Chemical Analysis Report

SE-DIST-2021-07-20-02

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

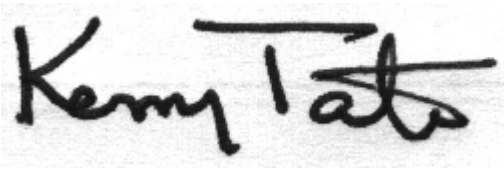
Event Description: **SMP - Palm Beach West 4**
Request ID: **RQ-2021-07-12-39**
Customer: **SE-DIST**
Project ID: **SMP**

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: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 06-AUG-2021 12:18



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: 07/19/2021 12:30**

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2263412	EPA 8321B	Aldicarb	0.020	U	ug/L	P401194	
		Aldicarb Sulfone	0.0020	U	ug/L	P401194	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P401194	
		Carbaryl	0.0020	U	ug/L	P401194	
		Carbofuran	0.0020	U	ug/L	P401194	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P401194	
		Methiocarb	0.0020	U	ug/L	P401194	
		Methomyl	0.0020	U	ug/L	P401194	
		Oxamyl	0.0020	U	ug/L	P401194	
		Propoxur	0.0020	U	ug/L	P401194	
2263413		2,4-D	0.19		ug/L	P401218	
		Acesulfame K	0.10	U	ug/L	P401256	
		2,4,5-T	0.0040	U	ug/L	P401218	
		AMPA	0.74		ug/L	P401256	
		Acetaminophen	0.0080	U	ug/L	P401218	MS, RPD
		Acetamiprid	0.0020	U	ug/L	P401218	
		Endothall	0.25	U	ug/L	P401256	
		Glufosinate	0.10	U	ug/L	P401256	
		Glyphosate	2.9		ug/L	P401256	
		Afidopyropen	0.0020	U	ug/L	P401218	
		Bentazon	0.088		ug/L	P401218	
		Sucralose	0.052		ug/L	P401256	
		Benzovindiflupyr	0.0020	U	ug/L	P401218	
		Carbamazepine	8.0E-04	U	ug/L	P401218	
		Clothianidin	0.0020	U	ug/L	P401218	
		Dinotefuran	0.0020	U	ug/L	P401218	
		Diuron	0.0020	U	ug/L	P401218	
		Fenuron	0.016	U	ug/L	P401218	
		Fluridone	0.0011	I	ug/L	P401218	
		Imazapyr	0.14		ug/L	P401218	
		Hydrocodone	0.0020	U	ug/L	P401218	
		Ibuprofen	0.020	U	ug/L	P401218	
		Imidacloprid	0.010		ug/L	P401218	
		Linuron	0.0040	U	ug/L	P401218	
		Mandestrobin	0.0020	U	ug/L	P401218	
		MCPP	0.0020	U	ug/L	P401218	
		Naproxen	0.0080	U	ug/L	P401218	
		Primidone	0.0040	U	ug/L	P401218	
		Pyraclostrobin	0.0020	U	ug/L	P401218	
		Thiamethoxam	0.0020	U	ug/L	P401218	
		Tolfenpyrad	0.0020	U	ug/L	P401218	
		Triclopyr	0.0040	U	ug/L	P401218	
2263414	EPA 8270E	Aldrin	0.70	UJ	ng/L	P401195	RPD
		Alpha-BHC	0.11	U	ng/L	P401195	

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2263414	EPA 8270E	Alpha-Chlordane	0.22	U	ng/L	P401195	
		Beta-BHC	0.11	U	ng/L	P401195	
		Beta-Cyfluthrin**	1.3	U	ng/L	P401195	RPD
		Bifenthrin**	0.54	UJ	ng/L	P401195	LCS, RPD
		Chlorothalonil	0.54	U	ng/L	P401195	
		Cis-Nonachlor**	0.22	U	ng/L	P401195	
		Cypermethrin	1.6	U	ng/L	P401195	RPD
		Dacthal**	0.16	U	ng/L	P401195	
		DDD-p,p'	1.0	I	ng/L	P401195	
		DDE-p,p'	0.32	I	ng/L	P401195	
		DDT-p,p'	0.27	U	ng/L	P401195	
		Delta-BHC	0.43	U	ng/L	P401195	
		Deltamethrin**	1.3	UJ	ng/L	P401195	RPD
		Dichlobenil**	0.11	U	ng/L	P401195	RPD
		Dicofol	1.3	U	ng/L	P401195	
		Dieldrin	0.61	I	ng/L	P401195	
		Endosulfan I	0.43	U	ng/L	P401195	
		Endosulfan II	0.43	U	ng/L	P401195	
		Endosulfan Sulfate	0.32	U	ng/L	P401195	
		Endrin	0.43	U	ng/L	P401195	
		Endrin Aldehyde	0.81	U	ng/L	P401195	
		Endrin Ketone	0.43	U	ng/L	P401195	
		Esfenvalerate**	0.81	UJ	ng/L	P401195	RPD
		Ethalfluralin**	0.16	U	ng/L	P401195	
		Fenpropathrin**	0.27	U	ng/L	P401195	
		Gamma-BHC	0.13	U	ng/L	P401195	
		Gamma-Chlordane	0.22	U	ng/L	P401195	
		Heptachlor	0.22	U	ng/L	P401195	
		Heptachlor Epoxide	0.27	U	ng/L	P401195	
		Hexachlorobenzene	1.1	UJ	ng/L	P401195	LCS
		Kepone**	5.4	U	ng/L	P401195	
		Lambda-Cyhalothrin**	0.81	U	ng/L	P401195	RPD
		Methoxychlor	0.32	U	ng/L	P401195	
		MGK-264**	0.22	U	ng/L	P401195	
		Mirex	0.32	UJ	ng/L	P401195	LCS, RPD
		Permethrin	2.1	I	ng/L	P401195	
		Phenothrin**	0.97	U	ng/L	P401195	
		Piperonyl Butoxide**	0.39	I	ng/L	P401195	
		Prallethrin**	2.2	U	ng/L	P401195	
		Tau-Fluvalinate**	0.27	UJ	ng/L	P401195	RPD
		Tetramethrin**	0.81	U	ng/L	P401195	RPD
		Trans-Nonachlor**	0.22	U	ng/L	P401195	
		Triclosan Methyl**	0.16	U	ng/L	P401195	
		Trifluralin	0.22	U	ng/L	P401195	
	EPA 8276	Chlordane	5.4	U	ng/L	P401195	

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2263414	EPA 8276	Toxaphene	32	U	ng/L	P401195	
2263415	EPA 8270E	Acetochlor	0.25	U	ng/L	P401556	
		Alachlor	0.25	U	ng/L	P401556	
		Ametryn	67		ng/L	P401556	
		Atrazine	140		ng/L	P401556	
		Atrazine Desethyl	23		ng/L	P401556	
		Azinphos Methyl	2.0	U	ng/L	P401556	
		Azoxystrobin**	0.50	U	ng/L	P401556	
		Bromacil	0.50	U	ng/L	P401556	
		Butylate	0.40	U	ng/L	P401556	
		Caffeine**	7.4	U	ng/L	P401556	
		Carbophenothion	0.50	U	ng/L	P401556	
		Carfentrazone Ethyl**	0.099	U	ng/L	P401556	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P401556	
		Chlorpyrifos Methyl	0.050	U	ng/L	P401556	
		Cyanazine	3.2	U	ng/L	P401556	
		Demeton	1.5	U	ng/L	P401556	
		Diazinon	0.12	U	ng/L	P401556	
		Difenoconazole**	0.60	U	ng/L	P401556	
		Dimethenamid**	0.099	U	ng/L	P401556	
		Disulfoton	0.50	U	ng/L	P401556	
		Dithiopyr**	0.17	U	ng/L	P401556	
		EPTC	1.2	U	ng/L	P401556	
		Ethion	0.15	U	ng/L	P401556	
		Ethoprop	0.099	U	ng/L	P401556	
		Fenamiphos	0.50	U	ng/L	P401556	
		Fenbuconazole**	0.12	U	ng/L	P401556	
		Fipronil	0.25	U	ng/L	P401556	
		Fipronil Desulfinyl**	0.12	U	ng/L	P401556	
		Fipronil Sulfide	0.15	U	ng/L	P401556	
		Fipronil Sulfone	0.15	U	ng/L	P401556	
		Fluazifop-P-butyl**	0.099	U	ng/L	P401556	
		Fludioxonil**	0.12	U	ng/L	P401556	
		Flumioxazin**	1.7	U	ng/L	P401556	
		Flutolanil**	0.099	U	ng/L	P401556	
		Fluxapyroxad**	0.099	U	ng/L	P401556	
		Fonofos	0.20	UJ	ng/L	P401556	RPD
		Hexazinone	28		ng/L	P401556	
		Imazalil**	0.74	U	ng/L	P401556	RPD
		Iprodione**	0.60	U	ng/L	P401556	
		Malathion	0.35	U	ng/L	P401556	
		Metalaxyl	0.74	U	ng/L	P401556	
		Metolachlor	12		ng/L	P401556	
		Metribuzin	37		ng/L	P401556	
		Mevinphos	1.0	U	ng/L	P401556	

Field ID: G5SE0058 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2263415	EPA 8270E	Molinate	0.30	U	ng/L	P401556	
		Myclobutanil**	0.25	U	ng/L	P401556	
		Naled**	1.5	UJ	ng/L	P401556	LCS
		Norflurazon	0.50	U	ng/L	P401556	
		Oxadiazon	0.30	U	ng/L	P401556	
		Oxyfluorfen**	0.15	U	ng/L	P401556	
		Parathion Ethyl	0.25	U	ng/L	P401556	
		Parathion Methyl	0.55	U	ng/L	P401556	
		Pendimethalin	0.99	U	ng/L	P401556	
		Phorate	0.52	U	ng/L	P401556	
		Prodiamine**	0.17	U	ng/L	P401556	
		Prometon	0.89	U	ng/L	P401556	
		Prometryn	0.20	U	ng/L	P401556	
		Pronamide**	0.15	U	ng/L	P401556	
		Propiconazole**	95		ng/L	P401556	
		Pyriproxyfen**	0.12	U	ng/L	P401556	
		Simazine	0.65	I	ng/L	P401556	
		Sulfentrazone**	0.50	U	ng/L	P401556	
		Tebuconazole**	0.50	U	ng/L	P401556	
		Terbufos	0.099	U	ng/L	P401556	
		Terbuthylazine	0.42	U	ng/L	P401556	

Ref. Method and Comment:
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.
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: P401195

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: P401195

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	0.30	U	ng/L
Mirex	0.30	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: P401556

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: P401556

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: P401556

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: P401556

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: P401195

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

Reference Method: EPA 8321B
Batch ID: P401194

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

Reference Method: EPA 8321B
Batch ID: P401218

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P401218

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

Reference Method: EPA 8321B
Batch ID: P401256

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: P401195

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	32.7	47.9	P/P	20 - 150
Alpha-BHC	91.4	86.4	P/P	50 - 150
Alpha-Chlordane	66.8	77.9	P/P	50 - 150
Beta-BHC	112	102	P/P	50 - 150
Beta-Cyfluthrin	88.8	119	P/P	50 - 150
Bifenthrin	217	75.0	F/P	40 - 150
Chlorothalonil	118	118	P/P	20 - 150
Cis-Nonachlor	56.1	69.1	P/P	50 - 150
Cypermethrin	85.4	114	P/P	50 - 150
Dacthal	98.6	93.3	P/P	50 - 150
DDD-p,p'	61.9	68.3	P/P	50 - 150
DDE-p,p'	59.4	73.8	P/P	50 - 150
DDT-p,p'	63.0	79.8	P/P	50 - 150
Delta-BHC	118	113	P/P	50 - 150
Deltamethrin	77.5	145	P/P	50 - 150
Dichlobenil	74.6	72.5	P/P	40 - 150
Dicofol	73.8	80.0	P/P	50 - 150
Dieldrin	75.8	81.4	P/P	50 - 150
Endosulfan I	73.5	80.4	P/P	50 - 150
Endosulfan II	77.9	79.5	P/P	50 - 150
Endosulfan Sulfate	89.9	77.7	P/P	50 - 150
Endrin	64.5	69.3	P/P	50 - 150
Endrin Aldehyde	68.9	71.5	P/P	50 - 150
Endrin Ketone	83.7	82.4	P/P	50 - 150
Esfenvalerate	86.4	141	P/P	50 - 180
Ethalfluralin	58.8	69.0	P/P	50 - 150
Fenpropathrin	63.0	84.4	P/P	50 - 150
Gamma-BHC	97.8	93.9	P/P	50 - 150
Gamma-Chlordane	58.7	70.1	P/P	50 - 150
Heptachlor	51.3	65.7	P/P	50 - 150
Heptachlor Epoxide	76.5	78.5	P/P	50 - 150
Hexachlorobenzene	49.4	64.2	F/P	50 - 150
Kepone	124	115	P/P	30 - 180
Lambda-Cyhalothrin	106	128	P/P	50 - 200
Methoxychlor	83.4	88.9	P/P	50 - 150
MGK-264	85.5	87.9	P/P	30 - 150
Mirex	36.5	52.2	F/P	50 - 180
Permethrin	122	128	P/P	50 - 150
Phenothrin	85.7	68.3	P/P	20 - 150
Piperonyl Butoxide	85.9	83.0	P/P	50 - 150
Prallethrin	64.6	76.4	P/P	30 - 150
Tau-Fluvalinate	63.4	103	P/P	40 - 150
Tetramethrin	78.0	81.0	P/P	30 - 150
Trans-Nonachlor	60.0	71.8	P/P	50 - 150
Triclosan Methyl	78.1	82.9	P/P	50 - 150
Trifluralin	56.7	68.2	P/P	50 - 150

Reference Method: EPA 8270E
Batch ID: P401556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	87.5	103	P/P	70 - 121

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P401556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alachlor	76.0	77.3	P/P	70 - 119
Ametryn	82.8	85.8	P/P	61 - 135
Atrazine	89.8	102	P/P	76 - 123
Atrazine Desethyl	96.8	99.2	P/P	35 - 140
Azinphos Methyl	101	96.7	P/P	57 - 163
Azoxystrobin	89.0	99.0	P/P	43 - 231
Bromacil	85.3	85.5	P/P	42 - 123
Butylate	38.2	43.4	P/P	34 - 92.0
Caffeine	85.6	84.0	P/P	70 - 130
Carbophenothion	80.4	86.4	P/P	61 - 121
Carfentrazone Ethyl	85.6	81.1	P/P	62 - 139
Chlorpyrifos Ethyl	78.2	84.7	P/P	67 - 121
Chlorpyrifos Methyl	84.7	104	P/P	67 - 120
Cyanazine	119	112	P/P	20 - 226
Demeton	62.8	73.4	P/P	35 - 125
Diazinon	87.5	95.8	P/P	70 - 122
Difenoconazole	161	177	P/P	56 - 186
Dimethenamid	68.6	74.5	P/P	67 - 119
Disulfoton	62.1	63.3	P/P	47 - 120
Dithiopyr	73.5	67.1	P/P	67 - 118
EPTC	43.0	46.0	P/P	33 - 90.0
Ethion	64.3	65.3	P/P	40 - 133
Ethoprop	91.6	99.0	P/P	61 - 121
Fenamiphos	58.3	65.9	P/P	31 - 139
Fenbuconazole	89.1	92.9	P/P	66 - 141
Fipronil	89.3	89.7	P/P	62 - 129
Fipronil Desulfinyl	82.4	81.8	P/P	59 - 126
Fipronil Sulfide	77.0	83.8	P/P	63 - 117
Fipronil Sulfone	77.3	91.4	P/P	57 - 117
Fluazifop-P-butyl	81.6	89.3	P/P	63 - 124
Fludioxonil	97.5	104	P/P	63 - 123
Flumioxazin	154	191	P/P	34 - 245
Flutolanil	88.0	94.1	P/P	56 - 131
Fluxapyroxad	73.3	67.1	P/P	57 - 117
Fonofos	69.2	93.9	P/P	61 - 116
Hexazinone	86.0	94.7	P/P	55 - 138
Imazalil	44.5	42.5	P/P	33 - 143
Iprodione	80.3	78.6	P/P	59 - 118
Malathion	96.4	101	P/P	62 - 138
Metalaxyl	57.4	53.2	P/P	24 - 147
Metolachlor	80.5	79.3	P/P	68 - 118
Metribuzin	97.4	95.8	P/P	20 - 239
Mevinphos	93.6	108	P/P	46 - 124
Molinate	50.8	58.4	P/P	46 - 100
Myclobutanil	76.3	83.8	P/P	32 - 149
Naled	30.3	36.0	F/P	32 - 95.0
Norflurazon	81.0	84.0	P/P	57 - 127
Oxadiazon	73.6	74.3	P/P	63 - 118
Oxyfluorfen	74.4	85.7	P/P	69 - 137
Parathion Ethyl	81.3	90.3	P/P	70 - 113
Parathion Methyl	92.9	111	P/P	71 - 130
Pendimethalin	73.1	84.1	P/P	55 - 118

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P401556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Phorate	53.4	70.7	P/P	46 - 125
Prodiamine	67.8	59.9	P/P	20 - 141
Prometon	56.0	65.2	P/P	54 - 122
Prometryn	85.8	86.7	P/P	66 - 124
Pronamide	88.8	97.5	P/P	79 - 122
Propiconazole	74.8	75.2	P/P	61 - 126
Pyriproxyfen	76.3	74.4	P/P	52 - 131
Simazine	91.6	100	P/P	75 - 128
Sulfentrazone	78.3	71.9	P/P	20 - 132
Tebuconazole	43.9	39.8	P/P	20 - 116
Terbufos	83.3	101	P/P	61 - 117
Terbuthylazine	82.5	91.2	P/P	74 - 116

Reference Method: EPA 8276
Batch ID: P401195

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	83.8	85.3	P/P	56 - 117
Toxaphene	72.0	73.5	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P401194

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

Reference Method: EPA 8321B
Batch ID: P401218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	121		P	30 - 160
2,4,5-T	122		P	30 - 160
Acetaminophen	86.2		P	30 - 160
Acetamiprid	85.9		P	30 - 160
Afidopyropen	70.0		P	30 - 160
Bentazon	95.0		P	30 - 160
Benzovindiflupyr	91.7		P	30 - 160
Carbamazepine	101		P	30 - 160
Clothianidin	98.6		P	30 - 160
Dinotefuran	94.6		P	30 - 160
Diuron	94.6		P	30 - 160
Fenuron	95.5		P	30 - 160
Fluridone	89.2		P	30 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P401218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hydrocodone	95.5		P	30 - 160
Ibuprofen	91.0		P	30 - 160
Imazapyr	110		P	30 - 160
Imidacloprid	95.8		P	30 - 160
Linuron	87.9		P	30 - 160
Mandestrobin	90.7		P	30 - 160
MCPP	115		P	30 - 160
Naproxen	72.0		P	30 - 160
Primidone	108		P	30 - 160
Pyraclostrobin	81.4		P	30 - 160
Thiamethoxam	95.7		P	30 - 160
Tolfenpyrad	39.8		P	30 - 160
Triclopyr	120		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P401256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	85.8		P	40 - 150
AMPA	95.8		P	40 - 150
Endothall	93.4		P	40 - 150
Glufosinate	99.6		P	40 - 150
Glyphosate	96.1		P	40 - 150
Sucralose	83.3		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P401195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262774	Aldrin	47.2	53.9	P/P	20 - 170
2262774	Alpha-BHC	83.9	94.5	P/P	50 - 170
2262774	Alpha-Chlordane	76.3	86.1	P/P	50 - 170
2262774	Beta-BHC	105	119	P/P	50 - 170
2262774	Beta-Cyfluthrin	152	100	P/P	50 - 170
2262774	Bifenthrin	107	67.2	P/P	40 - 170
2262774	Chlorothalonil	151	148	P/P	20 - 170
2262774	Cis-Nonachlor	69.1	72.8	P/P	50 - 170
2262774	Cypermethrin	136	93.8	P/P	50 - 170
2262774	Dacthal	90.1	104	P/P	50 - 170
2262774	DDD-p,p'	67.7	70.8	P/P	50 - 170
2262774	DDE-p,p'	69.6	81.9	P/P	50 - 170
2262774	DDT-p,p'	75.5	87.6	P/P	50 - 170
2262774	Delta-BHC	118	129	P/P	50 - 170
2262774	Deltamethrin	144	88.9	P/P	50 - 170
2262774	Dichlobenil	59.4	84.2	P/P	40 - 170
2262774	Dicofol	83.3	82.1	P/P	50 - 170
2262774	Dieldrin	79.2	89.1	P/P	50 - 170
2262774	Endosulfan I	77.8	88.5	P/P	50 - 170
2262774	Endosulfan II	80.8	85.7	P/P	50 - 170
2262774	Endosulfan Sulfate	84.2	86.0	P/P	50 - 170
2262774	Endrin	68.9	73.7	P/P	50 - 170
2262774	Endrin Aldehyde	66.8	69.1	P/P	50 - 170
2262774	Endrin Ketone	77.5	89.7	P/P	50 - 170
2262774	Esfenvalerate	168	98.1	P/P	50 - 180
2262774	Ethalfluralin	66.0	74.0	P/P	50 - 170
2262774	Fenpropathrin	91.4	82.4	P/P	50 - 170
2262774	Gamma-BHC	95.7	104	P/P	50 - 170
2262774	Gamma-Chlordane	69.6	77.9	P/P	50 - 170
2262774	Heptachlor	62.4	66.8	P/P	50 - 170
2262774	Heptachlor Epoxide	78.1	88.8	P/P	50 - 170
2262774	Hexachlorobenzene	63.0	68.8	P/P	50 - 170
2262774	Kepone	96.3	113	P/P	30 - 180
2262774	Lambda-Cyhalothrin	159	99.2	P/P	50 - 200
2262774	Methoxychlor	97.2	91.9	P/P	50 - 170
2262774	MGK-264	83.3	102	P/P	30 - 170
2262774	Mirex	56.4	57.5	P/P	50 - 180
2262774	Permethrin	117	88.3	P/P	50 - 170
2262774	Phenothrin	91.1	74.2	P/P	20 - 170
2262774	Piperonyl Butoxide	84.7	87.3	P/P	50 - 170
2262774	Prallethrin	69.6	84.5	P/P	30 - 170
2262774	Tau-Fluvalinate	136	79.1	P/P	40 - 170
2262774	Tetramethrin	131	91.7	P/P	30 - 170
2262774	Trans-Nonachlor	70.8	81.7	P/P	50 - 170
2262774	Triclosan Methyl	77.8	91.4	P/P	50 - 170
2262774	Trifluralin	63.1	73.1	P/P	50 - 170

Reference Method: EPA 8270E
Batch ID: P401556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2263584	Acetochlor	81.2	103	P/P	66 - 122

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P401556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2263584	Alachlor	74.5	88.8	P/P	65 - 122
2263584	Ametryn	96.6	114	P/P	45 - 173
2263584	Atrazine	93.7	113	P/P	70 - 134
2263584	Atrazine Desethyl	76.6	98.2	P/P	25 - 150
2263584	Azinphos Methyl	105	124	P/P	44 - 174
2263584	Azoxystrobin	129	146	P/P	10 - 268
2263584	Bromacil	80.2	103	P/P	31 - 145
2263584	Butylate	40.0	40.2	P/P	15 - 97.0
2263584	Caffeine	91.2	90.3	P/P	70 - 130
2263584	Carbophenothion	77.8	95.4	P/P	42 - 129
2263584	Carfentrazone Ethyl	79.0	97.7	P/P	62 - 145
2263584	Chlorpyrifos Ethyl	81.4	95.3	P/P	60 - 124
2263584	Chlorpyrifos Methyl	89.5	99.2	P/P	66 - 119
2263584	Cyanazine	119	151	P/P	17 - 225
2263584	Demeton	93.5	99.7	P/P	36 - 142
2263584	Diazinon	95.3	108	P/P	70 - 128
2263584	Difenoconazole	137	173	P/P	33 - 222
2263584	Dimethenamid	60.2	75.5	P/P	54 - 125
2263584	Disulfoton	80.6	78.5	P/P	49 - 133
2263584	Dithiopyr	74.1	88.3	P/P	55 - 123
2263584	EPTC	39.9	46.8	P/P	19 - 91.0
2263584	Ethion	31.1	34.5	P/P	13 - 143
2263584	Ethoprop	97.3	106	P/P	49 - 144
2263584	Fenamiphos	73.0	80.4	P/P	32 - 136
2263584	Fenbuconazole	93.4	113	P/P	73 - 148
2263584	Fipronil	87.2	101	P/P	57 - 129
2263584	Fipronil Desulfinyl	79.2	99.1	P/P	49 - 127
2263584	Fipronil Sulfide	70.4	70.7	P/P	44 - 127
2263584	Fipronil Sulfone	65.2	80.2	P/P	35 - 126
2263584	Fluazifop-P-butyl	82.8	101	P/P	67 - 129
2263584	Fludioxonil	72.1	90.5	P/P	61 - 126
2263584	Flumioxazin	156	155	P/P	38 - 279
2263584	Flutolanil	74.5	96.0	P/P	55 - 136
2263584	Fluxapyroxad	46.6	51.7	P/P	33 - 140
2263584	Fonofos	88.3	95.3	P/P	58 - 125
2263584	Hexazinone	83.0	97.3	P/P	57 - 148
2263584	Imazalil	72.1	105	P/P	10 - 221
2263584	Iprodione	70.1	82.9	P/P	32 - 140
2263584	Malathion	92.8	109	P/P	52 - 138
2263584	Metalaxyl	82.7	100	P/P	46 - 134
2263584	Metolachlor	76.2	93.9	P/P	58 - 122
2263584	Metribuzin	102	123	P/P	16 - 272
2263584	Mevinphos	105	122	P/P	45 - 140
2263584	Molinate	57.9	56.4	P/P	41 - 103
2263584	Myclobutanil	73.9	91.3	P/P	60 - 134
2263584	Naled	24.5	29.0	P/P	20 - 113
2263584	Norflurazon	74.7	98.1	P/P	51 - 123
2263584	Oxadiazon	70.8	92.5	P/P	44 - 125
2263584	Oxyfluorfen	71.6	89.4	P/P	66 - 176
2263584	Parathion Ethyl	76.4	98.9	P/P	57 - 132
2263584	Parathion Methyl	93.1	111	P/P	59 - 156
2263584	Pendimethalin	71.9	75.9	P/P	59 - 129

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P401556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2263584	Phorate	82.4	84.3	P/P	47 - 136
2263584	Prodiamine	43.9	48.7	P/P	10 - 159
2263584	Prometon	94.5	111	P/P	59 - 127
2263584	Prometryn	86.5	104	P/P	59 - 129
2263584	Pronamide	91.3	110	P/P	65 - 145
2263584	Propiconazole	65.8	86.5	P/P	28 - 165
2263584	Pyriproxyfen	71.4	86.0	P/P	21 - 180
2263584	Simazine	91.1	112	P/P	63 - 147
2263584	Sulfentrazone	71.5	87.6	P/P	32 - 136
2263584	Tebuconazole	22.4	28.3	P/P	-8.3 - 117
2263584	Terbufos	96.9	108	P/P	61 - 131
2263584	Terbuthylazine	78.0	90.7	P/P	62 - 126

Reference Method: EPA 8276
Batch ID: P401195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262809	Chlordane	87.3	83.5	P/P	47 - 128
2262809	Toxaphene	75.4	74.3	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P401194

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

Reference Method: EPA 8321B
Batch ID: P401218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2263287	2,4,5-T	122	127	P/P	30 - 160
2263287	Acetaminophen	254	110	F/P	30 - 160
2263287	Acetamiprid	88.9	101	P/P	30 - 160
2263287	Afidopyropen	79.9	91.3	P/P	30 - 160
2263287	Bentazon	78.4	82.0	P/P	30 - 160
2263287	Benzovindiflupyr	98.2	103	P/P	30 - 160
2263287	Carbamazepine	102	104	P/P	30 - 160
2263287	Clothianidin	119	120	P/P	30 - 160
2263287	Dinotefuran	121	122	P/P	30 - 160
2263287	Diuron	86.0	91.2	P/P	30 - 160
2263287	Fenuron	76.9	78.5	P/P	30 - 160
2263287	Fluridone	86.3	88.5	P/P	30 - 160
2263287	Hydrocodone	107	108	P/P	30 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P401218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2263287	Ibuprofen	89.6	96.1	P/P	30 - 160
2263287	Imazapyr	136	140	P/P	30 - 160
2263287	Imidacloprid	154	156	P/P	30 - 160
2263287	Linuron	83.1	81.8	P/P	30 - 160
2263287	Mandestrobin	93.6	96.3	P/P	30 - 160
2263287	MCPP	124	127	P/P	30 - 160
2263287	Naproxen	75.4	77.7	P/P	30 - 160
2263287	Primidone	118	126	P/P	30 - 160
2263287	Pyraclostrobin	94.5	100	P/P	30 - 160
2263287	Thiamethoxam	150	152	P/P	30 - 160
2263287	Tolfenpyrad	60.0	55.9	P/P	30 - 160
2263287	Triclopyr	126	130	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P401256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2263287	Acesulfame K	121	130	P/P	40 - 150
2263287	AMPA	79.5	84.1	P/P	40 - 150
2263287	Endothall	110	105	P/P	40 - 150
2263287	Glufosinate	108	109	P/P	40 - 150
2263287	Glyphosate	85.9	85.8	P/P	40 - 150
2263287	Sucralose	90.2	93.3	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P401195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262774	Aldrin	13.1	Spike	P	0 - 30
2262774	Alpha-BHC	11.8	Spike	P	0 - 30
2262774	Alpha-Chlordane	12.1	Spike	P	0 - 30
2262774	Beta-BHC	12.4	Spike	P	0 - 30
2262774	Beta-Cyfluthrin	40.8	Spike	F	0 - 30
2262774	Bifenthrin	45.4	Spike	F	0 - 30
2262774	Chlorothalonil	1.90	Spike	P	0 - 50
2262774	Cis-Nonachlor	5.24	Spike	P	0 - 30
2262774	Cypermethrin	36.9	Spike	F	0 - 30
2262774	Dacthal	14.4	Spike	P	0 - 30
2262774	DDD-p,p'	4.49	Spike	P	0 - 30
2262774	DDE-p,p'	16.2	Spike	P	0 - 30
2262774	DDT-p,p'	14.8	Spike	P	0 - 30
2262774	Delta-BHC	8.38	Spike	P	0 - 30
2262774	Deltamethrin	47.1	Spike	F	0 - 30
2262774	Dichlobenil	34.6	Spike	F	0 - 30
2262774	Dicofol	1.41	Spike	P	0 - 30
2262774	Dieldrin	11.8	Spike	P	0 - 30
2262774	Endosulfan I	12.8	Spike	P	0 - 30
2262774	Endosulfan II	5.93	Spike	P	0 - 30
2262774	Endosulfan Sulfate	2.13	Spike	P	0 - 30
2262774	Endrin	6.71	Spike	P	0 - 30
2262774	Endrin Aldehyde	3.44	Spike	P	0 - 30
2262774	Endrin Ketone	14.6	Spike	P	0 - 30
2262774	Esfenvalerate	52.4	Spike	F	0 - 30
2262774	Ethalfluralin	11.5	Spike	P	0 - 30
2262774	Fenpropathrin	10.3	Spike	P	0 - 30
2262774	Gamma-BHC	8.79	Spike	P	0 - 30
2262774	Gamma-Chlordane	11.3	Spike	P	0 - 30
2262774	Heptachlor	6.85	Spike	P	0 - 30
2262774	Heptachlor Epoxide	12.8	Spike	P	0 - 30
2262774	Hexachlorobenzene	8.78	Spike	P	0 - 30
2262774	Kepone	16.3	Spike	P	0 - 30
2262774	Lambda-Cyhalothrin	46.4	Spike	F	0 - 30
2262774	Methoxychlor	5.56	Spike	P	0 - 30
2262774	MGK-264	20.4	Spike	P	0 - 30
2262774	Mirex	1.91	Spike	P	0 - 30
2262774	Permethrin	27.8	Spike	P	0 - 30
2262774	Phenothrin	20.5	Spike	P	0 - 30
2262774	Piperonyl Butoxide	3.11	Spike	P	0 - 30
2262774	Prallethrin	19.3	Spike	P	0 - 30
2262774	Tau-Fluvalinate	52.8	Spike	F	0 - 30
2262774	Tetramethrin	35.2	Spike	F	0 - 30
2262774	Trans-Nonachlor	14.3	Spike	P	0 - 30
2262774	Triclosan Methyl	16.1	Spike	P	0 - 30
2262774	Trifluralin	14.8	Spike	P	0 - 30
LFB	Aldrin	37.8	LCS	F	0 - 30
LFB	Alpha-BHC	5.63	LCS	P	0 - 30
LFB	Alpha-Chlordane	15.3	LCS	P	0 - 30
LFB	Beta-BHC	9.63	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	28.9	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P401195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Bifenthrin	97.1	LCS	F	0 - 30
LFB	Chlorothalonil	0.343	LCS	P	0 - 50
LFB	Cis-Nonachlor	20.8	LCS	P	0 - 30
LFB	Cypermethrin	28.6	LCS	P	0 - 30
LFB	Dacthal	5.55	LCS	P	0 - 30
LFB	DDD-p,p'	9.80	LCS	P	0 - 30
LFB	DDE-p,p'	21.6	LCS	P	0 - 30
LFB	DDT-p,p'	23.5	LCS	P	0 - 30
LFB	Delta-BHC	4.24	LCS	P	0 - 30
LFB	Deltamethrin	60.6	LCS	F	0 - 30
LFB	Dichlobenil	2.88	LCS	P	0 - 30
LFB	Dicofol	8.14	LCS	P	0 - 30
LFB	Dieldrin	7.07	LCS	P	0 - 30
LFB	Endosulfan I	8.95	LCS	P	0 - 30
LFB	Endosulfan II	2.13	LCS	P	0 - 30
LFB	Endosulfan Sulfate	14.5	LCS	P	0 - 30
LFB	Endrin	7.24	LCS	P	0 - 30
LFB	Endrin Aldehyde	3.80	LCS	P	0 - 30
LFB	Endrin Ketone	1.54	LCS	P	0 - 30
LFB	Esfenvalerate	47.9	LCS	F	0 - 30
LFB	Ethalfluralin	16.0	LCS	P	0 - 30
LFB	Fenpropathrin	29.0	LCS	P	0 - 30
LFB	Gamma-BHC	4.13	LCS	P	0 - 30
LFB	Gamma-Chlordane	17.7	LCS	P	0 - 30
LFB	Heptachlor	24.6	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.55	LCS	P	0 - 30
LFB	Hexachlorobenzene	26.1	LCS	P	0 - 30
LFB	Kepone	7.68	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	19.0	LCS	P	0 - 30
LFB	Methoxychlor	6.36	LCS	P	0 - 30
LFB	MGK-264	2.74	LCS	P	0 - 30
LFB	Mirex	35.5	LCS	F	0 - 30
LFB	Permethrin	4.64	LCS	P	0 - 30
LFB	Phenothrin	22.6	LCS	P	0 - 30
LFB	Piperonyl Butoxide	3.50	LCS	P	0 - 30
LFB	Prallethrin	16.8	LCS	P	0 - 30
LFB	Tau-Fluvalinate	47.7	LCS	F	0 - 30
LFB	Tetramethrin	3.82	LCS	P	0 - 30
LFB	Trans-Nonachlor	17.9	LCS	P	0 - 30
LFB	Triclosan Methyl	5.96	LCS	P	0 - 30
LFB	Trifluralin	18.5	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P401556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2263584	Acetochlor	23.5	Spike	P	0 - 30
2263584	Alachlor	17.6	Spike	P	0 - 30
2263584	Ametryn	16.3	Spike	P	0 - 30
2263584	Atrazine	16.4	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P401556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2263584	Atrazine Desethyl	20.2	Spike	P	0 - 30
2263584	Azinphos Methyl	16.6	Spike	P	0 - 30
2263584	Azoxystrobin	12.2	Spike	P	0 - 30
2263584	Bromacil	24.7	Spike	P	0 - 30
2263584	Butylate	0.487	Spike	P	0 - 30
2263584	Caffeine	0.971	Spike	P	0 - 30
2263584	Carbophenothion	20.3	Spike	P	0 - 30
2263584	Carfentrazone Ethyl	21.2	Spike	P	0 - 30
2263584	Chlorpyrifos Ethyl	15.7	Spike	P	0 - 30
2263584	Chlorpyrifos Methyl	10.3	Spike	P	0 - 30
2263584	Cyanazine	23.9	Spike	P	0 - 30
2263584	Demeton	6.40	Spike	P	0 - 30
2263584	Diazinon	12.4	Spike	P	0 - 30
2263584	Difenoconazole	23.1	Spike	P	0 - 30
2263584	Dimethenamid	22.5	Spike	P	0 - 30
2263584	Disulfoton	2.65	Spike	P	0 - 30
2263584	Dithiopyr	17.5	Spike	P	0 - 30
2263584	EPTC	15.8	Spike	P	0 - 30
2263584	Ethion	10.5	Spike	P	0 - 30
2263584	Ethoprop	8.24	Spike	P	0 - 30
2263584	Fenamiphos	9.74	Spike	P	0 - 30
2263584	Fenbuconazole	19.1	Spike	P	0 - 30
2263584	Fipronil	15.0	Spike	P	0 - 30
2263584	Fipronil Desulfinyl	22.4	Spike	P	0 - 30
2263584	Fipronil Sulfide	0.393	Spike	P	0 - 30
2263584	Fipronil Sulfone	20.6	Spike	P	0 - 30
2263584	Fluazifop-P-butyl	19.8	Spike	P	0 - 30
2263584	Fludioxonil	22.6	Spike	P	0 - 30
2263584	Flumioxazin	0.525	Spike	P	0 - 30
2263584	Flutolanil	25.2	Spike	P	0 - 30
2263584	Fluxapyroxad	10.4	Spike	P	0 - 30
2263584	Fonofos	7.68	Spike	P	0 - 30
2263584	Hexazinone	14.4	Spike	P	0 - 30
2263584	Imazalil	36.7	Spike	F	0 - 30
2263584	Iprodione	16.8	Spike	P	0 - 30
2263584	Malathion	16.0	Spike	P	0 - 30
2263584	Metalaxyl	18.9	Spike	P	0 - 30
2263584	Metolachlor	20.8	Spike	P	0 - 30
2263584	Metribuzin	18.5	Spike	P	0 - 30
2263584	Mevinphos	14.8	Spike	P	0 - 30
2263584	Molinate	2.69	Spike	P	0 - 30
2263584	Myclobutanil	21.1	Spike	P	0 - 30
2263584	Naled	16.8	Spike	P	0 - 30
2263584	Norflurazon	27.1	Spike	P	0 - 30
2263584	Oxadiazon	26.6	Spike	P	0 - 30
2263584	Oxyfluorfen	22.1	Spike	P	0 - 30
2263584	Parathion Ethyl	25.7	Spike	P	0 - 30
2263584	Parathion Methyl	17.7	Spike	P	0 - 30
2263584	Pendimethalin	5.43	Spike	P	0 - 30
2263584	Phorate	2.22	Spike	P	0 - 30
2263584	Prodiamine	10.3	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P401556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2263584	Prometon	16.3	Spike	P	0 - 30
2263584	Prometryn	18.3	Spike	P	0 - 30
2263584	Pronamide	18.8	Spike	P	0 - 30
2263584	Propiconazole	27.2	Spike	P	0 - 30
2263584	Pyriproxyfen	18.6	Spike	P	0 - 30
2263584	Simazine	13.4	Spike	P	0 - 30
2263584	Sulfentrazone	20.2	Spike	P	0 - 30
2263584	Tebuconazole	23.0	Spike	P	0 - 30
2263584	Terbufos	10.7	Spike	P	0 - 30
2263584	Terbuthylazine	15.2	Spike	P	0 - 30
LFB	Acetochlor	16.2	LCS	P	0 - 30
LFB	Alachlor	1.60	LCS	P	0 - 30
LFB	Ametryn	3.60	LCS	P	0 - 30
LFB	Atrazine	12.8	LCS	P	0 - 30
LFB	Atrazine Desethyl	2.48	LCS	P	0 - 30
LFB	Azinphos Methyl	3.96	LCS	P	0 - 30
LFB	Azoxystrobin	10.6	LCS	P	0 - 30
LFB	Bromacil	0.278	LCS	P	0 - 30
LFB	Butylate	12.7	LCS	P	0 - 30
LFB	Caffeine	1.86	LCS	P	0 - 30
LFB	Carbophenothion	7.23	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	5.39	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	7.98	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	20.7	LCS	P	0 - 30
LFB	Cyanazine	5.38	LCS	P	0 - 30
LFB	Demeton	15.5	LCS	P	0 - 30
LFB	Diazinon	9.03	LCS	P	0 - 30
LFB	Difenoconazole	9.50	LCS	P	0 - 30
LFB	Dimethenamid	8.34	LCS	P	0 - 30
LFB	Disulfoton	1.98	LCS	P	0 - 30
LFB	Dithiopyr	9.12	LCS	P	0 - 30
LFB	EPTC	6.78	LCS	P	0 - 30
LFB	Ethion	1.48	LCS	P	0 - 30
LFB	Ethoprop	7.76	LCS	P	0 - 30
LFB	Fenamiphos	12.2	LCS	P	0 - 30
LFB	Fenbuconazole	4.16	LCS	P	0 - 30
LFB	Fipronil	0.432	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	0.711	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.42	LCS	P	0 - 30
LFB	Fipronil Sulfone	16.8	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	9.09	LCS	P	0 - 30
LFB	Fludioxonil	6.21	LCS	P	0 - 30
LFB	Flumioxazin	21.8	LCS	P	0 - 30
LFB	Flutolanil	6.70	LCS	P	0 - 30
LFB	Fluxapyroxad	8.87	LCS	P	0 - 30
LFB	Fonofos	30.4	LCS	F	0 - 30
LFB	Hexazinone	9.62	LCS	P	0 - 30
LFB	Imazalil	4.56	LCS	P	0 - 30
LFB	Iprodione	2.18	LCS	P	0 - 30
LFB	Malathion	4.61	LCS	P	0 - 30
LFB	Metalaxyl	7.60	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P401556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Metolachlor	1.56	LCS	P	0 - 30
LFB	Metribuzin	1.71	LCS	P	0 - 30
LFB	Mevinphos	14.1	LCS	P	0 - 30
LFB	Molinate	13.8	LCS	P	0 - 30
LFB	Myclobutanil	9.41	LCS	P	0 - 30
LFB	Naled	17.3	LCS	P	0 - 30
LFB	Norflurazon	3.64	LCS	P	0 - 30
LFB	Oxadiazon	0.890	LCS	P	0 - 30
LFB	Oxyfluorfen	14.1	LCS	P	0 - 30
LFB	Parathion Ethyl	10.6	LCS	P	0 - 30
LFB	Parathion Methyl	17.7	LCS	P	0 - 30
LFB	Pendimethalin	14.0	LCS	P	0 - 30
LFB	Phorate	27.9	LCS	P	0 - 30
LFB	Prodiamine	12.5	LCS	P	0 - 30
LFB	Prometon	15.2	LCS	P	0 - 30
LFB	Prometryn	1.08	LCS	P	0 - 30
LFB	Pronamide	9.36	LCS	P	0 - 30
LFB	Propiconazole	0.510	LCS	P	0 - 30
LFB	Pyriproxyfen	2.47	LCS	P	0 - 30
LFB	Simazine	8.87	LCS	P	0 - 30
LFB	Sulfentrazone	8.46	LCS	P	0 - 30
LFB	Tebuconazole	9.84	LCS	P	0 - 30
LFB	Terbufos	19.1	LCS	P	0 - 30
LFB	Terbuthylazine	10.1	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P401195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262809	Chlordane	4.41	Spike	P	0 - 30
2262809	Toxaphene	1.48	Spike	P	0 - 30
LFB	Chlordane	1.81	LCS	P	0 - 30
LFB	Toxaphene	2.01	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P401194

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

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P401218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2263287	2,4-D	9.34	Spike	P	0 - 30
2263287	2,4,5-T	3.81	Spike	P	0 - 30
2263287	Acetaminophen	79.3	Spike	F	0 - 30
2263287	Acetamiprid	12.7	Spike	P	0 - 30
2263287	Afidopyropen	13.4	Spike	P	0 - 30
2263287	Bentazon	4.50	Spike	P	0 - 30
2263287	Benzovindiflupyr	4.71	Spike	P	0 - 30
2263287	Carbamazepine	2.13	Spike	P	0 - 30
2263287	Clothianidin	0.554	Spike	P	0 - 30
2263287	Dinotefuran	0.675	Spike	P	0 - 30
2263287	Diuron	4.96	Spike	P	0 - 30
2263287	Fenuron	2.08	Spike	P	0 - 30
2263287	Fluridone	2.59	Spike	P	0 - 30
2263287	Hydrocodone	1.09	Spike	P	0 - 30
2263287	Ibuprofen	6.97	Spike	P	0 - 30
2263287	Imazapyr	2.57	Spike	P	0 - 30
2263287	Imidacloprid	0.986	Spike	P	0 - 30
2263287	Linuron	1.57	Spike	P	0 - 30
2263287	Mandestrobin	2.83	Spike	P	0 - 30
2263287	MCPP	2.28	Spike	P	0 - 30
2263287	Naproxen	3.08	Spike	P	0 - 30
2263287	Primidone	6.12	Spike	P	0 - 30
2263287	Pyraclostrobin	5.96	Spike	P	0 - 30
2263287	Thiamethoxam	1.25	Spike	P	0 - 30
2263287	Tolfenpyrad	7.11	Spike	P	0 - 30
2263287	Triclopyr	2.72	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P401256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2263287	Acesulfame K	7.30	Spike	P	0 - 30
2263287	AMPA	5.07	Spike	P	0 - 30
2263287	Endothall	4.58	Spike	P	0 - 30
2263287	Glufosinate	0.494	Spike	P	0 - 30
2263287	Glyphosate	0.0999	Spike	P	0 - 30
2263287	Sucralose	3.47	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2263412
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	52.5	P	30 - 160

Lab Sample ID: 2263413
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	119	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.8	P	30 - 160
EPA 8321B	Diuron-d6	66.1	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	59.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.1	P	30 - 160
EPA 8321B	Primidone-d5	94.8	P	30 - 160
EPA 8321B	Sucralose-d6	93.3	P	30 - 160

Lab Sample ID: 2263414
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	79.4	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	46.1	P	30 - 110
EPA 8276	Decachlorobiphenyl	64.6	P	29 - 92.0
EPA 8276	PCNB	79.3	P	43 - 134

Lab Sample ID: 2263415
Field Sample ID: G5SE0058

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	72.3	P	20 - 200
EPA 8270E	Simazine-d10	117	P	73 - 135
EPA 8270E	Terbufos-d10	80.4	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A106754
Included Lab Sample IDs: 2263413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.6	94.5	P/P	60 - 160
Glufosinate	102	96.5	P/P	60 - 160
Glyphosate	98.4	99.0	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A106768
Included Lab Sample IDs: 2263413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.7	95.7	P/P	50 - 150
2,4,5-T	98.4	100	P/P	50 - 150
3-Hydroxycarbofuran	103	100	P/P	60 - 150
Acetaminophen	108	109	P/P	60 - 160
Acetamiprid	105	104	P/P	50 - 150
Afidopyropen	119	101	P/P	50 - 150
Aldicarb	114	104	P/P	60 - 150
Aldicarb Sulfone	108	109	P/P	50 - 150
Aldicarb Sulfoxide	108	107	P/P	50 - 150
Bentazon	102	102	P/P	50 - 160
Benzovindiflupyr	115	110	P/P	50 - 160
Carbamazepine	106	106	P/P	60 - 150
Carbaryl	115	118	P/P	60 - 150
Carbofuran	109	109	P/P	50 - 150
Clothianidin	107	109	P/P	60 - 150
Dinotefuran	105	104	P/P	50 - 150
Diuron	119	119	P/P	60 - 160
Fenuron	107	106	P/P	60 - 150
Fluridone	102	102	P/P	60 - 160
Hydrocodone	111	108	P/P	60 - 150
Ibuprofen	106	103	P/P	50 - 160
Imazapyr	108	112	P/P	50 - 160
Imidacloprid	101	99.6	P/P	60 - 150
Linuron	110	110	P/P	60 - 150
Mandestrobin	108	108	P/P	50 - 150
MCPP	95.4	97.8	P/P	50 - 150
Methiocarb	115	114	P/P	50 - 150
Methomyl	110	110	P/P	50 - 150
Naproxen	87.7	89.9	P/P	50 - 160
Oxamyl	105	103	P/P	50 - 150
Primidone	109	110	P/P	60 - 150
Propoxur	111	114	P/P	50 - 150
Pyraclostrobin	110	104	P/P	60 - 150
Thiamethoxam	104	104	P/P	50 - 150
Tolfenpyrad	105	103	P/P	60 - 150
Triclopyr	101	103	P/P	50 - 150

Reference Method: EPA 8276
Run ID: A106792
Included Lab Sample IDs: 2263414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8276
Run ID: A106792
Included Lab Sample IDs: 2263414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.8		P	80 - 120
Toxaphene	82.3		P	80 - 120

Reference Method: EPA 8321B
Run ID: A106812
Included Lab Sample IDs: 2263413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.4	98.5	P/P	60 - 160
Endothall	90.1	95.5	P/P	60 - 160
Sucralose	82.8	85.2	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A106837
Included Lab Sample IDs: 2263414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.3		P	80 - 120
Alpha-BHC	98.9		P	80 - 120
Alpha-Chlordane	98.5		P	80 - 120
Beta-BHC	101		P	80 - 120
Beta-Cyfluthrin	87.5		P	80 - 120
Bifenthrin	97.0		P	80 - 120
Chlorothalonil	87.6		P	80 - 120
Cis-Nonachlor	93.2		P	80 - 120
Cypermethrin	94.6		P	80 - 120
Dacthal	98.3		P	80 - 120
DDD-p,p'	96.9		P	80 - 120
DDE-p,p'	96.4		P	80 - 120
DDT-p,p'	92.9		P	80 - 120
Delta-BHC	97.4		P	80 - 120
Deltamethrin	85.9		P	80 - 120
Dichlobenil	97.3		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	95.9		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	95.4		P	80 - 120
Endrin	94.9		P	80 - 120
Endrin Aldehyde	92.9		P	80 - 120
Endrin Ketone	96.1		P	80 - 120
Esfenvalerate	90.3		P	80 - 120
Ethalfluralin	97.1		P	80 - 120
Fenpropathrin	96.3		P	80 - 120
Gamma-BHC	98.0		P	80 - 120
Gamma-Chlordane	96.0		P	80 - 120
Heptachlor	97.9		P	80 - 120
Heptachlor Epoxide	95.3		P	80 - 120
Hexachlorobenzene	98.8		P	80 - 120
Kepone	84.8		P	80 - 120
Lambda-Cyhalothrin	93.6		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106837
Included Lab Sample IDs: 2263414

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methoxychlor	102		P	80 - 120
MGK-264	103		P	80 - 120
Mirex	90.8		P	80 - 120
Permethrin	97.0		P	80 - 120
Phenothrin	93.0		P	80 - 120
Piperonyl Butoxide	91.2		P	80 - 120
Prallethrin	97.8		P	80 - 120
Tau-Fluvalinate	92.0		P	80 - 120
Tetramethrin	98.4		P	80 - 120
Trans-Nonachlor	94.8		P	80 - 120
Triclosan Methyl	98.3		P	80 - 120
Trifluralin	94.9		P	80 - 120

Reference Method: EPA 8270E
Run ID: A106938
Included Lab Sample IDs: 2263415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	99.2		P	80 - 120
Atrazine Desethyl	117		P	80 - 120
Azinphos Methyl	99.2		P	80 - 120
Azoxystrobin	105		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	95.3		P	80 - 120
Caffeine	99.7		P	70 - 120
Carbophenothion	80.1		P	80 - 120
Carfentrazone Ethyl	85.5		P	80 - 120
Chlorpyrifos Ethyl	96.2		P	80 - 120
Chlorpyrifos Methyl	94.1		P	80 - 120
Cyanazine	97.7		P	80 - 120
Demeton	104		P	80 - 120
Diazinon	92.8		P	80 - 120
Difenoconazole	98.6		P	80 - 120
Dimethenamid	99.4		P	80 - 120
Disulfoton	97.6		P	80 - 120
Dithiopyr	92.0		P	80 - 120
EPTC	102		P	80 - 120
Ethion	94.1		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	93.9		P	80 - 120
Fenbuconazole	89.1		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	87.4		P	80 - 120
Fipronil Sulfide	81.4		P	80 - 120
Fipronil Sulfone	87.2		P	80 - 120
Fluazifop-P-butyl	92.4		P	80 - 120
Fludioxonil	92.2		P	80 - 120
Flumioxazin	82.4		P	80 - 120
Flutolanil	106		P	80 - 120
Fluxapyroxad	85.1		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106938
Included Lab Sample IDs: 2263415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fonofos	91.1		P	80 - 120
Imazalil	96.9		P	80 - 120
Iprodione	81.2		P	80 - 120
Malathion	91.7		P	80 - 120
Metalaxyl	99.8		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	110		P	80 - 120
Mevinphos	96.2		P	80 - 120
Molinate	90.7		P	80 - 120
Myclobutanil	99.1		P	80 - 120
Naled	108		P	80 - 120
Norflurazon	93.3		P	80 - 120
Oxadiazon	103		P	80 - 120
Oxyfluorfen	88.8		P	80 - 120
Parathion Ethyl	99.7		P	80 - 120
Parathion Methyl	94.0		P	80 - 120
Pendimethalin	105		P	80 - 120
Phorate	98.5		P	80 - 120
Prodiamine	103		P	80 - 120
Prometon	105		P	80 - 120
Prometryn	95.6		P	80 - 120
Pronamide	92.9		P	80 - 120
Pyriproxyfen	102		P	80 - 120
Simazine	112		P	80 - 120
Sulfentrazone	83.4		P	80 - 120
Tebuconazole	98.2		P	80 - 120
Terbufos	90.4		P	80 - 120
Terbuthylazine	89.5		P	80 - 120

Reference Method: EPA 8270E
Run ID: A106956
Included Lab Sample IDs: 2263415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ametryn	105		P	80 - 120
Atrazine	96.2		P	80 - 120
Hexazinone	101		P	80 - 120
Propiconazole	83.9		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	87.5	103	81.2	103	16.2		23.5
	Alachlor	76.0	77.3	74.5	88.8	1.60		17.6
	Aldrin	32.7	47.9	47.2	53.9	37.8		13.1
	Alpha-BHC	91.4	86.4	83.9	94.5	5.63		11.8
	Alpha-Chlordane	66.8	77.9	76.3	86.1	15.3		12.1
	Ametryn	82.8	85.8	96.6	114	3.60		16.3
	Atrazine	89.8	102	93.7	113	12.8		16.4
	Atrazine Desethyl	96.8	99.2	76.6	98.2	2.48		20.2
	Azinphos Methyl	101	96.7	105	124	3.96		16.6
	Azoxystrobin	89.0	99.0	129	146	10.6		12.2
	Beta-BHC	112	102	105	119	9.63		12.4
	Beta-Cyfluthrin	88.8	119	152	100	28.9		40.8
	Bifenthrin	217	75.0	107	67.2	97.1		45.4
	Bromacil	85.3	85.5	80.2	103	0.278		24.7
	Butylate	38.2	43.4	40.0	40.2	12.7		0.487
	Caffeine	85.6	84.0	91.2	90.3	1.86		0.971
	Carbophenothion	80.4	86.4	77.8	95.4	7.23		20.3
	Carfentrazone Ethyl	85.6	81.1	79.0	97.7	5.39		21.2
	Chlorothalonil	118	118	151	148	0.343		1.90
	Chlorpyrifos Ethyl	78.2	84.7	81.4	95.3	7.98		15.7
	Chlorpyrifos Methyl	84.7	104	89.5	99.2	20.7		10.3
	Cis-Nonachlor	56.1	69.1	69.1	72.8	20.8		5.24
	Cyanazine	119	112	119	151	5.38		23.9
	Cypermethrin	85.4	114	136	93.8	28.6		36.9
	Dacthal	98.6	93.3	90.1	104	5.55		14.4
	DDD-p,p'	61.9	68.3	67.7	70.8	9.80		4.49
	DDE-p,p'	59.4	73.8	69.6	81.9	21.6		16.2
	DDT-p,p'	63.0	79.8	75.5	87.6	23.5		14.8
	Delta-BHC	118	113	118	129	4.24		8.38
	Deltamethrin	77.5	145	144	88.9	60.6		47.1
	Demeton	62.8	73.4	93.5	99.7	15.5		6.40
	Diazinon	87.5	95.8	95.3	108	9.03		12.4
	Dichlobenil	74.6	72.5	59.4	84.2	2.88		34.6
	Dicofol	73.8	80.0	83.3	82.1	8.14		1.41
	Dieldrin	75.8	81.4	79.2	89.1	7.07		11.8
	Difenoconazole	161	177	137	173	9.50		23.1
	Dimethenamid	68.6	74.5	60.2	75.5	8.34		22.5
	Disulfoton	62.1	63.3	80.6	78.5	1.98		2.65
	Dithiopyr	73.5	67.1	74.1	88.3	9.12		17.5
	Endosulfan I	73.5	80.4	77.8	88.5	8.95		12.8
	Endosulfan II	77.9	79.5	80.8	85.7	2.13		5.93
	Endosulfan Sulfate	89.9	77.7	84.2	86.0	14.5		2.13
	Endrin	64.5	69.3	68.9	73.7	7.24		6.71
	Endrin Aldehyde	68.9	71.5	66.8	69.1	3.80		3.44
	Endrin Ketone	83.7	82.4	77.5	89.7	1.54		14.6
	EPTC	43.0	46.0	39.9	46.8	6.78		15.8
	Esfenvalerate	86.4	141	168	98.1	47.9		52.4
	Ethalfluralin	58.8	69.0	66.0	74.0	16.0		11.5
	Ethion	64.3	65.3	31.1	34.5	1.48		10.5
	Ethoprop	91.6	99.0	97.3	106	7.76		8.24
	Fenamiphos	58.3	65.9	73.0	80.4	12.2		9.74
	Fenbuconazole	89.1	92.9	93.4	113	4.16		19.1
	Fenpropathrin	63.0	84.4	91.4	82.4	29.0		10.3
	Fipronil	89.3	89.7	87.2	101	0.432		15.0

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Fipronil Desulfinyl	82.4	81.8	79.2	99.1	0.711		22.4
	Fipronil Sulfide	77.0	83.8	70.4	70.7	8.42		0.393
	Fipronil Sulfone	77.3	91.4	65.2	80.2	16.8		20.6
	Fluazifop-P-butyl	81.6	89.3	82.8	101	9.09		19.8
	Fludioxonil	97.5	104	72.1	90.5	6.21		22.6
	Flumioxazin	154	191	156	155	21.8		0.525
	Flutolanil	88.0	94.1	74.5	96.0	6.70		25.2
	Fluxapyroxad	73.3	67.1	46.6	51.7	8.87		10.4
	Fonofos	69.2	93.9	88.3	95.3	30.4		7.68
	Gamma-BHC	97.8	93.9	95.7	104	4.13		8.79
	Gamma-Chlordane	58.7	70.1	69.6	77.9	17.7		11.3
	Heptachlor	51.3	65.7	62.4	66.8	24.6		6.85
	Heptachlor Epoxide	76.5	78.5	78.1	88.8	2.55		12.8
	Hexachlorobenzene	49.4	64.2	63.0	68.8	26.1		8.78
	Hexazinone	86.0	94.7	83.0	97.3	9.62		14.4
	Imazalil	44.5	42.5	72.1	105	4.56		36.7
	Iprodione	80.3	78.6	70.1	82.9	2.18		16.8
	Kepone	124	115	96.3	113	7.68		16.3
	Lambda-Cyhalothrin	106	128	159	99.2	19.0		46.4
	Malathion	96.4	101	92.8	109	4.61		16.0
	Metalaxyl	57.4	53.2	82.7	100	7.60		18.9
	Methoxychlor	83.4	88.9	97.2	91.9	6.36		5.56
	Metolachlor	80.5	79.3	76.2	93.9	1.56		20.8
	Metribuzin	97.4	95.8	102	123	1.71		18.5
	Mevinphos	93.6	108	105	122	14.1		14.8
	MGK-264	85.5	87.9	83.3	102	2.74		20.4
	Mirex	36.5	52.2	56.4	57.5	35.5		1.91
	Molinate	50.8	58.4	57.9	56.4	13.8		2.69
	Myclobutanil	76.3	83.8	73.9	91.3	9.41		21.1
	Naled	30.3	36.0	24.5	29.0	17.3		16.8
	Norflurazon	81.0	84.0	74.7	98.1	3.64		27.1
	Oxadiazon	73.6	74.3	70.8	92.5	0.890		26.6
	Oxyfluorfen	74.4	85.7	71.6	89.4	14.1		22.1
	Parathion Ethyl	81.3	90.3	76.4	98.9	10.6		25.7
	Parathion Methyl	92.9	111	93.1	111	17.7		17.7
	Pendimethalin	73.1	84.1	71.9	75.9	14.0		5.43
	Permethrin	122	128	117	88.3	4.64		27.8
	Phenothrin	85.7	68.3	91.1	74.2	22.6		20.5
	Phorate	53.4	70.7	82.4	84.3	27.9		2.22
	Piperonyl Butoxide	85.9	83.0	84.7	87.3	3.50		3.11
	Prallethrin	64.6	76.4	69.6	84.5	16.8		19.3
	Prodiamine	67.8	59.9	43.9	48.7	12.5		10.3
	Prometon	56.0	65.2	94.5	111	15.2		16.3
	Prometryn	85.8	86.7	86.5	104	1.08		18.3
	Pronamide	88.8	97.5	91.3	110	9.36		18.8
	Propiconazole	74.8	75.2	65.8	86.5	0.510		27.2
	Pyriproxyfen	76.3	74.4	71.4	86.0	2.47		18.6
	Simazine	91.6	100	91.1	112	8.87		13.4
	Sulfentrazone	78.3	71.9	71.5	87.6	8.46		20.2
	Tau-Fluvalinate	63.4	103	136	79.1	47.7		52.8
	Tebuconazole	43.9	39.8	22.4	28.3	9.84		23.0
	Terbufos	83.3	101	96.9	108	19.1		10.7
	Terbuthylazine	82.5	91.2	78.0	90.7	10.1		15.2
	Tetramethrin	78.0	81.0	131	91.7	3.82		35.2

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Trans-Nonachlor	60.0	71.8	70.8	81.7	17.9		14.3
	Triclosan Methyl	78.1	82.9	77.8	91.4	5.96		16.1
	Trifluralin	56.7	68.2	63.1	73.1	18.5		14.8
EPA 8276	Chlordane	83.8	85.3	87.3	83.5	1.81		4.41
	Toxaphene	72.0	73.5	75.4	74.3	2.01		1.48
EPA 8321B	2,4-D	121						9.34
	2,4,5-T	122		122	127			3.81
	3-Hydroxycarbofuran	90.7		104	103			0.724
	Acesulfame K	85.8		121	130			7.30
	Acetaminophen	86.2		254	110			79.3
	Acetamiprid	85.9		88.9	101			12.7
	Afidopyropen	70.0		79.9	91.3			13.4
	Aldicarb	74.0		81.3	71.1			13.4
	Aldicarb Sulfone	103		121	124			2.81
	Aldicarb Sulfoxide	102		39.6	40.4			1.94
	AMPA	95.8		79.5	84.1			5.07
	Bentazon	95.0		78.4	82.0			4.50
	Benzovindiflupyr	91.7		98.2	103			4.71
	Carbamazepine	101		102	104			2.13
	Carbaryl	93.5		84.1	82.1			2.40
	Carbofuran	96.4		88.9	88.2			0.833
	Clothianidin	98.6		119	120			0.554
	Dinotefuran	94.6		121	122			0.675
	Diuron	94.6		86.0	91.2			4.96
	Endothall	93.4		110	105			4.58
	Fenuron	95.5		76.9	78.5			2.08
	Fluridone	89.2		86.3	88.5			2.59
	Glufosinate	99.6		108	109			0.494
	Glyphosate	96.1		85.9	85.8			0.0999
	Hydrocodone	95.5		107	108			1.09
	Ibuprofen	91.0		89.6	96.1			6.97
	Imazapyr	110		136	140			2.57
	Imidacloprid	95.8		154	156			0.986
	Linuron	87.9		83.1	81.8			1.57
	Mandestrobin	90.7		93.6	96.3			2.83
	MCPP	115		124	127			2.28
	Methiocarb	95.3		88.0	95.2			7.86
	Methomyl	106		101	102			1.04
	Naproxen	72.0		75.4	77.7			3.08
	Oxamyl	96.0		96.0	97.6			1.64
	Primidone	108		118	126			6.12
	Propoxur	96.9		89.2	90.4			1.36
	Pyraclostrobin	81.4		94.5	100			5.96
	Sucralose	83.3		90.2	93.3			3.47
	Thiamethoxam	95.7		150	152			1.25
	Tolfenpyrad	39.8		60.0	55.9			7.11
	Triclopyr	120		126	130			2.72

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2263414
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2263415

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2263414
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2263412
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2263413

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	07/20/2021	07/21/2021 08:00	Fe-Val Siddell	07/27/2021 02:29	Arthur Maknenko	2263414
	07/20/2021	07/21/2021 08:00	Rasheda Ghaffari	07/27/2021 20:37	Michael Poppell	2263415
	07/20/2021	07/21/2021 08:00	Rasheda Ghaffari	07/30/2021 16:45	Michael Poppell	2263415
	07/20/2021	07/21/2021 08:00	Rasheda Ghaffari	07/30/2021 17:11	Michael Poppell	2263415
EPA 8276	07/20/2021	07/21/2021 08:00	Fe-Val Siddell	07/23/2021 09:45	Julie Wi	2263414
EPA 8321B	07/20/2021	07/21/2021 08:30	Hoor Shaik	07/21/2021 22:30	Juyoung Kim	2263412
	07/20/2021	07/21/2021 09:00	Hoor Shaik	07/22/2021 06:35	Juyoung Kim	2263413
	07/20/2021	07/21/2021 09:00	Juyoung Kim	07/21/2021 13:52	Juyoung Kim	2263413
	07/20/2021	07/21/2021 09:00	Juyoung Kim	07/23/2021 12:29	Pramila Ghimire	2263413