Chemical Analysis Report

SO-DIST-2021-05-20-01

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

Event Description: **2021 SMP: Lemon Bay**
Request ID: **RQ-2021-05-17-23**
Customer: **SO-DIST**
Project ID: **SMP**

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FLDEP South District Office
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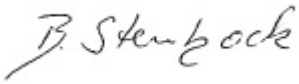
Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 10-JUN-2021 15:35



NON-CONFORMANCE REPORT INCLUDED

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 groups are included in this report: Metals and 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: AlligatorCrk@ShamrockDr **Collection Date/Time: 05/18/2021 09:20**

Field ID: G2SD0048 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249023	EPA 8321B	Acesulfame K	0.10	UY	ug/L	P398627	
		2,4-D	0.0020	UY	ug/L	P398662	
		2,4,5-T	0.0040	UY	ug/L	P398662	
		AMPA	0.10	UYJ	ug/L	P398627	SUR
		Sucralose	0.52	Y	ug/L	P398627	
		Acetaminophen	0.0080	UY	ug/L	P398662	RPD
		Endothall	0.25	UY	ug/L	P398627	
		Acetamiprid	0.0020	UY	ug/L	P398662	
		Glufosinate	0.10	UYJ	ug/L	P398627	SUR
		Glyphosate	0.10	UYJ	ug/L	P398627	SUR
		Afidopyropen	0.0020	UY	ug/L	P398662	
		Bentazon	0.0075	Y	ug/L	P398662	
		Benzovindiflupyr	0.0020	UY	ug/L	P398662	
		Carbamazepine	0.0042	Y	ug/L	P398662	
		Clothianidin	0.0020	UY	ug/L	P398662	
		Dinotefuran	0.0020	UY	ug/L	P398662	
		Diuron	0.0020	UY	ug/L	P398662	
		Fenuron	0.016	UY	ug/L	P398662	
		Fluridone	0.0029	IY	ug/L	P398662	
		Imazapyr	2.2	Y	ug/L	P398662	
		Hydrocodone	0.0020	UY	ug/L	P398662	
		Ibuprofen	0.020	UY	ug/L	P398662	
		Imidacloprid	0.0022	IY	ug/L	P398662	
		Linuron	0.0040	UY	ug/L	P398662	
		Mandestrobin	0.0020	UY	ug/L	P398662	
		MCPP	0.0020	UY	ug/L	P398662	
		Naproxen	0.0080	UY	ug/L	P398662	
		Primidone	0.014	IY	ug/L	P398662	
		Pyraclostrobin	0.0020	UY	ug/L	P398662	
		Thiamethoxam	0.0020	UY	ug/L	P398662	
		Tolfenpyrad	0.0020	UY	ug/L	P398662	
		Triclopyr	0.0040	UY	ug/L	P398662	

Ref. Method and Comment:
EPA 8321B: Results confirmed in re-extraction. Y - Sample was received with inadequate sample preservation; see NCR report. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: Y - Sample was received with inadequate sample preservation; see NCR report.

Sample Location: Alligator @ Jacaranda **Collection Date/Time: 05/18/2021 09:50**

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249024	EPA 8321B	2,4-D	0.021	Y	ug/L	P398662	
		Acesulfame K	0.10	UY	ug/L	P398627	
		2,4,5-T	0.0040	UY	ug/L	P398662	
		AMPA	1.8	Y	ug/L	P398627	
		Sucralose	0.75	Y	ug/L	P398627	
		Acetaminophen	0.0080	UY	ug/L	P398662	RPD
		Acetamiprid	0.0020	UY	ug/L	P398662	
		Endothall	0.25	UY	ug/L	P398627	
		Glufosinate	0.10	UY	ug/L	P398627	
		Glyphosate	21	Y	ug/L	P398627	
		Afidopyropen	0.0020	UY	ug/L	P398662	
		Bentazon	0.018	Y	ug/L	P398662	
		Benzovindiflupyr	0.0020	UY	ug/L	P398662	
		Carbamazepine	0.0019	IY	ug/L	P398662	
		Clothianidin	0.0020	UY	ug/L	P398662	
		Dinotefuran	0.0020	UY	ug/L	P398662	
		Diuron	0.0020	UY	ug/L	P398662	
		Fenuron	0.016	UY	ug/L	P398662	
		Fluridone	0.014	Y	ug/L	P398662	
		Imazapyr	3.9	Y	ug/L	P398662	
		Hydrocodone	0.0020	UY	ug/L	P398662	
		Ibuprofen	0.020	UY	ug/L	P398662	
		Imidacloprid	0.017	Y	ug/L	P398662	
		Linuron	0.0040	UY	ug/L	P398662	
		Mandestrobin	0.0020	UY	ug/L	P398662	
		MCPP	0.0020	UY	ug/L	P398662	
		Naproxen	0.0087	IY	ug/L	P398662	
		Primidone	0.0091	IY	ug/L	P398662	
		Pyraclostrobin	0.0020	UY	ug/L	P398662	
		Thiamethoxam	0.0020	UY	ug/L	P398662	
		Tolfenpyrad	0.0020	UY	ug/L	P398662	
		Triclopyr	0.0040	UY	ug/L	P398662	
2249039		Aldicarb	0.020	UY	ug/L	P398391	
		Aldicarb Sulfone	0.0020	UY	ug/L	P398391	
		Aldicarb Sulfoxide	0.0020	UY	ug/L	P398391	
		Carbaryl	0.0020	UY	ug/L	P398391	
		Carbofuran	0.0020	UY	ug/L	P398391	
		3-Hydroxycarbofuran	0.0020	UY	ug/L	P398391	
		Methiocarb	0.0020	UY	ug/L	P398391	
		Methomyl	0.0020	UY	ug/L	P398391	
		Oxamyl	0.0020	UY	ug/L	P398391	
		Propoxur	0.0020	UY	ug/L	P398391	
2249040	EPA 8270E	Aldrin	0.67	UYJ	ng/L	P398689	LCS, RPD
		Alpha-BHC	0.10	UY	ng/L	P398689	

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249040	EPA 8270E	Alpha-Chlordane	0.21	UY	ng/L	P398689	
		Beta-BHC	0.10	UY	ng/L	P398689	
		Beta-Cyfluthrin**	1.3	UY	ng/L	P398689	
		Bifenthrin**	0.74	IY	ng/L	P398689	
		Carbophenothion	0.36	UY	ng/L	P398689	
		Chlorothalonil	0.52	UYJ	ng/L	P398689	LCS, MS
		Cis-Nonachlor**	0.21	UY	ng/L	P398689	
		Cypermethrin	1.6	UY	ng/L	P398689	
		Dacthal**	0.16	UY	ng/L	P398689	
		DDD-p,p'	0.26	UY	ng/L	P398689	
		DDE-p,p'	0.21	UY	ng/L	P398689	
		DDT-p,p'	0.26	UY	ng/L	P398689	
		Delta-BHC	0.41	UY	ng/L	P398689	
		Deltamethrin**	1.3	UYJ	ng/L	P398689	LCS, MS, RPD
		Dichlobenil**	0.10	UY	ng/L	P398689	
		Dicofol	1.3	UY	ng/L	P398689	
		Dieldrin	0.41	UY	ng/L	P398689	
		Endosulfan I	0.41	UY	ng/L	P398689	
		Endosulfan II	0.41	UY	ng/L	P398689	
		Endosulfan Sulfate	0.31	UY	ng/L	P398689	
		Endrin	0.41	UY	ng/L	P398689	
		Endrin Aldehyde	0.78	UY	ng/L	P398689	
		Endrin Ketone	0.41	UY	ng/L	P398689	
		Esfenvalerate**	0.78	UY	ng/L	P398689	
		Ethalfluralin**	0.16	UY	ng/L	P398689	
		Fenpropathrin**	0.26	UY	ng/L	P398689	
		Gamma-BHC	0.13	UY	ng/L	P398689	
		Gamma-Chlordane	0.21	UY	ng/L	P398689	
		Heptachlor	0.21	UY	ng/L	P398689	
		Heptachlor Epoxide	0.26	UY	ng/L	P398689	
		Hexachlorobenzene	1.0	UY	ng/L	P398689	
		Kepone**	5.2	UY	ng/L	P398689	
		Lambda-Cyhalothrin**	0.78	UY	ng/L	P398689	
		Methoxychlor	0.31	UY	ng/L	P398689	
		MGK-264**	0.21	UY	ng/L	P398689	
		Mirex	0.31	UY	ng/L	P398689	
		Permethrin	1.7	UY	ng/L	P398689	
		Phenothrin**	0.93	UYJ	ng/L	P398689	LCS, RPD
		Piperonyl Butoxide**	0.16	UYJ	ng/L	P398689	LCS
		Prallethrin**	2.1	UY	ng/L	P398689	
		Tau-Fluvalinate**	0.26	UY	ng/L	P398689	
		Tetramethrin**	0.78	UYJ	ng/L	P398689	RPD
		Trans-Nonachlor**	0.21	UY	ng/L	P398689	
		Triclosan Methyl**	0.16	UY	ng/L	P398689	

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249040	EPA 8270E	Trifluralin	0.21	UY	ng/L	P398689	
	EPA 8276	Chlordane	5.2	UYJ	ng/L	P398689	SUR
		Toxaphene	31	UYJ	ng/L	P398689	SUR
2249041	EPA 8270E	Acetochlor	0.27	UY	ng/L	P398626	
		Alachlor	0.27	UY	ng/L	P398626	
		Ametryn	3.9	Y	ng/L	P398626	
		Atrazine	3.1	Y	ng/L	P398626	
		Atrazine Desethyl	1.6	UY	ng/L	P398626	
		Azinphos Methyl	2.1	UY	ng/L	P398626	
		Azoxystrobin**	0.54	UY	ng/L	P398626	
		Bromacil	0.54	UY	ng/L	P398626	
		Butylate	0.43	UYJ	ng/L	P398626	RPD
		Carbophenothion	0.54	UY	ng/L	P398626	
		Carfentrazone Ethyl**	0.11	UY	ng/L	P398626	
		Chlorpyrifos Ethyl	0.27	UY	ng/L	P398626	
		Chlorpyrifos Methyl	0.054	UY	ng/L	P398626	
		Cyanazine	3.5	UY	ng/L	P398626	
		Demeton	1.6	UY	ng/L	P398626	
		Diazinon	0.13	UY	ng/L	P398626	
		Difenoconazole**	0.64	UY	ng/L	P398626	
		Dimethenamid**	0.11	UY	ng/L	P398626	
		Disulfoton	0.54	UY	ng/L	P398626	
		Dithiopyr**	0.19	UY	ng/L	P398626	
		EPTC	1.3	UYJ	ng/L	P398626	RPD
		Ethion	0.16	UYJ	ng/L	P398626	RPD
		Ethoprop	0.11	UY	ng/L	P398626	
		Fenamiphos	0.54	UY	ng/L	P398626	
		Fenbuconazole**	0.13	UY	ng/L	P398626	
		Fipronil	0.27	UY	ng/L	P398626	
		Fipronil Desulfinyl**	0.40	IY	ng/L	P398626	
		Fipronil Sulfide	0.30	IY	ng/L	P398626	
		Fipronil Sulfone	0.88	Y	ng/L	P398626	
		Fluazifop-P-butyl**	0.11	UY	ng/L	P398626	
		Fludioxonil**	0.13	UY	ng/L	P398626	
		Flumioxazin**	1.9	UY	ng/L	P398626	
		Flutolanil**	0.11	UY	ng/L	P398626	
		Fluxapyroxad**	0.11	UY	ng/L	P398626	
		Fonofos	0.21	UY	ng/L	P398626	
		Hexazinone	23	Y	ng/L	P398626	
		Imazalil**	0.80	UY	ng/L	P398626	
		Iprodione**	0.64	UY	ng/L	P398626	
		Malathion	0.38	UY	ng/L	P398626	
		Metalaxyl	0.80	UY	ng/L	P398626	
		Metolachlor	0.38	UY	ng/L	P398626	
		Metribuzin	3.5	UY	ng/L	P398626	

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249041	EPA 8270E	Mevinphos	1.1	UY	ng/L	P398626	
		Molinate	0.32	UY	ng/L	P398626	
		Myclobutanil**	0.27	UY	ng/L	P398626	
		Naled**	1.6	UYJ	ng/L	P398626	RPD
		Norflurazon	0.54	UY	ng/L	P398626	
		Oxadiazon	7.7	Y	ng/L	P398626	
		Oxyfluorfen**	0.16	UY	ng/L	P398626	
		Parathion Ethyl	0.27	UY	ng/L	P398626	
		Parathion Methyl	0.59	UY	ng/L	P398626	
		Pendimethalin	1.1	UY	ng/L	P398626	
		Phorate	0.56	UY	ng/L	P398626	
		Prodiamine**	0.19	UY	ng/L	P398626	
		Prometon	0.97	UY	ng/L	P398626	RPD
		Prometryn	0.21	UY	ng/L	P398626	
		Pronamide**	0.16	UY	ng/L	P398626	
		Propiconazole**	0.54	UY	ng/L	P398626	
		Pyriproxyfen**	0.13	UY	ng/L	P398626	
		Simazine	0.54	UY	ng/L	P398626	
		Sulfentrazone**	3.4	Y	ng/L	P398626	
		Tebuconazole**	0.54	UY	ng/L	P398626	
		Terbufos	0.11	UY	ng/L	P398626	
		Terbuthylazine	0.46	UY	ng/L	P398626	

Ref. Method and Comment:
EPA 8321B: Y - Sample was received with inadequate sample preservation; see NCR report.
EPA 8270E: MS accuracy for kepone not assessed due to high content of this parameter in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes. Y - Due to improper preservation; see NCR report.
EPA 8276: Y - Due to improper preservation; see NCR report. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for bromacil not assessed due to high content of this parameter in the sample spiked. Y - Due to improper preservation; see NCR report. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Gottfried Creek @ Deer Creek Mobile Home **Collection Date/Time: 05/18/2021 10:45**

Field ID: G2SD0028 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249022	EPA 8270E	Aldrin	0.66	UYJ	ng/L	P398689	LCS, RPD
		Alpha-BHC	0.10	UY	ng/L	P398689	
		Alpha-Chlordane	0.20	UY	ng/L	P398689	
		Beta-BHC	0.10	UY	ng/L	P398689	
		Beta-Cyfluthrin**	1.3	UY	ng/L	P398689	
		Bifenthrin**	0.51	UY	ng/L	P398689	
		Carbophenothion	0.36	UY	ng/L	P398689	
		Chlorothalonil	0.51	UYJ	ng/L	P398689	LCS, MS
		Cis-Nonachlor**	0.20	UY	ng/L	P398689	
		Cypermethrin	1.5	UY	ng/L	P398689	
		Dacthal**	0.15	UY	ng/L	P398689	
		DDD-p,p'	0.25	UY	ng/L	P398689	
		DDE-p,p'	0.20	UY	ng/L	P398689	
		DDT-p,p'	0.25	UY	ng/L	P398689	
		Delta-BHC	0.41	UY	ng/L	P398689	
		Deltamethrin**	1.3	UYJ	ng/L	P398689	LCS, MS, RPD
		Dichlobenil**	0.10	UY	ng/L	P398689	
		Dicofol	1.3	UY	ng/L	P398689	
		Dieldrin	0.41	UY	ng/L	P398689	
		Endosulfan I	0.41	UY	ng/L	P398689	
		Endosulfan II	0.41	UY	ng/L	P398689	
		Endosulfan Sulfate	0.30	UY	ng/L	P398689	
		Endrin	0.41	UY	ng/L	P398689	
		Endrin Aldehyde	0.76	UY	ng/L	P398689	
		Endrin Ketone	0.41	UY	ng/L	P398689	
		Esfenvalerate**	0.76	UY	ng/L	P398689	
		Ethalfluralin**	0.15	UY	ng/L	P398689	
		Fenpropathrin**	0.25	UY	ng/L	P398689	
		Gamma-BHC	0.13	UY	ng/L	P398689	
		Gamma-Chlordane	0.20	UY	ng/L	P398689	
		Heptachlor	0.20	UY	ng/L	P398689	
		Heptachlor Epoxide	0.25	UY	ng/L	P398689	
		Hexachlorobenzene	1.0	UY	ng/L	P398689	
		Kepone**	5.1	UY	ng/L	P398689	
		Lambda-Cyhalothrin**	0.76	UY	ng/L	P398689	
		Methoxychlor	0.30	UY	ng/L	P398689	
		MGK-264**	0.20	UY	ng/L	P398689	
		Mirex	0.30	UY	ng/L	P398689	
		Permethrin	1.6	UY	ng/L	P398689	
		Phenothrin**	0.91	UYJ	ng/L	P398689	LCS, RPD
		Piperonyl Butoxide**	0.15	UYJ	ng/L	P398689	LCS
		Prallethrin**	2.0	UY	ng/L	P398689	
		Tau-Fluvalinate**	0.25	UY	ng/L	P398689	

Field ID: G2SD0028 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249022	EPA 8270E	Tetramethrin**	0.76	UYJ	ng/L	P398689	RPD
		Trans-Nonachlor**	0.20	UY	ng/L	P398689	
		Triclosan Methyl**	0.15	UY	ng/L	P398689	
		Trifluralin	0.20	UY	ng/L	P398689	
2249025	EPA 200.7 Rev. 4.4	Calcium	464		mg/L	P398524	
		Chromium	10	U	ug/L	P398524	
		Iron	120	U	ug/L	P398524	
		Magnesium	1.34E+03		mg/L	P398524	
		Manganese	10	U	ug/L	P398524	
		Zinc	50	U	ug/L	P398524	
	EPA 200.8 Rev. 5.4	Aluminum	40	I	ug/L	P398524	
		Antimony	0.20	U	ug/L	P398524	
		Arsenic	2.17		ug/L	P398524	
		Beryllium	0.10	U	ug/L	P398524	
		Cadmium	0.080	U	ug/L	P398524	
		Copper	1.6	U	ug/L	P398524	
		Lead	0.80	U	ug/L	P398524	
		Nickel	2.0	U	ug/L	P398524	
		Selenium	0.80	U	ug/L	P398524	
		Silver	0.040	U	ug/L	P398524	
		Thallium	0.40	U	ug/L	P398524	
	SM 2340B	Hardness	6.68E+03		mg/L	P398524	

Ref. Method and Comment:
EPA 8270E: Y - Due to improper preservation; see NCR report. MS accuracy for kepone not assessed due to high content of this parameter in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.
SM 2340B: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 8844

Event(s)	Job(s)	Sample(s)	Test(s)
SO-DIST-2021-05-20-01			

NCR Type: SHIPPING/RECEIVING **NCR Category: Samples arrived late**

Observation: Samples arrived one or more days late by FedEx, samples received outside the acceptable temperature.

Resolution: Samples will be qualified as appropriate.
Customer contacted.

Authorized by/Date: Kerry Tate, Ph.D. 5/21/2021

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P398524

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Chromium	1.0	U	ug/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398524

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 8270E
Batch ID: P398626

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P398626

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P398626

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P398689

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.35	U	ng/L
Chlorothalonil	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfluralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.30	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P398689

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8276
Batch ID: P398689

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

Reference Method: EPA 8321B
Batch ID: P398391

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: P398627

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

Reference Method: EPA 8321B
Batch ID: P398662

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P398662

Component	Result	Code	Units
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P398524

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Chromium	95.0		P	85 - 115
Iron	105		P	85 - 115
Magnesium	103		P	85 - 115
Manganese	101		P	85 - 115
Zinc	99.6		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398524

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.7		P	85 - 115
Antimony	99.6		P	85 - 115
Arsenic	98.7		P	85 - 115
Beryllium	89.7		P	85 - 115
Cadmium	101		P	85 - 115
Copper	97.6		P	85 - 115
Lead	91.6		P	85 - 115
Nickel	97.7		P	85 - 115
Selenium	101		P	85 - 115
Silver	101		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 8270E
Batch ID: P398626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	97.4	99.8	P/P	70 - 121
Alachlor	102	104	P/P	70 - 119
Ametryn	99.7	114	P/P	61 - 135
Atrazine	101	108	P/P	76 - 123
Atrazine Desethyl	100	110	P/P	35 - 140
Azinphos Methyl	128	137	P/P	57 - 163
Azoxystrobin	181	208	P/P	43 - 231
Bromacil	98.2	105	P/P	42 - 123
Butylate	46.3	67.1	P/P	34 - 92.0
Carbophenothion	80.6	88.2	P/P	61 - 121
Carfentrazone Ethyl	115	119	P/P	62 - 139
Chlorpyrifos Ethyl	82.1	89.1	P/P	67 - 121
Chlorpyrifos Methyl	87.8	93.2	P/P	67 - 120
Cyanazine	202	210	P/P	20 - 226
Demeton	88.7	91.5	P/P	35 - 125
Diazinon	108	115	P/P	70 - 122
Difenoconazole	130	126	P/P	56 - 186
Dimethenamid	97.2	99.7	P/P	67 - 119
Disulfoton	69.7	75.2	P/P	47 - 120
Dithiopyr	90.9	91.3	P/P	67 - 118
EPTC	42.6	65.6	P/P	33 - 90.0
Ethion	82.6	59.7	P/P	40 - 133
Ethoprop	90.7	92.1	P/P	61 - 121
Fenamiphos	97.9	106	P/P	31 - 139
Fenbuconazole	103	112	P/P	66 - 141

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P398626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil	112	119	P/P	62 - 129
Fipronil Desulfinyl	98.3	103	P/P	59 - 126
Fipronil Sulfide	82.2	91.7	P/P	63 - 117
Fipronil Sulfone	90.2	94.0	P/P	57 - 117
Fluazifop-P-butyl	94.6	106	P/P	63 - 124
Fludioxonil	103	107	P/P	63 - 123
Flumioxazin	202	227	P/P	34 - 245
Flutolanil	103	110	P/P	56 - 131
Fluxapyroxad	84.3	86.3	P/P	57 - 117
Fonofos	70.0	79.5	P/P	61 - 116
Hexazinone	96.5	97.2	P/P	55 - 138
Imazalil	120	128	P/P	33 - 143
Iprodione	98.7	106	P/P	59 - 118
Malathion	104	112	P/P	62 - 138
Metalaxyl	93.5	98.3	P/P	24 - 147
Metolachlor	103	107	P/P	68 - 118
Metribuzin	99.0	107	P/P	20 - 239
Mevinphos	83.6	89.3	P/P	46 - 124
Molinate	57.9	70.3	P/P	46 - 100
Myclobutanil	104	112	P/P	32 - 149
Naled	33.5	48.8	P/P	32 - 95.0
Norflurazon	103	110	P/P	57 - 127
Oxadiazon	100	106	P/P	63 - 118
Oxyfluorfen	115	116	P/P	69 - 137
Parathion Ethyl	94.8	103	P/P	70 - 113
Parathion Methyl	103	115	P/P	71 - 130
Pendimethalin	100	98.3	P/P	55 - 118
Phorate	87.6	118	P/P	46 - 125
Prodiamine	68.1	68.3	P/P	20 - 141
Prometon	105	107	P/P	54 - 122
Prometryn	107	110	P/P	66 - 124
Pronamide	113	118	P/P	79 - 122
Propiconazole	92.2	97.6	P/P	61 - 126
Pyriproxyfen	93.1	98.4	P/P	52 - 131
Simazine	93.2	108	P/P	75 - 128
Sulfentrazone	94.8	100	P/P	20 - 132
Tebuconazole	50.0	38.0	P/P	20 - 116
Terbufos	86.9	84.3	P/P	61 - 117
Terbuthylazine	104	105	P/P	74 - 116

Reference Method: EPA 8270E
Batch ID: P398689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	19.3	25.3	F/P	20 - 150
Alpha-BHC	101	88.0	P/P	50 - 150
Alpha-Chlordane	72.6	69.6	P/P	50 - 150
Beta-BHC	119	108	P/P	50 - 150
Beta-Cyfluthrin	98.4	93.4	P/P	50 - 150
Bifenthrin	69.5	62.5	P/P	40 - 150
Carbophenothion	59.1	51.5	P/P	20 - 150
Chlorothalonil	147	150	P/F	20 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P398689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cis-Nonachlor	92.0	83.2	P/P	50 - 150
Cypermethrin	119	109	P/P	50 - 150
Dacthal	94.9	82.4	P/P	50 - 150
DDD-p,p'	95.9	83.0	P/P	50 - 150
DDE-p,p'	72.7	67.8	P/P	50 - 150
DDT-p,p'	81.0	78.7	P/P	50 - 150
Delta-BHC	122	113	P/P	50 - 150
Deltamethrin	133	186	P/F	50 - 150
Dichlobenil	63.6	60.8	P/P	40 - 150
Dicofol	76.8	72.7	P/P	50 - 150
Dieldrin	82.2	74.0	P/P	50 - 150
Endosulfan I	81.4	76.3	P/P	50 - 150
Endosulfan II	106	91.4	P/P	50 - 150
Endosulfan Sulfate	108	86.4	P/P	50 - 150
Endrin	97.1	86.1	P/P	50 - 150
Endrin Aldehyde	113	99.9	P/P	50 - 150
Endrin Ketone	134	114	P/P	50 - 150
Esfenvalerate	127	154	P/P	50 - 180
Ethalfluralin	78.9	70.8	P/P	50 - 150
Fenpropathrin	91.3	86.4	P/P	50 - 150
Gamma-BHC	102	90.7	P/P	50 - 150
Gamma-Chlordane	75.1	70.5	P/P	50 - 150
Heptachlor	76.9	71.6	P/P	50 - 150
Heptachlor Epoxide	88.2	77.8	P/P	50 - 150
Hexachlorobenzene	61.1	58.6	P/P	50 - 150
Kepone	134	114	P/P	30 - 180
Lambda-Cyhalothrin	124	98.5	P/P	50 - 200
Methoxychlor	86.1	80.0	P/P	50 - 150
MGK-264	37.4	41.5	P/P	30 - 150
Mirex	125	121	P/P	50 - 180
Permethrin	95.3	94.8	P/P	50 - 150
Phenothrin	18.3	29.0	F/P	20 - 150
Piperonyl Butoxide	52.8	48.3	P/F	50 - 150
Prallethrin	38.0	50.5	P/P	30 - 150
Tau-Fluvalinate	68.4	64.6	P/P	40 - 150
Tetramethrin	31.6	48.5	P/P	30 - 150
Trans-Nonachlor	73.8	72.5	P/P	50 - 150
Triclosan Methyl	84.6	75.2	P/P	50 - 150
Trifluralin	81.9	77.2	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P398689

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	88.1	87.5	P/P	56 - 117
Toxaphene	88.3	80.0	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P398391

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	98.2		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P398391

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldicarb	97.7		P	30 - 150
Aldicarb Sulfone	89.5		P	40 - 150
Aldicarb Sulfoxide	105		P	40 - 150
Carbaryl	77.2		P	40 - 150
Carbofuran	95.6		P	40 - 150
Methiocarb	62.4		P	40 - 150
Methomyl	96.9		P	40 - 150
Oxamyl	80.8		P	40 - 150
Propoxur	95.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P398627

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	69.2		P	40 - 150
AMPA	102		P	40 - 150
Endothall	109		P	40 - 150
Glufosinate	97.6		P	40 - 150
Glyphosate	99.7		P	40 - 140
Sucralose	123		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P398662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	108		P	40 - 150
2,4,5-T	125		P	40 - 150
Acetaminophen	95.5		P	30 - 150
Acetamiprid	89.1		P	40 - 150
Afidopyropen	65.4		P	40 - 150
Bentazon	109		P	30 - 150
Benzovindiflupyr	95.4		P	40 - 150
Carbamazepine	88.9		P	40 - 150
Clothianidin	99.7		P	40 - 150
Dinotefuran	96.5		P	40 - 150
Diuron	81.6		P	40 - 150
Fenuron	124		P	40 - 150
Fluridone	94.5		P	40 - 150
Hydrocodone	87.3		P	40 - 150
Ibuprofen	74.8		P	40 - 150
Imazapyr	102		P	40 - 150
Imidacloprid	95.0		P	40 - 150
Linuron	80.3		P	40 - 150
Mandestrobin	92.6		P	40 - 150
MCPP	142		P	40 - 150
Naproxen	75.9		P	40 - 150
Primidone	107		P	40 - 150
Pyraclostrobin	85.8		P	40 - 150
Thiamethoxam	91.5		P	40 - 150
Tolfenpyrad	43.5		P	40 - 150
Triclopyr	126		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P398524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248620	Chromium	94.3	93.7	P/P	70 - 130
2248620	Iron	107	105	P/P	70 - 130
2248620	Manganese	103	101	P/P	70 - 130
2248620	Zinc	113	112	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248620	Aluminum	83.7	102	P/P	70 - 130
2248620	Antimony	82.3	100	P/P	70 - 130
2248620	Arsenic	86.8	106	P/P	70 - 130
2248620	Beryllium	93.3	104	P/P	80 - 120
2248620	Cadmium	79.7	96.8	P/P	70 - 130
2248620	Copper	89.4	108	P/P	70 - 130
2248620	Lead	79.4	95.9	P/P	70 - 130
2248620	Nickel	87.7	109	P/P	70 - 130
2248620	Selenium	81.7	98.3	P/P	70 - 130
2248620	Silver	87.4	90.0	P/P	70 - 130
2248620	Thallium	89.5	109	P/P	70 - 130

Reference Method: EPA 8270E
Batch ID: P398626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248453	Acetochlor	84.1	98.2	P/P	66 - 122
2248453	Alachlor	90.9	107	P/P	65 - 122
2248453	Ametryn	91.8	122	P/P	45 - 173
2248453	Atrazine	88.2	101	P/P	70 - 134
2248453	Atrazine Desethyl	89.5	102	P/P	25 - 150
2248453	Azinphos Methyl	124	119	P/P	44 - 174
2248453	Azoxystrobin	175	198	P/P	10 - 268
2248453	Butylate	40.2	49.3	P/P	15 - 97.0
2248453	Carbophenothion	79.9	97.4	P/P	42 - 129
2248453	Carfentrazone Ethyl	99.2	128	P/P	62 - 145
2248453	Chlorpyrifos Ethyl	77.3	96.9	P/P	60 - 124
2248453	Chlorpyrifos Methyl	80.0	90.8	P/P	66 - 119
2248453	Cyanazine	151	181	P/P	17 - 225
2248453	Demeton	85.1	90.0	P/P	36 - 142
2248453	Diazinon	95.9	118	P/P	70 - 128
2248453	Difenoconazole	184	206	P/P	33 - 222
2248453	Dimethenamid	85.2	97.7	P/P	54 - 125
2248453	Disulfoton	75.6	73.2	P/P	49 - 133
2248453	Dithiopyr	91.4	98.1	P/P	55 - 123
2248453	EPTC	39.5	46.3	P/P	19 - 91.0
2248453	Ethion	63.2	87.9	P/P	13 - 143
2248453	Ethoprop	82.4	87.6	P/P	49 - 144
2248453	Fenamiphos	86.0	96.4	P/P	32 - 136
2248453	Fenbuconazole	128	139	P/P	73 - 148
2248453	Fipronil	97.5	126	P/P	57 - 129
2248453	Fipronil Desulfinyl	88.3	113	P/P	49 - 127
2248453	Fipronil Sulfide	99.3	113	P/P	44 - 127

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P398626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248453	Fipronil Sulfone	74.1	116	P/P	35 - 126
2248453	Fluazifop-P-butyl	92.4	104	P/P	67 - 129
2248453	Fludioxonil	86.0	112	P/P	61 - 126
2248453	Flumioxazin	202	246	P/P	38 - 279
2248453	Flutolanil	88.0	113	P/P	55 - 136
2248453	Fluxapyroxad	76.6	101	P/P	33 - 140
2248453	Fonofos	74.8	76.7	P/P	58 - 125
2248453	Hexazinone	86.4	105	P/P	57 - 148
2248453	Imazalil	92.3	103	P/P	10 - 221
2248453	Iprodione	83.7	106	P/P	32 - 140
2248453	Malathion	93.1	115	P/P	52 - 138
2248453	Metalaxyl	81.2	98.0	P/P	46 - 134
2248453	Metolachlor	88.8	106	P/P	58 - 122
2248453	Metribuzin	90.5	113	P/P	16 - 272
2248453	Mevinphos	74.1	80.0	P/P	45 - 140
2248453	Molinate	54.7	60.3	P/P	41 - 103
2248453	Myclobutanil	96.1	102	P/P	60 - 134
2248453	Naled	32.9	31.6	P/P	20 - 113
2248453	Norflurazon	89.2	112	P/P	51 - 123
2248453	Oxadiazon	83.3	94.2	P/P	44 - 125
2248453	Oxyfluorfen	109	137	P/P	66 - 176
2248453	Parathion Ethyl	87.0	99.2	P/P	57 - 132
2248453	Parathion Methyl	92.3	102	P/P	59 - 156
2248453	Pendimethalin	95.1	100	P/P	59 - 129
2248453	Phorate	86.1	97.3	P/P	47 - 136
2248453	Prodiamine	95.0	78.5	P/P	10 - 159
2248453	Prometon	89.8	122	P/P	59 - 127
2248453	Prometryn	94.9	110	P/P	59 - 129
2248453	Pronamide	97.4	121	P/P	65 - 145
2248453	Propiconazole	90.3	98.4	P/P	28 - 165
2248453	Pyriproxyfen	79.9	92.0	P/P	21 - 180
2248453	Simazine	91.5	112	P/P	63 - 147
2248453	Sulfentrazone	90.3	120	P/P	32 - 136
2248453	Tebuconazole	42.1	46.2	P/P	-8.3 - 117
2248453	Terbufos	79.5	87.9	P/P	61 - 131
2248453	Terbuthylazine	89.5	110	P/P	62 - 126

Reference Method: EPA 8270E
Batch ID: P398689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249386	Aldrin	56.7	37.9	P/P	20 - 170
2249386	Alpha-BHC	97.5	99.1	P/P	50 - 170
2249386	Alpha-Chlordane	83.4	81.8	P/P	50 - 170
2249386	Beta-BHC	131	154	P/P	50 - 170
2249386	Beta-Cyfluthrin	114	118	P/P	50 - 170
2249386	Bifenthrin	70.4	62.8	P/P	40 - 170
2249386	Carbophenothion	72.3	72.5	P/P	20 - 170
2249386	Chlorothalonil	172	224	F/F	20 - 170
2249386	Cis-Nonachlor	82.9	86.9	P/P	50 - 170
2249386	Cypermethrin	119	121	P/P	50 - 170
2249386	Dacthal	93.7	96.8	P/P	50 - 170

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P398689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249386	DDD-p,p'	81.6	86.3	P/P	50 - 170
2249386	DDE-p,p'	75.3	72.2	P/P	50 - 170
2249386	DDT-p,p'	79.9	78.0	P/P	50 - 170
2249386	Delta-BHC	133	159	P/P	50 - 170
2249386	Deltamethrin	190	150	F/P	50 - 170
2249386	Dichlobenil	52.2	51.9	P/P	40 - 170
2249386	Dicofol	75.7	74.1	P/P	50 - 170
2249386	Dieldrin	84.8	85.4	P/P	50 - 170
2249386	Endosulfan I	81.6	81.6	P/P	50 - 170
2249386	Endosulfan II	87.4	96.1	P/P	50 - 170
2249386	Endosulfan Sulfate	118	135	P/P	50 - 170
2249386	Endrin	83.5	77.1	P/P	50 - 170
2249386	Endrin Aldehyde	78.9	64.1	P/P	50 - 170
2249386	Endrin Ketone	128	142	P/P	50 - 170
2249386	Esfenvalerate	176	168	P/P	50 - 180
2249386	Ethalfluralin	69.8	77.6	P/P	50 - 170
2249386	Fenpropathrin	92.9	89.1	P/P	50 - 170
2249386	Gamma-BHC	102	115	P/P	50 - 170
2249386	Gamma-Chlordane	80.8	77.7	P/P	50 - 170
2249386	Heptachlor	69.4	60.7	P/P	50 - 170
2249386	Heptachlor Epoxide	91.8	91.3	P/P	50 - 170
2249386	Hexachlorobenzene	66.5	55.9	P/P	50 - 170
2249386	Lambda-Cyhalothrin	146	171	P/P	50 - 200
2249386	Methoxychlor	97.0	90.5	P/P	50 - 170
2249386	MGK-264	81.7	76.7	P/P	30 - 170
2249386	Mirex	132	125	P/P	50 - 180
2249386	Permethrin	107	101	P/P	50 - 170
2249386	Phenothrin	68.9	41.1	P/P	20 - 170
2249386	Piperonyl Butoxide	51.7	53.4	P/P	50 - 170
2249386	Prallethrin	88.6	84.9	P/P	30 - 170
2249386	Tau-Fluvalinate	76.4	67.0	P/P	40 - 170
2249386	Tetramethrin	81.5	65.3	P/P	30 - 170
2249386	Trans-Nonachlor	79.7	80.0	P/P	50 - 170
2249386	Triclosan Methyl	82.7	84.1	P/P	50 - 170
2249386	Trifluralin	80.9	81.0	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P398689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249392	Chlordane	100	108	P/P	47 - 128
2249392	Toxaphene	94.9	102	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P398391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248251	3-Hydroxycarbofuran	88.3	111	P/P	40 - 150
2248251	Aldicarb	81.8	103	P/P	30 - 150
2248251	Aldicarb Sulfone	92.7	108	P/P	40 - 150
2248251	Aldicarb Sulfoxide	48.8	62.7	P/P	40 - 150
2248251	Carbaryl	62.1	68.4	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P398391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248251	Carbofuran	74.8	84.8	P/P	40 - 150
2248251	Methiocarb	59.2	64.7	P/P	40 - 150
2248251	Methomyl	84.5	98.7	P/P	40 - 150
2248251	Oxamyl	79.2	94.0	P/P	40 - 150
2248251	Propoxur	76.8	87.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P398627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248597	Acesulfame K	82.6	89.6	P/P	40 - 150
2248597	AMPA	124	131	P/P	40 - 150
2248597	Endothall	88.4	96.4	P/P	40 - 150
2248597	Glufosinate	99.1	106	P/P	40 - 150
2248597	Glyphosate	90.4	96.5	P/P	40 - 140
2248597	Sucralose	126	132	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P398662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248252	2,4-D	139	129	P/P	40 - 150
2248252	2,4,5-T	131	132	P/P	40 - 150
2248252	Acetaminophen	144	96.5	P/P	30 - 150
2248252	Acetamiprid	108	113	P/P	40 - 150
2248252	Afidopyropen	78.7	73.4	P/P	40 - 150
2248252	Bentazon	95.8	90.3	P/P	30 - 150
2248252	Benzovindiflupyr	97.8	94.0	P/P	40 - 150
2248252	Carbamazepine	91.5	84.3	P/P	40 - 150
2248252	Clothianidin	104	98.9	P/P	40 - 150
2248252	Dinotefuran	123	117	P/P	40 - 150
2248252	Diuron	63.7	67.7	P/P	40 - 150
2248252	Fenuron	116	117	P/P	40 - 150
2248252	Fluridone	99.4	90.0	P/P	40 - 150
2248252	Hydrocodone	97.9	95.4	P/P	40 - 150
2248252	Ibuprofen	76.4	60.4	P/P	40 - 150
2248252	Imazapyr	122	116	P/P	40 - 150
2248252	Imidacloprid	146	142	P/P	40 - 150
2248252	Linuron	70.6	68.5	P/P	40 - 150
2248252	Mandestrobin	89.4	87.8	P/P	40 - 150
2248252	MCPP	144	146	P/P	40 - 150
2248252	Naproxen	75.3	86.7	P/P	40 - 150
2248252	Primidone	101	108	P/P	40 - 150
2248252	Pyraclostrobin	83.7	70.4	P/P	40 - 150
2248252	Thiamethoxam	117	112	P/P	40 - 150
2248252	Tolfenpyrad	49.1	51.7	P/P	40 - 150
2248252	Triclopyr	120	140	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P398524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248620	Calcium	2.31	Spike	P	0 - 20
2248620	Chromium	0.727	Spike	P	0 - 20
2248620	Iron	1.53	Spike	P	0 - 20
2248620	Magnesium	2.41	Spike	P	0 - 20
2248620	Manganese	1.66	Spike	P	0 - 20
2248620	Zinc	1.06	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248620	Aluminum	19.5	Spike	P	0 - 20
2248620	Antimony	19.5	Spike	P	0 - 20
2248620	Arsenic	16.5	Spike	P	0 - 20
2248620	Beryllium	11.0	Spike	P	0 - 20
2248620	Cadmium	19.3	Spike	P	0 - 20
2248620	Copper	19.2	Spike	P	0 - 20
2248620	Lead	18.8	Spike	P	0 - 20
2248620	Nickel	13.4	Spike	P	0 - 20
2248620	Selenium	18.1	Spike	P	0 - 20
2248620	Silver	2.88	Spike	P	0 - 20
2248620	Thallium	19.6	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P398626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248453	Acetochlor	15.5	Spike	P	0 - 30
2248453	Alachlor	16.1	Spike	P	0 - 30
2248453	Ametryn	24.5	Spike	P	0 - 30
2248453	Atrazine	6.83	Spike	P	0 - 30
2248453	Atrazine Desethyl	13.3	Spike	P	0 - 30
2248453	Azinphos Methyl	3.96	Spike	P	0 - 30
2248453	Azoxystrobin	12.2	Spike	P	0 - 30
2248453	Bromacil	5.80	Spike	P	0 - 30
2248453	Butylate	20.4	Spike	P	0 - 30
2248453	Carbophenothion	19.7	Spike	P	0 - 30
2248453	Carfentrazone Ethyl	25.5	Spike	P	0 - 30
2248453	Chlorpyrifos Ethyl	22.5	Spike	P	0 - 30
2248453	Chlorpyrifos Methyl	12.6	Spike	P	0 - 30
2248453	Cyanazine	17.8	Spike	P	0 - 30
2248453	Demeton	5.67	Spike	P	0 - 30
2248453	Diazinon	20.5	Spike	P	0 - 30
2248453	Difenoconazole	11.3	Spike	P	0 - 30
2248453	Dimethenamid	13.7	Spike	P	0 - 30
2248453	Disulfoton	3.17	Spike	P	0 - 30
2248453	Dithiopyr	6.04	Spike	P	0 - 30
2248453	EPTC	15.7	Spike	P	0 - 30
2248453	Ethion	32.6	Spike	F	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248453	Ethoprop	6.04	Spike	P	0 - 30
2248453	Fenamiphos	11.3	Spike	P	0 - 30
2248453	Fenbuconazole	8.23	Spike	P	0 - 30
2248453	Fipronil	23.5	Spike	P	0 - 30
2248453	Fipronil Desulfinyl	24.0	Spike	P	0 - 30
2248453	Fipronil Sulfide	10.4	Spike	P	0 - 30
2248453	Fipronil Sulfone	25.7	Spike	P	0 - 30
2248453	Fluazifop-P-butyl	11.6	Spike	P	0 - 30
2248453	Fludioxonil	26.2	Spike	P	0 - 30
2248453	Flumioxazin	19.7	Spike	P	0 - 30
2248453	Flutolanil	24.9	Spike	P	0 - 30
2248453	Fluxapyroxad	27.7	Spike	P	0 - 30
2248453	Fonofos	2.50	Spike	P	0 - 30
2248453	Hexazinone	19.0	Spike	P	0 - 30
2248453	Imazalil	11.4	Spike	P	0 - 30
2248453	Iprodione	23.7	Spike	P	0 - 30
2248453	Malathion	21.0	Spike	P	0 - 30
2248453	Metalaxyl	18.7	Spike	P	0 - 30
2248453	Metolachlor	17.9	Spike	P	0 - 30
2248453	Metribuzin	22.0	Spike	P	0 - 30
2248453	Mevinphos	7.66	Spike	P	0 - 30
2248453	Molinate	9.72	Spike	P	0 - 30
2248453	Myclobutanil	5.79	Spike	P	0 - 30
2248453	Naled	3.93	Spike	P	0 - 30
2248453	Norflurazon	22.6	Spike	P	0 - 30
2248453	Oxadiazon	11.1	Spike	P	0 - 30
2248453	Oxyfluorfen	23.2	Spike	P	0 - 30
2248453	Parathion Ethyl	13.1	Spike	P	0 - 30
2248453	Parathion Methyl	10.2	Spike	P	0 - 30
2248453	Pendimethalin	5.09	Spike	P	0 - 30
2248453	Phorate	12.2	Spike	P	0 - 30
2248453	Prodiamine	16.4	Spike	P	0 - 30
2248453	Prometon	30.4	Spike	F	0 - 30
2248453	Prometryn	15.0	Spike	P	0 - 30
2248453	Pronamide	21.8	Spike	P	0 - 30
2248453	Propiconazole	5.20	Spike	P	0 - 30
2248453	Pyriproxyfen	14.1	Spike	P	0 - 30
2248453	Simazine	20.0	Spike	P	0 - 30
2248453	Sulfentrazone	19.2	Spike	P	0 - 30
2248453	Tebuconazole	9.35	Spike	P	0 - 30
2248453	Terbufos	10.0	Spike	P	0 - 30
2248453	Terbuthylazine	20.7	Spike	P	0 - 30
LFB	Acetochlor	2.42	LCS	P	0 - 30
LFB	Alachlor	2.63	LCS	P	0 - 30
LFB	Ametryn	13.3	LCS	P	0 - 30
LFB	Atrazine	7.03	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.14	LCS	P	0 - 30
LFB	Azinphos Methyl	6.60	LCS	P	0 - 30
LFB	Azoxystrobin	14.0	LCS	P	0 - 30
LFB	Bromacil	6.51	LCS	P	0 - 30
LFB	Butylate	36.6	LCS	F	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	9.02	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	3.27	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	8.20	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.94	LCS	P	0 - 30
LFB	Cyanazine	3.86	LCS	P	0 - 30
LFB	Demeton	3.14	LCS	P	0 - 30
LFB	Diazinon	6.62	LCS	P	0 - 30
LFB	Difenoconazole	3.04	LCS	P	0 - 30
LFB	Dimethenamid	2.56	LCS	P	0 - 30
LFB	Disulfoton	7.53	LCS	P	0 - 30
LFB	Dithiopyr	0.497	LCS	P	0 - 30
LFB	EPTC	42.4	LCS	F	0 - 30
LFB	Ethion	32.2	LCS	F	0 - 30
LFB	Ethoprop	1.57	LCS	P	0 - 30
LFB	Fenamiphos	8.37	LCS	P	0 - 30
LFB	Fenbuconazole	7.60	LCS	P	0 - 30
LFB	Fipronil	5.43	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	4.76	LCS	P	0 - 30
LFB	Fipronil Sulfide	10.9	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.12	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	11.8	LCS	P	0 - 30
LFB	Fludioxonil	3.79	LCS	P	0 - 30
LFB	Flumioxazin	11.8	LCS	P	0 - 30
LFB	Flutolanil	6.07	LCS	P	0 - 30
LFB	Fluxapyroxad	2.28	LCS	P	0 - 30
LFB	Fonofos	12.7	LCS	P	0 - 30
LFB	Hexazinone	0.760	LCS	P	0 - 30
LFB	Imazalil	6.75	LCS	P	0 - 30
LFB	Iprodione	7.51	LCS	P	0 - 30
LFB	Malathion	7.22	LCS	P	0 - 30
LFB	Metalaxyl	5.02	LCS	P	0 - 30
LFB	Metolachlor	3.87	LCS	P	0 - 30
LFB	Metribuzin	7.67	LCS	P	0 - 30
LFB	Mevinphos	6.55	LCS	P	0 - 30
LFB	Molinate	19.4	LCS	P	0 - 30
LFB	Myclobutanil	6.99	LCS	P	0 - 30
LFB	Naled	37.2	LCS	F	0 - 30
LFB	Norflurazon	6.63	LCS	P	0 - 30
LFB	Oxadiazon	5.77	LCS	P	0 - 30
LFB	Oxyfluorfen	1.36	LCS	P	0 - 30
LFB	Parathion Ethyl	7.98	LCS	P	0 - 30
LFB	Parathion Methyl	11.4	LCS	P	0 - 30
LFB	Pendimethalin	1.98	LCS	P	0 - 30
LFB	Phorate	29.3	LCS	P	0 - 30
LFB	Prodiamine	0.247	LCS	P	0 - 30
LFB	Prometon	2.32	LCS	P	0 - 30
LFB	Prometryn	3.20	LCS	P	0 - 30
LFB	Pronamide	4.43	LCS	P	0 - 30
LFB	Propiconazole	5.75	LCS	P	0 - 30
LFB	Pyriproxyfen	5.58	LCS	P	0 - 30
LFB	Simazine	14.3	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Sulfentrazone	5.48	LCS	P	0 - 30
LFB	Tebuconazole	27.3	LCS	P	0 - 30
LFB	Terbufos	3.00	LCS	P	0 - 30
LFB	Terbuthylazine	0.858	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P398689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249386	Aldrin	39.7	Spike	F	0 - 30
2249386	Alpha-BHC	1.65	Spike	P	0 - 30
2249386	Alpha-Chlordane	1.88	Spike	P	0 - 30
2249386	Beta-BHC	16.1	Spike	P	0 - 30
2249386	Beta-Cyfluthrin	3.84	Spike	P	0 - 30
2249386	Bifenthrin	11.4	Spike	P	0 - 30
2249386	Carbophenothion	0.306	Spike	P	0 - 30
2249386	Chlorothalonil	26.7	Spike	P	0 - 50
2249386	Cis-Nonachlor	4.80	Spike	P	0 - 30
2249386	Cypermethrin	1.52	Spike	P	0 - 30
2249386	Dacthal	3.29	Spike	P	0 - 30
2249386	DDD-p,p'	5.60	Spike	P	0 - 30
2249386	DDE-p,p'	4.22	Spike	P	0 - 30
2249386	DDT-p,p'	2.42	Spike	P	0 - 30
2249386	Delta-BHC	17.5	Spike	P	0 - 30
2249386	Deltamethrin	24.0	Spike	P	0 - 30
2249386	Dichlobenil	0.586	Spike	P	0 - 30
2249386	Dicofol	2.15	Spike	P	0 - 30
2249386	Dieldrin	0.644	Spike	P	0 - 30
2249386	Endosulfan I	0.0204	Spike	P	0 - 30
2249386	Endosulfan II	9.49	Spike	P	0 - 30
2249386	Endosulfan Sulfate	13.4	Spike	P	0 - 30
2249386	Endrin	7.96	Spike	P	0 - 30
2249386	Endrin Aldehyde	20.7	Spike	P	0 - 30
2249386	Endrin Ketone	10.7	Spike	P	0 - 30
2249386	Esfenvalerate	4.29	Spike	P	0 - 30
2249386	Ethalfluralin	10.7	Spike	P	0 - 30
2249386	Fenpropathrin	4.27	Spike	P	0 - 30
2249386	Gamma-BHC	11.5	Spike	P	0 - 30
2249386	Gamma-Chlordane	3.97	Spike	P	0 - 30
2249386	Heptachlor	13.3	Spike	P	0 - 30
2249386	Heptachlor Epoxide	0.481	Spike	P	0 - 30
2249386	Hexachlorobenzene	17.3	Spike	P	0 - 30
2249386	Kepone	12.5	Spike	P	0 - 30
2249386	Lambda-Cyhalothrin	15.3	Spike	P	0 - 30
2249386	Methoxychlor	6.92	Spike	P	0 - 30
2249386	MGK-264	6.41	Spike	P	0 - 30
2249386	Mirex	6.08	Spike	P	0 - 30
2249386	Permethrin	6.36	Spike	P	0 - 30
2249386	Phenothrin	50.6	Spike	F	0 - 30
2249386	Piperonyl Butoxide	3.35	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249386	Prallethrin	4.26	Spike	P	0 - 30
2249386	Tau-Fluvalinate	13.1	Spike	P	0 - 30
2249386	Tetramethrin	22.1	Spike	P	0 - 30
2249386	Trans-Nonachlor	0.342	Spike	P	0 - 30
2249386	Triclosan Methyl	1.65	Spike	P	0 - 30
2249386	Trifluralin	0.124	Spike	P	0 - 30
LFB	Aldrin	26.9	LCS	P	0 - 30
LFB	Alpha-BHC	13.4	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.28	LCS	P	0 - 30
LFB	Beta-BHC	9.82	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	5.22	LCS	P	0 - 30
LFB	Bifenthrin	10.6	LCS	P	0 - 30
LFB	Carbophenothion	13.7	LCS	P	0 - 30
LFB	Chlorothalonil	2.61	LCS	P	0 - 50
LFB	Cis-Nonachlor	10.1	LCS	P	0 - 30
LFB	Cypermethrin	8.97	LCS	P	0 - 30
LFB	Dacthal	14.0	LCS	P	0 - 30
LFB	DDD-p,p'	14.4	LCS	P	0 - 30
LFB	DDE-p,p'	7.01	LCS	P	0 - 30
LFB	DDT-p,p'	2.86	LCS	P	0 - 30
LFB	Delta-BHC	7.04	LCS	P	0 - 30
LFB	Deltamethrin	33.1	LCS	F	0 - 30
LFB	Dichlobenil	4.45	LCS	P	0 - 30
LFB	Dicofol	5.40	LCS	P	0 - 30
LFB	Dieldrin	10.4	LCS	P	0 - 30
LFB	Endosulfan I	6.43	LCS	P	0 - 30
LFB	Endosulfan II	14.9	LCS	P	0 - 30
LFB	Endosulfan Sulfate	22.3	LCS	P	0 - 30
LFB	Endrin	12.1	LCS	P	0 - 30
LFB	Endrin Aldehyde	12.7	LCS	P	0 - 30
LFB	Endrin Ketone	15.8	LCS	P	0 - 30
LFB	Esfenvalerate	18.9	LCS	P	0 - 30
LFB	Ethalfluralin	10.9	LCS	P	0 - 30
LFB	Fenpropathrin	5.49	LCS	P	0 - 30
LFB	Gamma-BHC	12.0	LCS	P	0 - 30
LFB	Gamma-Chlordane	6.44	LCS	P	0 - 30
LFB	Heptachlor	7.11	LCS	P	0 - 30
LFB	Heptachlor Epoxide	12.6	LCS	P	0 - 30
LFB	Hexachlorobenzene	4.19	LCS	P	0 - 30
LFB	Kepone	16.7	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	22.6	LCS	P	0 - 30
LFB	Methoxychlor	7.35	LCS	P	0 - 30
LFB	MGK-264	10.2	LCS	P	0 - 30
LFB	Mirex	3.03	LCS	P	0 - 30
LFB	Permethrin	0.502	LCS	P	0 - 30
LFB	Phenothrin	45.5	LCS	F	0 - 30
LFB	Piperonyl Butoxide	8.97	LCS	P	0 - 30
LFB	Prallethrin	28.4	LCS	P	0 - 30
LFB	Tau-Fluvalinate	5.81	LCS	P	0 - 30
LFB	Tetramethrin	42.3	LCS	F	0 - 30
LFB	Trans-Nonachlor	1.77	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Triclosan Methyl	11.8	LCS	P	0 - 30
LFB	Trifluralin	5.95	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P398689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249392	Chlordane	7.57	Spike	P	0 - 30
2249392	Toxaphene	7.05	Spike	P	0 - 30
LFB	Chlordane	0.636	LCS	P	0 - 30
LFB	Toxaphene	9.85	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P398391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248251	3-Hydroxycarbofuran	22.4	Spike	P	0 - 30
2248251	Aldicarb	23.0	Spike	P	0 - 30
2248251	Aldicarb Sulfone	14.8	Spike	P	0 - 30
2248251	Aldicarb Sulfoxide	24.9	Spike	P	0 - 30
2248251	Carbaryl	9.70	Spike	P	0 - 30
2248251	Carbofuran	12.5	Spike	P	0 - 30
2248251	Methiocarb	8.99	Spike	P	0 - 30
2248251	Methomyl	15.6	Spike	P	0 - 30
2248251	Oxamyl	17.0	Spike	P	0 - 30
2248251	Propoxur	13.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P398627

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248597	Acesulfame K	8.17	Spike	P	0 - 30
2248597	AMPA	5.33	Spike	P	0 - 30
2248597	Endothall	8.70	Spike	P	0 - 30
2248597	Glufosinate	6.42	Spike	P	0 - 30
2248597	Glyphosate	6.44	Spike	P	0 - 30
2248597	Sucralose	4.40	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P398662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248252	2,4-D	7.81	Spike	P	0 - 30
2248252	2,4,5-T	0.896	Spike	P	0 - 30
2248252	Acetaminophen	39.5	Spike	F	0 - 30
2248252	Acetamiprid	4.29	Spike	P	0 - 30
2248252	Afidopyropen	6.96	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P398662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248252	Bentazon	5.90	Spike	P	0 - 30
2248252	Benzovindiflupyr	3.94	Spike	P	0 - 30
2248252	Carbamazepine	8.22	Spike	P	0 - 30
2248252	Clothianidin	3.88	Spike	P	0 - 30
2248252	Dinotefuran	4.38	Spike	P	0 - 30
2248252	Diuron	6.23	Spike	P	0 - 30
2248252	Fenuron	0.443	Spike	P	0 - 30
2248252	Fluridone	9.93	Spike	P	0 - 30
2248252	Hydrocodone	2.63	Spike	P	0 - 30
2248252	Ibuprofen	23.4	Spike	P	0 - 30
2248252	Imazapyr	5.62	Spike	P	0 - 30
2248252	Imidacloprid	2.61	Spike	P	0 - 30
2248252	Linuron	3.01	Spike	P	0 - 30
2248252	Mandestrobin	1.84	Spike	P	0 - 30
2248252	MCPP	1.52	Spike	P	0 - 30
2248252	Naproxen	14.0	Spike	P	0 - 30
2248252	Primidone	7.10	Spike	P	0 - 30
2248252	Pyraclostrobin	17.3	Spike	P	0 - 30
2248252	Thiamethoxam	4.81	Spike	P	0 - 30
2248252	Tolfenpyrad	5.22	Spike	P	0 - 30
2248252	Triclopyr	15.7	Spike	P	0 - 30

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2249022
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	70.2	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	60.0	P	30 - 110

Lab Sample ID: 2249023
Field Sample ID: G2SD0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.4	P	30 - 160
EPA 8321B	Diuron-d6	51.8	P	30 - 160
EPA 8321B	Endothall-d6	79.1	P	30 - 160
EPA 8321B	Endothall-d6	79.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	2.42	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	2.42	F	40 - 160
EPA 8321B	Ibuprofen-d3	56.6	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	51.9	P	30 - 160
EPA 8321B	Sucralose-d6	51.9	P	30 - 160

Lab Sample ID: 2249024
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	135	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.4	P	30 - 160
EPA 8321B	Diuron-d6	48.4	P	30 - 160
EPA 8321B	Endothall-d6	93.1	P	30 - 160
EPA 8321B	Endothall-d6	93.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	136	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	136	P	40 - 160
EPA 8321B	Ibuprofen-d3	72.3	P	30 - 160
EPA 8321B	Primidone-d5	88.1	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Lab Sample ID: 2249039
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	49.2	P	30 - 160

Lab Sample ID: 2249040
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	52.0	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	52.0	P	30 - 110
EPA 8276	Decachlorobiphenyl	93.9	F	29 - 92.0
EPA 8276	PCNB	98.4	P	43 - 134

Quality Assurance Report
Surrogates

Lab Sample ID: 2249041
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	92.0	P	73 - 135
EPA 8270E	Terbufos-d10	81.4	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A105556
Included Lab Sample IDs: 2249039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	115	114	P/P	60 - 150
Aldicarb	96.1	94.5	P/P	60 - 150
Aldicarb Sulfone	102	103	P/P	50 - 150
Aldicarb Sulfoxide	81.6	85.2	P/P	50 - 150
Carbaryl	109	115	P/P	60 - 150
Carbofuran	114	120	P/P	50 - 150
Methiocarb	114	106	P/P	50 - 150
Methomyl	88.9	85.6	P/P	50 - 150
Oxamyl	98.3	97.5	P/P	50 - 150
Propoxur	110	116	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A105606
Included Lab Sample IDs: 2249025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	100	P/P	90 - 110
Antimony	99.9	101	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Lead	94.6	94.7	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Selenium	102	103	P/P	90 - 110
Silver	99.8	100	P/P	90 - 110
Thallium	98.0	97.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A105615
Included Lab Sample IDs: 2249025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	97.8	104	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A105616
Included Lab Sample IDs: 2249023, 2249024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	71.1	66.7	P/P	60 - 160
Endothall	117	105	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A105621
Included Lab Sample IDs: 2249025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	103	P/P	90 - 110
Chromium	100	99.0	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A105621
Included Lab Sample IDs: 2249025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Manganese	103	102	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A105625
Included Lab Sample IDs: 2249023, 2249024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	115	119	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105627
Included Lab Sample IDs: 2249023, 2249024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	124	103	P/P	60 - 160
Glufosinate	107	102	P/P	60 - 160
Glyphosate	106	107	P/P	60 - 160
Glyphosate	107	106	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A105644
Included Lab Sample IDs: 2249041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.5		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	93.6		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	104		P	80 - 120
Azinphos Methyl	108		P	80 - 120
Azoxystrobin	107		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	101		P	80 - 120
Carbophenothion	81.7		P	80 - 120
Carfentrazone Ethyl	97.4		P	80 - 120
Chlorpyrifos Ethyl	92.3		P	80 - 120
Chlorpyrifos Methyl	95.6		P	80 - 120
Cyanazine	102		P	80 - 120
Demeton	93.6		P	80 - 120
Diazinon	100		P	80 - 120
Difenoconazole	102		P	80 - 120
Dimethenamid	97.1		P	80 - 120
Disulfoton	85.2		P	80 - 120
Dithiopyr	102		P	80 - 120
EPTC	98.1		P	80 - 120
Ethion	88.4		P	80 - 120
Ethoprop	95.7		P	80 - 120
Fenamiphos	94.3		P	80 - 120
Fenbuconazole	104		P	80 - 120
Fipronil	103		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A105644
Included Lab Sample IDs: 2249041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Desulfinyl	96.4		P	80 - 120
Fipronil Sulfide	93.9		P	80 - 120
Fipronil Sulfone	88.2		P	80 - 120
Fluazifop-P-butyl	89.9		P	80 - 120
Fludioxonil	106		P	80 - 120
Flumioxazin	98.5		P	80 - 120
Flutolanil	100		P	80 - 120
Fluxapyroxad	94.4		P	80 - 120
Fonofos	90.8		P	80 - 120
Hexazinone	96.6		P	80 - 120
Imazalil	108		P	80 - 120
Iprodione	90.9		P	80 - 120
Malathion	95.1		P	80 - 120
Metalaxyl	98.1		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	97.4		P	80 - 120
Mevinphos	94.9		P	80 - 120
Molinate	98.4		P	80 - 120
Myclobutanil	104		P	80 - 120
Naled	97.0		P	80 - 120
Norflurazon	102		P	80 - 120
Oxadiazon	106		P	80 - 120
Oxyfluorfen	100		P	80 - 120
Parathion Ethyl	102		P	80 - 120
Parathion Methyl	97.9		P	80 - 120
Pendimethalin	109		P	80 - 120
Phorate	95.8		P	80 - 120
Prodiamine	99.8		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	98.8		P	80 - 120
Pronamide	104		P	80 - 120
Propiconazole	100		P	80 - 120
Pyriproxyfen	108		P	80 - 120
Simazine	102		P	80 - 120
Sulfentrazone	105		P	80 - 120
Tebuconazole	99.0		P	80 - 120
Terbufos	96.9		P	80 - 120
Terbuthylazine	107		P	80 - 120

Reference Method: EPA 8321B
Run ID: A105752
Included Lab Sample IDs: 2249023, 2249024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.5	93.3	P/P	50 - 150
2,4,5-T	94.0	88.4	P/P	50 - 150
Acetaminophen	99.1	91.3	P/P	60 - 160
Acetamiprid	104	96.6	P/P	50 - 150
Afidopyropen	93.9	79.5	P/P	50 - 150
Bentazon	104	119	P/P	50 - 160
Benzovindiflupyr	110	87.2	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A105752
Included Lab Sample IDs: 2249023, 2249024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	92.4	86.5	P/P	60 - 150
Clothianidin	109	98.3	P/P	60 - 150
Dinotefuran	105	100	P/P	50 - 150
Diuron	99.2	87.5	P/P	60 - 160
Fenuron	105	103	P/P	60 - 150
Fluridone	115	87.4	P/P	60 - 160
Hydrocodone	101	103	P/P	60 - 150
Ibuprofen	70.7	99.2	P/P	50 - 160
Imazapyr	104	100	P/P	50 - 150
Imidacloprid	88.8	92.5	P/P	60 - 150
Linuron	96.3	82.7	P/P	60 - 150
Mandestrobin	115	89.5	P/P	50 - 150
MCPP	92.6	89.2	P/P	50 - 150
Naproxen	91.1	93.2	P/P	50 - 160
Primidone	96.0	98.7	P/P	60 - 150
Pyraclostrobin	101	85.4	P/P	60 - 150
Thiamethoxam	103	95.3	P/P	50 - 150
Tolfenpyrad	101	82.7	P/P	60 - 150
Triclopyr	97.3	91.8	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A105776
Included Lab Sample IDs: 2249022, 2249040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	110		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	86.5		P	80 - 120
Beta-Cyfluthrin	80.9		P	80 - 120
Carbophenothion	107		P	80 - 120
Chlorothalonil	111		P	80 - 120
Cis-Nonachlor	106		P	80 - 120
Cypermethrin	88.0		P	80 - 120
Dacthal	83.9		P	80 - 120
DDD-p,p'	104		P	80 - 120
DDE-p,p'	83.4		P	80 - 120
DDT-p,p'	99.9		P	80 - 120
Dichlobenil	93.3		P	80 - 120
Dieldrin	83.6		P	80 - 120
Endosulfan I	85.3		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	93.9		P	80 - 120
Endrin	109		P	80 - 120
Endrin Aldehyde	110		P	80 - 120
Endrin Ketone	119		P	80 - 120
Ethalfluralin	97.5		P	80 - 120
Gamma-Chlordane	83.9		P	80 - 120
Heptachlor Epoxide	85.6		P	80 - 120
Hexachlorobenzene	89.5		P	80 - 120
Kepone	88.1		P	80 - 120
Lambda-Cyhalothrin	81.6		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A105776
Included Lab Sample IDs: 2249022, 2249040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methoxychlor	80.2		P	80 - 120
MGK-264	80.8		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	88.1		P	80 - 120
Phenothrin	86.6		P	80 - 120
Piperonyl Butoxide	99.8		P	80 - 120
Tau-Fluvalinate	81.5		P	80 - 120
Trans-Nonachlor	83.5		P	80 - 120
Triclosan Methyl	82.4		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8276
Run ID: A105844
Included Lab Sample IDs: 2249040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	103		P	80 - 120
Toxaphene	107		P	80 - 120

Reference Method: EPA 8270E
Run ID: A105918
Included Lab Sample IDs: 2249022, 2249040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beta-BHC	98.3		P	80 - 120
Bifenthrin	97.4		P	80 - 120
Delta-BHC	99.2		P	80 - 120
Deltamethrin	103		P	80 - 120
Dicofol	94.3		P	80 - 120
Esfenvalerate	97.1		P	80 - 120
Fenpropathrin	113		P	80 - 120
Gamma-BHC	99.1		P	80 - 120
Heptachlor	97.1		P	80 - 120
Prallethrin	101		P	80 - 120
Tetramethrin	115		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 200.7 Rev. 4.4	Calcium	106						2.31
	Chromium	95.0		94.3	93.7			0.727
	Iron	105		107	105			1.53
	Magnesium	103						2.41
	Manganese	101		103	101			1.66
	Zinc	99.6		113	112			1.06
EPA 200.8 Rev. 5.4	Aluminum	95.7		83.7	102			19.5
	Antimony	99.6		82.3	100			19.5
	Arsenic	98.7		86.8	106			16.5
	Beryllium	89.7		93.3	104			11.0
	Cadmium	101		79.7	96.8			19.3
	Copper	97.6		89.4	108			19.2
	Lead	91.6		79.4	95.9			18.8
	Nickel	97.7		87.7	109			13.4
	Selenium	101		81.7	98.3			18.1
	Silver	101		87.4	90.0			2.88
	Thallium	104		89.5	109			19.6
EPA 8270E	Acetochlor	97.4	99.8	98.2	84.1	2.42		15.5
	Alachlor	102	104	107	90.9	2.63		16.1
	Aldrin	19.3	25.3	56.7	37.9	26.9		39.7
	Alpha-BHC	101	88.0	97.5	99.1	13.4		1.65
	Alpha-Chlordane	72.6	69.6	83.4	81.8	4.28		1.88
	Ametryn	99.7	114	122	91.8	13.3		24.5
	Atrazine	101	108	101	88.2	7.03		6.83
	Atrazine Desethyl	100	110	102	89.5	9.14		13.3
	Azinphos Methyl	128	137	119	124	6.60		3.96
	Azoxystrobin	181	208	198	175	14.0		12.2
	Beta-BHC	119	108	131	154	9.82		16.1
	Beta-Cyfluthrin	98.4	93.4	114	118	5.22		3.84
	Bifenthrin	69.5	62.5	70.4	62.8	10.6		11.4
	Bromacil	98.2	105			6.51		5.80
	Butylate	46.3	67.1	49.3	40.2	36.6		20.4
	Carbophenothion	80.6	88.2	97.4	79.9	9.02		19.7
	Carbophenothion	59.1	51.5	72.3	72.5	13.7		0.306
	Carfentrazone Ethyl	115	119	128	99.2	3.27		25.5
	Chlorothalonil	147	150	172	224	2.61		26.7
	Chlorpyrifos Ethyl	82.1	89.1	96.9	77.3	8.20		22.5
	Chlorpyrifos Methyl	87.8	93.2	90.8	80.0	5.94		12.6
	Cis-Nonachlor	92.0	83.2	82.9	86.9	10.1		4.80
	Cyanazine	202	210	181	151	3.86		17.8
	Cypermethrin	119	109	119	121	8.97		1.52
	Dacthal	94.9	82.4	93.7	96.8	14.0		3.29
	DDD-p,p'	95.9	83.0	81.6	86.3	14.4		5.60
	DDE-p,p'	72.7	67.8	75.3	72.2	7.01		4.22
	DDT-p,p'	81.0	78.7	79.9	78.0	2.86		2.42
	Delta-BHC	122	113	133	159	7.04		17.5
	Deltamethrin	133	186	190	150	33.1		24.0
	Demeton	88.7	91.5	90.0	85.1	3.14		5.67
	Diazinon	108	115	118	95.9	6.62		20.5
	Dichlobenil	63.6	60.8	52.2	51.9	4.45		0.586
	Dicofol	76.8	72.7	75.7	74.1	5.40		2.15
	Dieldrin	82.2	74.0	84.8	85.4	10.4		0.644
	Difenoconazole	130	126	206	184	3.04		11.3
	Dimethenamid	97.2	99.7	97.7	85.2	2.56		13.7

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Disulfoton	69.7	75.2	73.2	75.6	7.53		3.17
	Dithiopyr	90.9	91.3	98.1	91.4	0.497		6.04
	Endosulfan I	81.4	76.3	81.6	81.6	6.43		0.0204
	Endosulfan II	106	91.4	87.4	96.1	14.9		9.49
	Endosulfan Sulfate	108	86.4	118	135	22.3		13.4
	Endrin	97.1	86.1	83.5	77.1	12.1		7.96
	Endrin Aldehyde	113	99.9	78.9	64.1	12.7		20.7
	Endrin Ketone	134	114	128	142	15.8		10.7
	EPTC	42.6	65.6	46.3	39.5	42.4		15.7
	Esfenvalerate	127	154	176	168	18.9		4.29
	Ethalfluralin	78.9	70.8	69.8	77.6	10.9		10.7
	Ethion	82.6	59.7	87.9	63.2	32.2		32.6
	Ethoprop	90.7	92.1	87.6	82.4	1.57		6.04
	Fenamiphos	97.9	106	96.4	86.0	8.37		11.3
	Fenbuconazole	103	112	139	128	7.60		8.23
	Fenpropathrin	91.3	86.4	92.9	89.1	5.49		4.27
	Fipronil	112	119	126	97.5	5.43		23.5
	Fipronil Desulfinyl	98.3	103	113	88.3	4.76		24.0
	Fipronil Sulfide	82.2	91.7	113	99.3	10.9		10.4
	Fipronil Sulfone	90.2	94.0	116	74.1	4.12		25.7
	Fluazifop-P-butyl	94.6	106	104	92.4	11.8		11.6
	Fludioxonil	103	107	112	86.0	3.79		26.2
	Flumioxazin	202	227	246	202	11.8		19.7
	Flutolanil	103	110	113	88.0	6.07		24.9
	Fluxapyroxad	84.3	86.3	101	76.6	2.28		27.7
	Fonofos	70.0	79.5	76.7	74.8	12.7		2.50
	Gamma-BHC	102	90.7	102	115	12.0		11.5
	Gamma-Chlordane	75.1	70.5	80.8	77.7	6.44		3.97
	Heptachlor	76.9	71.6	69.4	60.7	7.11		13.3
	Heptachlor Epoxide	88.2	77.8	91.8	91.3	12.6		0.481
	Hexachlorobenzene	61.1	58.6	66.5	55.9	4.19		17.3
	Hexazinone	96.5	97.2	105	86.4	0.760		19.0
	Imazalil	120	128	103	92.3	6.75		11.4
	Iprodione	98.7	106	106	83.7	7.51		23.7
	Kepone	134	114			16.7		12.5
	Lambda-Cyhalothrin	124	98.5	146	171	22.6		15.3
	Malathion	104	112	115	93.1	7.22		21.0
	Metalaxyl	93.5	98.3	98.0	81.2	5.02		18.7
	Methoxychlor	86.1	80.0	97.0	90.5	7.35		6.92
	Metolachlor	103	107	106	88.8	3.87		17.9
	Metribuzin	99.0	107	113	90.5	7.67		22.0
	Mevinphos	83.6	89.3	80.0	74.1	6.55		7.66
	MGK-264	37.4	41.5	81.7	76.7	10.2		6.41
	Mirex	125	121	132	125	3.03		6.08
	Molinate	57.9	70.3	60.3	54.7	19.4		9.72
	Myclobutanil	104	112	102	96.1	6.99		5.79
	Naled	33.5	48.8	31.6	32.9	37.2		3.93
	Norflurazon	103	110	112	89.2	6.63		22.6
	Oxadiazon	100	106	94.2	83.3	5.77		11.1
	Oxyfluorfen	115	116	137	109	1.36		23.2
	Parathion Ethyl	94.8	103	99.2	87.0	7.98		13.1
	Parathion Methyl	103	115	102	92.3	11.4		10.2
	Pendimethalin	100	98.3	100	95.1	1.98		5.09
	Permethrin	95.3	94.8	107	101	0.502		6.36

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Phenothrin	18.3	29.0	68.9	41.1	45.5		50.6
	Phorate	87.6	118	97.3	86.1	29.3		12.2
	Piperonyl Butoxide	52.8	48.3	51.7	53.4	8.97		3.35
	Prallethrin	38.0	50.5	88.6	84.9	28.4		4.26
	Prodiamine	68.1	68.3	78.5	95.0	0.247		16.4
	Prometon	105	107	122	89.8	2.32		30.4
	Prometryn	107	110	110	94.9	3.20		15.0
	Pronamide	113	118	121	97.4	4.43		21.8
	Propiconazole	92.2	97.6	98.4	90.3	5.75		5.20
	Pyriproxyfen	93.1	98.4	92.0	79.9	5.58		14.1
	Simazine	93.2	108	112	91.5	14.3		20.0
	Sulfentrazone	94.8	100	120	90.3	5.48		19.2
	Tau-Fluvalinate	68.4	64.6	76.4	67.0	5.81		13.1
	Tebuconazole	50.0	38.0	46.2	42.1	27.3		9.35
	Terbufos	86.9	84.3	87.9	79.5	3.00		10.0
	Terbuthylazine	104	105	110	89.5	0.858		20.7
	Tetramethrin	31.6	48.5	81.5	65.3	42.3		22.1
	Trans-Nonachlor	73.8	72.5	79.7	80.0	1.77		0.342
	Triclosan Methyl	84.6	75.2	82.7	84.1	11.8		1.65
	Trifluralin	81.9	77.2	80.9	81.0	5.95		0.124
EPA 8276	Chlordane	88.1	87.5	100	108	0.636		7.57
	Toxaphene	88.3	80.0	94.9	102	9.85		7.05
EPA 8321B	2,4-D	108		139	129			7.81
	2,4,5-T	125		131	132			0.896
	3-Hydroxycarbofuran	98.2		88.3	111			22.4
	Acesulfame K	69.2		82.6	89.6			8.17
	Acetaminophen	95.5		144	96.5			39.5
	Acetamiprid	89.1		108	113			4.29
	Afidopyropen	65.4		78.7	73.4			6.96
	Aldicarb	97.7		81.8	103			23.0
	Aldicarb Sulfone	89.5		92.7	108			14.8
	Aldicarb Sulfoxide	105		48.8	62.7			24.9
	AMPA	102		124	131			5.33
	Bentazon	109		95.8	90.3			5.90
	Benzovindiflupyr	95.4		97.8	94.0			3.94
	Carbamazepine	88.9		91.5	84.3			8.22
	Carbaryl	77.2		62.1	68.4			9.70
	Carbofuran	95.6		74.8	84.8			12.5
	Clothianidin	99.7		104	98.9			3.88
	Dinotefuran	96.5		123	117			4.38
	Diuron	81.6		63.7	67.7			6.23
	Endothall	109		88.4	96.4			8.70
	Fenuron	124		116	117			0.443
	Fluridone	94.5		99.4	90.0			9.93
	Glufosinate	97.6		99.1	106			6.42
	Glyphosate	99.7		90.4	96.5			6.44
	Hydrocodone	87.3		97.9	95.4			2.63
	Ibuprofen	74.8		76.4	60.4			23.4
	Imazapyr	102		122	116			5.62
	Imidacloprid	95.0		146	142			2.61
	Linuron	80.3		70.6	68.5			3.01
	Mandestrobin	92.6		89.4	87.8			1.84
	MCPP	142		144	146			1.52
	Methiocarb	62.4		59.2	64.7			8.99

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Methomyl	96.9	84.5	98.7			15.6
	Naproxen	75.9	75.3	86.7			14.0
	Oxamyl	80.8	79.2	94.0			17.0
	Primidone	107	101	108			7.10
	Propoxur	95.6	76.8	87.4			13.0
	Pyraclostrobin	85.8	83.7	70.4			17.3
	Sucralose	123	126	132			4.40
	Thiamethoxam	91.5	117	112			4.81
	Tolfenpyrad	43.5	49.1	51.7			5.22
	Triclopyr	126	120	140			15.7

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2249025
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2249025
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2249022, 2249040
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2249041
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2249040
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2249039
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2249023, 2249024
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2249023, 2249024
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2249025

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 200.7 Rev. 4.4	05/20/2021	05/20/2021 16:00	Elliott D. Healy	05/24/2021 18:04	Betina Topolski	2249025
	05/20/2021	05/20/2021 16:00	Elliott D. Healy	05/24/2021 18:16	Betina Topolski	2249025
	05/20/2021	05/20/2021 16:00	Elliott D. Healy	05/24/2021 18:24	Betina Topolski	2249025
EPA 200.8 Rev. 5.4	05/20/2021	05/20/2021 16:00	Elliott D. Healy	05/22/2021 01:41	Alexander Thompson	2249025
	05/20/2021	05/20/2021 16:00	Elliott D. Healy	05/24/2021 13:51	Alexander Thompson	2249025
EPA 8270E	05/20/2021	05/21/2021 08:00	Rasheda Ghaffari	05/24/2021 22:18	Vandana T. Nagar	2249041
	05/20/2021	05/24/2021 08:00	Fe-Val Siddell	05/29/2021 02:54	Arthur Maknenko	2249022
	05/20/2021	05/24/2021 08:00	Fe-Val Siddell	05/29/2021 03:23	Arthur Maknenko	2249040
	05/20/2021	05/24/2021 08:00	Fe-Val Siddell	06/05/2021 01:50	Arthur Maknenko	2249022
	05/20/2021	05/24/2021 08:00	Fe-Val Siddell	06/05/2021 02:19	Arthur Maknenko	2249040
EPA 8276	05/20/2021	05/24/2021 08:00	Fe-Val Siddell	05/28/2021 06:35	Chiran X. Ghimire	2249040
EPA 8321B	05/20/2021	05/20/2021 13:00	Hoor Shaik	05/21/2021 01:37	Juyoung Kim	2249039
	05/20/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 11:57	Pramila Ghimire	2249023
	05/20/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 12:11	Pramila Ghimire	2249024
	05/20/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 13:01	Juyoung Kim	2249023
	05/20/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 13:12	Juyoung Kim	2249024
	05/20/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 14:59	Juyoung Kim	2249024
	05/20/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 20:04	Pramila Ghimire	2249023
	05/20/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 20:16	Pramila Ghimire	2249024
	05/20/2021	05/25/2021 09:00	Hoor Shaik	05/27/2021 11:16	Juyoung Kim	2249023
	05/20/2021	05/25/2021 09:00	Hoor Shaik	05/27/2021 11:51	Juyoung Kim	2249024
	05/20/2021	05/25/2021 09:00	Hoor Shaik	05/27/2021 13:00	Juyoung Kim	2249023
	05/20/2021	05/25/2021 09:00	Hoor Shaik	05/27/2021 13:35	Juyoung Kim	2249024
SM 2340B	05/20/2021			05/24/2021 18:24	Betina Topolski	2249025