 - 30
2272767	Carbophenothion	6.92	Spike	P	0 - 30
2272767	Carfentrazone Ethyl	19.4	Spike	P	0 - 30
2272767	Chlorpyrifos Ethyl	9.99	Spike	P	0 - 30
2272767	Chlorpyrifos Methyl	7.47	Spike	P	0 - 30
2272767	Cyanazine	26.2	Spike	P	0 - 30
2272767	Demeton	3.49	Spike	P	0 - 30
2272767	Diazinon	4.43	Spike	P	0 - 30
2272767	Difenoconazole	4.27	Spike	P	0 - 30
2272767	Dimethenamid	5.05	Spike	P	0 - 30
2272767	Disulfoton	6.07	Spike	P	0 - 30
2272767	Dithiopyr	6.33	Spike	P	0 - 30
2272767	EPTC	16.5	Spike	P	0 - 30
2272767	Ethion	8.86	Spike	P	0 - 30
2272767	Ethoprop	5.71	Spike	P	0 - 30
2272767	Fenamiphos	6.57	Spike	P	0 - 30
2272767	Fenbuconazole	16.9	Spike	P	0 - 30
2272767	Fipronil	6.26	Spike	P	0 - 30
2272767	Fipronil Desulfinyl	22.0	Spike	P	0 - 30
2272767	Fipronil Sulfide	1.94	Spike	P	0 - 30
2272767	Fipronil Sulfone	0.970	Spike	P	0 - 30
2272767	Fluazifop-P-butyl	13.3	Spike	P	0 - 30
2272767	Fludioxonil	0.635	Spike	P	0 - 30
2272767	Flumioxazin	0.713	Spike	P	0 - 30
2272767	Flutolanil	0.423	Spike	P	0 - 30
2272767	Fluxapyroxad	5.84	Spike	P	0 - 30
2272767	Fonofos	3.78	Spike	P	0 - 30
2272767	Hexazinone	4.83	Spike	P	0 - 30
2272767	Imazalil	10.7	Spike	P	0 - 30
2272767	Iprodione	8.69	Spike	P	0 - 30
2272767	Malathion	0.691	Spike	P	0 - 30
2272767	Metalaxyl	2.43	Spike	P	0 - 30
2272767	Metolachlor	6.42	Spike	P	0 - 30
2272767	Metribuzin	4.77	Spike	P	0 - 30
2272767	Mevinphos	3.62	Spike	P	0 - 30
2272767	Molinate	6.26	Spike	P	0 - 30
2272767	Myclobutanil	5.16	Spike	P	0 - 30
2272767	Naled	15.6	Spike	P	0 - 30
2272767	Norflurazon	6.16	Spike	P	0 - 30
2272767	Oxadiazon	6.88	Spike	P	0 - 30
2272767	Oxyfluorfen	13.1	Spike	P	0 - 30
2272767	Parathion Ethyl	5.81	Spike	P	0 - 30
2272767	Parathion Methyl	9.06	Spike	P	0 - 30
2272767	Pendimethalin	0.216	Spike	P	0 - 30
2272767	Phorate	5.87	Spike	P	0 - 30
2272767	Prodiamine	4.84	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272767	Prometon	9.43	Spike	P	0 - 30
2272767	Prometryn	14.5	Spike	P	0 - 30
2272767	Pronamide	6.91	Spike	P	0 - 30
2272767	Propiconazole	3.05	Spike	P	0 - 30
2272767	Pyriproxyfen	12.5	Spike	P	0 - 30
2272767	Simazine	1.43	Spike	P	0 - 30
2272767	Sulfentrazone	2.33	Spike	P	0 - 30
2272767	Tebuconazole	1.86	Spike	P	0 - 30
2272767	Terbufos	6.95	Spike	P	0 - 30
2272767	Terbuthylazine	6.17	Spike	P	0 - 30
LFB	Acetochlor	3.05	LCS	P	0 - 30
LFB	Alachlor	1.71	LCS	P	0 - 30
LFB	Ametryn	7.15	LCS	P	0 - 30
LFB	Atrazine	4.78	LCS	P	0 - 30
LFB	Atrazine Desethyl	14.5	LCS	P	0 - 30
LFB	Azinphos Methyl	0.455	LCS	P	0 - 30
LFB	Azoxystrobin	12.2	LCS	P	0 - 30
LFB	Bromacil	3.39	LCS	P	0 - 30
LFB	Butylate	8.12	LCS	P	0 - 30
LFB	Caffeine	4.81	LCS	P	0 - 30
LFB	Carbophenothion	5.82	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	3.08	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.34	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.44	LCS	P	0 - 30
LFB	Cyanazine	11.5	LCS	P	0 - 30
LFB	Demeton	2.43	LCS	P	0 - 30
LFB	Diazinon	6.86	LCS	P	0 - 30
LFB	Difenoconazole	0.292	LCS	P	0 - 30
LFB	Dimethenamid	0.614	LCS	P	0 - 30
LFB	Disulfoton	6.30	LCS	P	0 - 30
LFB	Dithiopyr	6.02	LCS	P	0 - 30
LFB	EPTC	14.3	LCS	P	0 - 30
LFB	Ethion	14.9	LCS	P	0 - 30
LFB	Ethoprop	3.62	LCS	P	0 - 30
LFB	Fenamiphos	1.83	LCS	P	0 - 30
LFB	Fenbuconazole	0.260	LCS	P	0 - 30
LFB	Fipronil	2.48	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	5.05	LCS	P	0 - 30
LFB	Fipronil Sulfide	5.63	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.82	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	3.76	LCS	P	0 - 30
LFB	Fludioxonil	2.35	LCS	P	0 - 30
LFB	Flumioxazin	8.19	LCS	P	0 - 30
LFB	Flutolanil	3.19	LCS	P	0 - 30
LFB	Fluxapyroxad	0.418	LCS	P	0 - 30
LFB	Fonofos	10.7	LCS	P	0 - 30
LFB	Hexazinone	0.315	LCS	P	0 - 30
LFB	Imazalil	4.37	LCS	P	0 - 30
LFB	Iprodione	1.06	LCS	P	0 - 30
LFB	Malathion	6.37	LCS	P	0 - 30
LFB	Metalaxyl	6.63	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Metolachlor	2.49	LCS	P	0 - 30
LFB	Metribuzin	5.26	LCS	P	0 - 30
LFB	Mevinphos	13.5	LCS	P	0 - 30
LFB	Molinate	8.58	LCS	P	0 - 30
LFB	Myclobutanil	0.921	LCS	P	0 - 30
LFB	Naled	3.06	LCS	P	0 - 30
LFB	Norflurazon	5.10	LCS	P	0 - 30
LFB	Oxadiazon	4.64	LCS	P	0 - 30
LFB	Oxyfluorfen	5.58	LCS	P	0 - 30
LFB	Parathion Ethyl	10.8	LCS	P	0 - 30
LFB	Parathion Methyl	6.92	LCS	P	0 - 30
LFB	Pendimethalin	1.96	LCS	P	0 - 30
LFB	Phorate	3.80	LCS	P	0 - 30
LFB	Prodiamine	5.12	LCS	P	0 - 30
LFB	Prometon	1.89	LCS	P	0 - 30
LFB	Prometryn	5.09	LCS	P	0 - 30
LFB	Pronamide	3.11	LCS	P	0 - 30
LFB	Propiconazole	1.15	LCS	P	0 - 30
LFB	Pyriproxyfen	5.18	LCS	P	0 - 30
LFB	Simazine	6.41	LCS	P	0 - 30
LFB	Sulfentrazone	2.07	LCS	P	0 - 30
LFB	Tebuconazole	13.6	LCS	P	0 - 30
LFB	Terbufos	7.39	LCS	P	0 - 30
LFB	Terbuthylazine	3.60	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P403259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272899	Chlordane	16.9	Spike	P	0 - 30
2272899	Toxaphene	3.45	Spike	P	0 - 30
LFB	Chlordane	7.84	LCS	P	0 - 30
LFB	Toxaphene	15.1	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P403290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272764	3-Hydroxycarbofuran	22.6	Spike	P	0 - 30
2272764	Aldicarb	6.46	Spike	P	0 - 30
2272764	Aldicarb Sulfone	3.47	Spike	P	0 - 30
2272764	Aldicarb Sulfoxide	9.72	Spike	P	0 - 30
2272764	Carbaryl	2.88	Spike	P	0 - 30
2272764	Carbofuran	0.907	Spike	P	0 - 30
2272764	Methiocarb	7.91	Spike	P	0 - 30
2272764	Methomyl	1.10	Spike	P	0 - 30
2272764	Oxamyl	2.44	Spike	P	0 - 30
2272764	Propoxur	0.525	Spike	P	0 - 30
2273120	2,4-D	5.50	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P403290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273120	2,4,5-T	1.19	Spike	P	0 - 30
2273120	Acetaminophen	7.77	Spike	P	0 - 30
2273120	Acetamiprid	6.83	Spike	P	0 - 30
2273120	Afidopyropen	15.1	Spike	P	0 - 30
2273120	Bentazon	8.88	Spike	P	0 - 30
2273120	Benzovindiflupyr	5.58	Spike	P	0 - 30
2273120	Carbamazepine	4.86	Spike	P	0 - 30
2273120	Clothianidin	5.99	Spike	P	0 - 30
2273120	Dinotefuran	0.784	Spike	P	0 - 30
2273120	Diuron	10.7	Spike	P	0 - 30
2273120	Fenuron	5.78	Spike	P	0 - 30
2273120	Fluridone	2.01	Spike	P	0 - 30
2273120	Hydrocodone	5.12	Spike	P	0 - 30
2273120	Ibuprofen	15.5	Spike	P	0 - 30
2273120	Imazapyr	3.01	Spike	P	0 - 30
2273120	Imidacloprid	6.44	Spike	P	0 - 30
2273120	Linuron	7.29	Spike	P	0 - 30
2273120	Mandestrobin	0.0138	Spike	P	0 - 30
2273120	MCPP	8.03	Spike	P	0 - 30
2273120	Naproxen	26.1	Spike	P	0 - 30
2273120	Primidone	4.72	Spike	P	0 - 30
2273120	Pyraclostrobin	1.04	Spike	P	0 - 30
2273120	Thiamethoxam	4.80	Spike	P	0 - 30
2273120	Tolfenpyrad	7.34	Spike	P	0 - 30
2273120	Triclopyr	2.54	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P403327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273120	Acesulfame K	0.279	Spike	P	0 - 30
2273120	AMPA	0.431	Spike	P	0 - 30
2273120	Endothall	3.43	Spike	P	0 - 30
2273120	Glufosinate	1.17	Spike	P	0 - 30
2273120	Glyphosate	6.53	Spike	P	0 - 30
2273120	Sucralose	2.26	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2272764
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	57.9	P	30 - 160

Lab Sample ID: 2272765
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	44.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.5	P	30 - 160
EPA 8321B	Diuron-d6	92.6	P	30 - 160
EPA 8321B	Endothall-d6	40.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	48.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	48.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.3	P	30 - 160
EPA 8321B	Primidone-d5	46.5	P	30 - 160
EPA 8321B	Primidone-d5	46.5	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2272766
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	63.8	P	29 - 123
EPA 8270E	Tetrachloro-m-xylene	57.5	P	24 - 97.0
EPA 8276	Decachlorobiphenyl	57.4	P	29 - 92.0
EPA 8276	PCNB	74.0	P	43 - 134

Lab Sample ID: 2272767
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	100	P	20 - 200
EPA 8270E	Simazine-d10	151	F	73 - 135
EPA 8270E	Terbufos-d10	141	F	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A107646
Included Lab Sample IDs: 2272765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	72.3	77.4	P/P	60 - 160
Glufosinate	91.0	98.3	P/P	60 - 160
Glyphosate	99.2	103	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A107647
Included Lab Sample IDs: 2272765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	101	102	P/P	60 - 160
Endothall	117	103	P/P	60 - 160
Sucralose	89.2	87.8	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A107661
Included Lab Sample IDs: 2272767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	104		P	80 - 120
Atrazine	98.5		P	80 - 120
Atrazine Desethyl	104		P	80 - 120
Azinphos Methyl	100		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	98.0		P	80 - 120
Caffeine	93.5		P	80 - 120
Carbophenothion	97.1		P	80 - 120
Carfentrazone Ethyl	99.7		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	104		P	80 - 120
Cyanazine	110		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	101		P	80 - 120
Difenoconazole	97.3		P	80 - 120
Dimethenamid	104		P	80 - 120
Disulfoton	99.8		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	104		P	80 - 120
Ethion	94.8		P	80 - 120
Ethoprop	97.6		P	80 - 120
Fenamiphos	99.9		P	80 - 120
Fenbuconazole	98.5		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	107		P	80 - 120
Fipronil Sulfide	96.2		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	96.6		P	80 - 120
Fludioxonil	95.7		P	80 - 120
Flumioxazin	97.6		P	80 - 120
Flutolanil	105		P	80 - 120
Fluxapyroxad	106		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A107661
Included Lab Sample IDs: 2272767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fonofos	99.8		P	80 - 120
Hexazinone	102		P	80 - 120
Imazalil	101		P	80 - 120
Iprodione	97.2		P	80 - 120
Malathion	95.4		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	107		P	80 - 120
Mevinphos	108		P	80 - 120
Molinate	106		P	80 - 120
Myclobutanil	104		P	80 - 120
Naled	104		P	80 - 120
Norflurazon	98.8		P	80 - 120
Oxadiazon	105		P	80 - 120
Oxyfluorfen	96.2		P	80 - 120
Parathion Ethyl	99.4		P	80 - 120
Parathion Methyl	104		P	80 - 120
Pendimethalin	96.6		P	80 - 120
Phorate	102		P	80 - 120
Prodiamine	99.5		P	80 - 120
Prometon	98.4		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	100		P	80 - 120
Pyriproxyfen	98.8		P	80 - 120
Simazine	107		P	80 - 120
Sulfentrazone	98.6		P	80 - 120
Tebuconazole	104		P	80 - 120
Terbufos	101		P	80 - 120
Terbuthylazine	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A107662
Included Lab Sample IDs: 2272767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ametryn	116		P	80 - 120
Azoxystrobin	98.7		P	80 - 120
Metalaxyl	105		P	80 - 120
Propiconazole	96.5		P	80 - 120

Reference Method: EPA 8321B
Run ID: A107667
Included Lab Sample IDs: 2272765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	109	115	P/P	50 - 150
2,4,5-T	96.7	90.7	P/P	50 - 150
3-Hydroxycarbofuran	115	110	P/P	60 - 150
Acetaminophen	106	106	P/P	60 - 160
Acetamiprid	109	112	P/P	50 - 150
Afidopyropen	113	118	P/P	50 - 150
Aldicarb	101	86.3	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A107667
Included Lab Sample IDs: 2272764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldicarb Sulfone	112	108	P/P	50 - 150
Aldicarb Sulfoxide	97.5	104	P/P	50 - 150
Bentazon	85.2	106	P/P	50 - 160
Benzovindiflupyr	118	108	P/P	50 - 150
Carbamazepine	104	105	P/P	60 - 150
Carbaryl	115	110	P/P	60 - 150
Carbofuran	105	111	P/P	50 - 150
Clothianidin	111	108	P/P	60 - 150
Dinotefuran	109	101	P/P	50 - 150
Diuron	111	98.7	P/P	60 - 160
Fenuron	101	102	P/P	60 - 150
Fluridone	105	108	P/P	60 - 160
Hydrocodone	110	105	P/P	60 - 150
Ibuprofen	75.2	129	P/P	50 - 160
Imazapyr	107	104	P/P	50 - 150
Imidacloprid	123	109	P/P	60 - 150
Linuron	114	109	P/P	60 - 150
Mandestrobin	104	111	P/P	50 - 150
MCPP	104	107	P/P	50 - 150
Methiocarb	107	99.0	P/P	50 - 150
Methomyl	98.3	100	P/P	50 - 150
Naproxen	148	119	P/P	50 - 160
Oxamyl	102	103	P/P	50 - 150
Primidone	115	115	P/P	60 - 150
Propoxur	117	110	P/P	50 - 150
Pyraclostrobin	116	119	P/P	60 - 150
Thiamethoxam	106	101	P/P	50 - 150
Tolfenpyrad	121	117	P/P	60 - 150
Triclopyr	101	102	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A107721
Included Lab Sample IDs: 2272766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.8		P	80 - 120
Alpha-BHC	99.4		P	80 - 120
Alpha-Chlordane	98.0		P	80 - 120
Beta-BHC	107		P	80 - 120
Beta-Cyfluthrin	98.7		P	80 - 120
Bifenthrin	98.9		P	80 - 120
Chlorothalonil	101		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	95.2		P	80 - 120
Dacthal	98.6		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	100		P	80 - 120
DDT-p,p'	97.2		P	80 - 120
Delta-BHC	113		P	80 - 120
Deltamethrin	92.2		P	80 - 120
Dichlobenil	99.2		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A107721
Included Lab Sample IDs: 2272766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dicofol	98.2		P	80 - 120
Dieldrin	98.8		P	80 - 120
Endosulfan I	96.6		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	100		P	80 - 120
Endrin	104		P	80 - 120
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	98.9		P	80 - 120
Esfenvalerate	95.1		P	80 - 120
Ethalfluralin	100		P	80 - 120
Fenpropathrin	93.6		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	99.0		P	80 - 120
Heptachlor Epoxide	99.1		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Kepone	78.7*		F	80 - 120
Lambda-Cyhalothrin	98.6		P	80 - 120
Methoxychlor	102		P	80 - 120
MGK-264	97.0		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	94.9		P	80 - 120
Phenothrin	102		P	80 - 120
Piperonyl Butoxide	99.5		P	80 - 120
Prallethrin	96.7		P	80 - 120
Tau-Fluvalinate	91.1		P	80 - 120
Tetramethrin	93.2		P	80 - 120
Trans-Nonachlor	100		P	80 - 120
Triclosan Methyl	99.5		P	80 - 120
Trifluralin	94.5		P	80 - 120

Reference Method: EPA 8276
Run ID: A107749
Included Lab Sample IDs: 2272766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.6		P	80 - 120
Toxaphene	109		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	101	98.0	112	102	3.05		8.61
	Alachlor	93.5	92.0	102	86.4	1.71		16.1
	Aldrin	50.0	53.5	47.0	47.9	6.80		1.94
	Alpha-BHC	86.6	86.9	81.5	82.8	0.306		1.58
	Alpha-Chlordane	89.9	96.8	82.1	84.4	7.39		2.67
	Ametryn	94.5	88.0			7.15		0.271
	Atrazine	99.0	94.4			4.78		8.90
	Atrazine Desethyl	104	89.7	101	71.3	14.5		19.4
	Azinphos Methyl	129	128	115	115	0.455		0.161
	Azoxystrobin	118	104			12.2		6.81
	Beta-BHC	83.6	82.7	74.2	82.7	1.10		10.8
	Beta-Cyfluthrin	69.5	87.8	94.2	101	23.4		7.12
	Bifenthrin	46.9	55.2	60.3	61.0	16.1		1.25
	Bromacil	86.8	83.9	100	89.7	3.39		11.3
	Butylate	40.8	37.6	46.6	37.1	8.12		22.9
	Caffeine	70.8	74.3	72.8	73.9	4.81		1.54
	Carbophenothion	96.3	102	97.5	91.0	5.82		6.92
	Carfentrazone Ethyl	106	109	110	90.2	3.08		19.4
	Chlorothalonil	103	105	86.3	66.8	1.92		25.5
	Chlorpyrifos Ethyl	89.9	93.0	91.3	81.9	3.34		9.99
	Chlorpyrifos Methyl	91.6	95.7	102	94.5	4.44		7.47
	Cis-Nonachlor	68.5	73.2	54.2	57.5	6.61		5.88
	Cyanazine	124	139	152	117	11.5		26.2
	Cypermethrin	60.0	69.7	74.2	75.0	14.9		1.07
	Dacthal	84.1	81.7	75.0	74.3	2.93		0.829
	DDD-p,p'	56.9	52.2	41.2	42.6	8.61		3.42
	DDE-p,p'	71.1	65.9	60.3	58.1	7.58		3.66
	DDT-p,p'	76.8	66.8	67.3	66.0	13.9		2.03
	Delta-BHC	82.9	84.0	76.7	82.3	1.34		7.06
	Deltamethrin	73.1	62.4	86.5	90.1	15.9		4.12
	Demeton	105	107	126	122	2.43		3.49
	Diazinon	94.8	102	116	111	6.86		4.43
	Dichlobenil	84.2	72.1	62.8	74.6	15.5		17.2
	Dicofol	76.3	67.1	68.1	68.6	12.9		0.723
	Dieldrin	70.3	66.1	56.9	52.3	6.25		7.46
	Difenoconazole	123	122	136	130	0.292		4.27
	Dimethenamid	77.2	76.7	83.2	79.1	0.614		5.05
	Disulfoton	191	203	242	228	6.30		6.07
	Dithiopyr	88.9	94.5	98.2	92.1	6.02		6.33
	Endosulfan I	76.7	68.2	63.1	63.7	11.7		1.02
	Endosulfan II	60.7	55.9	44.3	45.1	8.12		1.72
	Endosulfan Sulfate	66.9	61.4	50.7	54.1	8.59		6.56
	Endrin	57.5	53.8	43.6	46.2	6.58		5.77
	Endrin Aldehyde	66.3	52.7	45.2	54.9	22.8		19.4
	Endrin Ketone	81.6	83.3	69.8	75.1	2.07		7.33
	EPTC	42.0	48.5	47.6	40.4	14.3		16.5
	Esfenvalerate	66.3	54.1	68.3	73.0	20.2		6.66
	Ethalfluralin	72.3	64.1	65.6	64.3	11.9		2.03
	Ethion	64.9	55.9	69.4	63.5	14.9		8.86
	Ethoprop	81.2	84.2	108	102	3.62		5.71
	Fenamiphos	93.4	91.7	95.3	102	1.83		6.57
	Fenbuconazole	99.1	99.3	107	90.4	0.260		16.9
	Fenpropathrin	69.9	61.0	67.1	71.9	13.6		6.85
	Fipronil	105	108	110	103	2.48		6.26

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Fipronil Desulfinyl	99.9	105	125	101	5.05		22.0
	Fipronil Sulfide	89.0	94.2	96.8	94.9	5.63		1.94
	Fipronil Sulfone	74.6	77.5	77.7	76.9	3.82		0.970
	Fluazifop-P-butyl	101	105	115	101	3.76		13.3
	Fludioxonil	119	116	119	118	2.35		0.635
	Flumioxazin	133	123	160	161	8.19		0.713
	Flutolanil	97.3	100	90.2	90.6	3.19		0.423
	Fluxapyroxad	89.2	89.6			0.418		5.84
	Fonofos	87.3	97.1	99.8	96.1	10.7		3.78
	Gamma-BHC	80.6	82.6	72.3	77.0	2.54		6.24
	Gamma-Chlordane	134	125	117	117	6.82		0.0937
	Heptachlor	89.5	83.4	81.6	82.0	7.07		0.401
	Heptachlor Epoxide	69.5	63.7	58.8	57.6	8.70		1.94
	Hexachlorobenzene	73.1	62.2	65.4	65.5	16.1		0.168
	Hexazinone	96.0	95.7			0.315		4.83
	Imazalil	91.4	87.5	194	175	4.37		10.7
	Iprodione	96.3	97.3	98.5	90.3	1.06		8.69
	Kepone	30.0	26.6	25.6	27.3	12.0		6.07
	Lambda-Cyhalothrin	72.9	59.9	83.0	81.1	19.5		2.31
	Malathion	84.9	90.5	86.7	86.1	6.37		0.691
	Metalaxyl	89.9	96.1			6.63		2.43
	Methoxychlor	85.5	81.1	81.5	81.2	5.28		0.290
	Metolachlor	90.9	88.6			2.49		6.42
	Metribuzin	93.9	99.0	103	95.0	5.26		4.77
	Mevinphos	81.6	93.4	116	112	13.5		3.62
	MGK-264	82.4	74.7	69.9	70.8	9.76		1.25
	Mirex	48.5	42.9	43.3	44.3	12.1		2.31
	Molinate	50.7	55.2	61.4	57.7	8.58		6.26
	Myclobutanil	95.7	96.6	102	97.2	0.921		5.16
	Naled	34.0	32.9	35.5	30.4	3.06		15.6
	Norflurazon	88.1	92.7	86.9	81.7	5.10		6.16
	Oxadiazon	83.9	87.9	84.3	77.9	4.64		6.88
	Oxyfluorfen	90.5	85.6	123	108	5.58		13.1
	Parathion Ethyl	83.6	93.1	93.4	88.1	10.8		5.81
	Parathion Methyl	105	112	126	115	6.92		9.06
	Pendimethalin	75.4	73.9	87.6	87.8	1.96		0.216
	Permethrin	65.8	60.8	80.8	76.1	7.88		6.08
	Phenothrin	50.4	43.8	61.1	60.0	13.9		1.86
	Phorate	68.1	65.6	88.5	83.5	3.80		5.87
	Piperonyl Butoxide	99.7	92.1	99.1	98.2	7.92		0.928
	Prallethrin	67.4	54.4	59.0	56.4	21.3		4.51
	Prodiamine	31.1	29.6	51.0	53.5	5.12		4.84
	Prometon	83.4	81.8	99.1	90.2	1.89		9.43
	Prometryn	94.5	99.4	101	83.3	5.09		14.5
	Pronamide	98.1	101	93.3	87.1	3.11		6.91
	Propiconazole	91.5	92.6			1.15		3.05
	Pyriproxyfen	86.3	81.9	79.1	69.8	5.18		12.5
	Simazine	91.5	97.6	106	105	6.41		1.43
	Sulfentrazone	84.6	86.4	90.7	88.4	2.07		2.33
	Tau-Fluvalinate	64.7	49.7	65.4	71.0	26.2		8.19
	Tebuconazole	74.2	64.8	71.0	69.6	13.6		1.86
	Terbufos	99.0	107	127	119	7.39		6.95
	Terbuthylazine	84.7	87.8	96.6	90.8	3.60		6.17
	Tetramethrin	58.5	70.3	61.2	56.2	18.2		8.62

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Trans-Nonachlor	126	113	108	105	10.6		2.79
	Triclosan Methyl	72.2	67.4	61.4	60.1	6.89		2.12
	Trifluralin	69.9	62.7	64.4	64.7	10.9		0.525
EPA 8276	Chlordane	96.4	89.1	66.2	78.4	7.84		16.9
	Toxaphene	100	86.2	74.5	77.1	15.1		3.45
EPA 8321B	2,4-D	90.6						5.50
	2,4,5-T	86.4		119	118			1.19
	3-Hydroxycarbofuran	84.0		59.9	47.8			22.6
	Acesulfame K	105		148	148			0.279
	Acetaminophen	78.0		70.0	64.7			7.77
	Acetamiprid	80.5		74.3	69.4			6.83
	Afidopyropen	74.5		92.4	79.4			15.1
	Aldicarb	62.1		60.5	56.7			6.46
	Aldicarb Sulfone	93.8		59.4	61.5			3.47
	Aldicarb Sulfoxide	103		34.5	31.3			9.72
	AMPA	71.1		101	99.9			0.431
	Bentazon	98.4		227	206			8.88
	Benzovindiflupyr	86.4		87.3	92.3			5.58
	Carbamazepine	80.4		75.6	71.7			4.86
	Carbaryl	89.2		69.1	67.1			2.88
	Carbofuran	90.0		68.6	68.0			0.907
	Clothianidin	86.3		46.4	43.7			5.99
	Dinotefuran	80.5		74.6	75.9			0.784
	Diuron	81.8		83.2	74.1			10.7
	Endothall	125		113	109			3.43
	Fenuron	89.0		94.6	89.3			5.78
	Fluridone	92.3		91.1	89.2			2.01
	Glufosinate	97.7		108	109			1.17
	Glyphosate	101						6.53
	Hydrocodone	85.3		106	112			5.12
	Ibuprofen	54.2		75.3	64.4			15.5
	Imazapyr	86.5		106	111			3.01
	Imidacloprid	97.7		88.2	82.7			6.44
	Linuron	86.3		85.1	91.6			7.29
	Mandestrobin	86.4		98.4	98.5			0.0138
	MCPP	82.6		123	114			8.03
	Methiocarb	77.9		72.7	78.6			7.91
	Methomyl	91.9		74.9	75.8			1.10
	Naproxen	76.6		93.1	71.6			26.1
	Oxamyl	87.1		67.6	66.0			2.44
	Primidone	99.3		25.0	23.9			4.72
	Propoxur	92.4		69.2	69.6			0.525
	Pyraclostrobin	72.0		90.2	91.2			1.04
	Sucralose	89.1		90.1	92.2			2.26
	Thiamethoxam	90.9		75.0	79.4			4.80
	Tolfenpyrad	50.7		48.7	52.4			7.34
	Triclopyr	91.8		110	113			2.54

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2272766
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2272767

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2272766
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2272764
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2272765

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	08/31/2021	09/03/2021 08:00	Fe-Val Siddell	09/04/2021 18:45	Michael Poppell	2272767
	08/31/2021	09/03/2021 08:00	Fe-Val Siddell	09/05/2021 20:20	Michael Poppell	2272767
	08/31/2021	09/03/2021 08:00	Rasheda Ghaffari	09/08/2021 22:24	Arthur Maknenko	2272766
EPA 8276	08/31/2021	09/03/2021 08:00	Rasheda Ghaffari	09/10/2021 06:26	Julie Wi	2272766
EPA 8321B	08/31/2021	09/03/2021 08:00	Mohammad Ghaffari	09/03/2021 09:42	Mohammad Ghaffari	2272765
	08/31/2021	09/03/2021 08:00	Mohammad Ghaffari	09/03/2021 15:04	Mohammad Ghaffari	2272765
	08/31/2021	09/03/2021 14:00	Hoor Shaik	09/08/2021 07:28	Juyoung Kim	2272764
	08/31/2021	09/03/2021 14:00	Hoor Shaik	09/08/2021 12:56	Juyoung Kim	2272765
	08/31/2021	09/03/2021 14:00	Hoor Shaik	09/08/2021 19:16	Juyoung Kim	2272765