Chemical Analysis Report

SO-DIST-2021-01-15-01

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-2021-01-11-40**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Chris Hormuth

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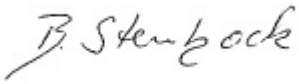
Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 08-FEB-2021 15:33



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, Nutrients 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: Alligator @ Jacaranda **Collection Date/Time: 01/14/2021 11:00**

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219376	EPA 8321B	Aldicarb	0.020	U	ug/L	P392377	RPD
		Aldicarb Sulfone	0.0020	U	ug/L	P392377	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P392377	
		Carbaryl	0.0020	U	ug/L	P392377	MS
		Carbofuran	0.0020	U	ug/L	P392377	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P392377	
		Methiocarb	0.0020	U	ug/L	P392377	
		Methomyl	0.0020	U	ug/L	P392377	
		Oxamyl	0.0020	U	ug/L	P392377	
		Propoxur	0.0020	U	ug/L	P392377	
2219377		2,4-D	0.0071	I	ug/L	P392448	
		Acesulfame K**	0.10	U	ug/L	P392508	MS
		AMPA**	1.1		ug/L	P392508	
		Sucralose**	1.2		ug/L	P392508	
		Acetaminophen**	0.0080	U	ug/L	P392448	
		Acetamiprid**	0.0020	U	ug/L	P392448	
		Endothall**	0.25	U	ug/L	P392508	
		Glufosinate**	0.10	U	ug/L	P392508	
		Glyphosate**	3.2		ug/L	P392508	
		Afidopyropen**	0.0020	U	ug/L	P392448	
		Bentazon	0.016		ug/L	P392448	
		Benzovindiflupyr**	0.0020	U	ug/L	P392448	
		Carbamazepine**	0.0012	I	ug/L	P392448	
		Clothianidin**	0.0020	U	ug/L	P392448	
		Dinotefuran**	0.0020	U	ug/L	P392448	
		Diuron	0.0020	U	ug/L	P392448	
		Fenuron	0.016	U	ug/L	P392448	
		Fluridone**	0.015		ug/L	P392448	
		Imazapyr**	0.79		ug/L	P392448	
		Hydrocodone**	0.0020	U	ug/L	P392448	
		Ibuprofen**	0.020	U	ug/L	P392448	
		Imidacloprid	0.012		ug/L	P392448	
		Linuron	0.0040	U	ug/L	P392448	
		Mandestrobin**	0.0020	U	ug/L	P392448	
		MCPP	0.0020	U	ug/L	P392448	
		Naproxen**	0.0080	U	ug/L	P392448	
		Primidone**	0.0084	I	ug/L	P392448	
		Pyraclostrobin**	0.0020	U	ug/L	P392448	
		Thiamethoxam**	0.0020	U	ug/L	P392448	
		Tolfenpyrad**	0.0020	U	ug/L	P392448	
		Triclopyr**	0.0040	U	ug/L	P392448	
2219378	EPA 8270E	Aldrin	0.81	U	ng/L	P392378	
		Dieldrin	0.43	U	ng/L	P392378	
		Alpha-BHC	2.2	U	ng/L	P392378	

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219378	EPA 8270E	Kepone**	5.9	U	ng/L	P392378	
		Alpha-Chlordane	1.1	U	ng/L	P392378	
		Beta-BHC	8.6	U	ng/L	P392378	
		Beta-Cyfluthrin**	16	U	ng/L	P392378	
		Bifenthrin**	4.3	U	ng/L	P392378	
		Delta-BHC	8.6	U	ng/L	P392378	
		Gamma-BHC	8.6	U	ng/L	P392378	
		Chlorothalonil	2.2	UJ	ng/L	P392378	RPD
		Cis-Nonachlor**	1.1	U	ng/L	P392378	
		Cypermethrin	22	U	ng/L	P392378	
		Dacthal**	1.1	U	ng/L	P392378	
		DDD-p,p'	5.4	U	ng/L	P392378	
		DDE-p,p'	5.4	U	ng/L	P392378	
		DDT-p,p'	6.5	U	ng/L	P392378	
		Deltamethrin**	22	U	ng/L	P392378	
		Dicofol	32	U	ng/L	P392378	
		Endosulfan I	4.3	U	ng/L	P392378	
		Endosulfan II	4.3	U	ng/L	P392378	
		Endosulfan Sulfate	2.2	U	ng/L	P392378	
		Endrin	2.2	U	ng/L	P392378	
		Endrin Aldehyde	2.2	U	ng/L	P392378	
		Endrin Ketone	2.2	U	ng/L	P392378	
		Ethalfluralin**	3.2	U	ng/L	P392378	
		Gamma-Chlordane	1.1	U	ng/L	P392378	
		Dichlobenil**	2.2	U	ng/L	P392378	
		Esfenvalerate**	22	U	ng/L	P392378	
		Fenpropathrin**	11	U	ng/L	P392378	RPD
		Heptachlor	1.6	U	ng/L	P392378	
		Heptachlor Epoxide	2.2	U	ng/L	P392378	
		Hexachlorobenzene	2.2	U	ng/L	P392378	
		Lambda-Cyhalothrin**	16	U	ng/L	P392378	
		Methoxychlor	4.3	U	ng/L	P392378	
		Mirex	2.2	U	ng/L	P392378	
		MGK-264**	3.2	U	ng/L	P392378	
		Permethrin	11	U	ng/L	P392378	
		Phenothrin**	32	U	ng/L	P392378	
		Piperonyl Butoxide**	1.6	U	ng/L	P392378	
		Prallethrin**	27	U	ng/L	P392378	
		Tau-Fluvalinate**	3.8	U	ng/L	P392378	
		Tetramethrin**	8.6	U	ng/L	P392378	
		Trans-Nonachlor**	1.1	U	ng/L	P392378	
		Triclosan Methyl**	1.1	U	ng/L	P392378	
		Trifluralin	2.7	U	ng/L	P392378	
	EPA 8276	Chlordane	7.7	I	ng/L	P392378	
		Toxaphene	32	U	ng/L	P392378	

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219379	EPA 8270E	Acetochlor	0.25	U	ng/L	P392528	
		Alachlor	0.25	U	ng/L	P392528	
		Ametryn	3.4		ng/L	P392528	
		Atrazine	27		ng/L	P392528	
		Atrazine Desethyl	1.5	U	ng/L	P392528	
		Azinphos Methyl	2.0	UJ	ng/L	P392528	CCV
		Azoxystrobin**	0.49	U	ng/L	P392528	
		Bromacil	0.49	U	ng/L	P392528	
		Butylate	0.39	U	ng/L	P392528	
		Carbophenothion	0.49	U	ng/L	P392528	
		Carfentrazone Ethyl**	0.099	U	ng/L	P392528	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P392528	
		Chlorpyrifos Methyl	0.049	U	ng/L	P392528	
		Cyanazine	3.2	U	ng/L	P392528	
		Demeton	1.5	U	ng/L	P392528	
		Diazinon	0.12	U	ng/L	P392528	
		Difenoconazole**	0.59	U	ng/L	P392528	
		Dimethenamid**	0.099	U	ng/L	P392528	
		Disulfoton	0.49	U	ng/L	P392528	
		Dithiopyr**	0.48	I	ng/L	P392528	
		EPTC	1.2	U	ng/L	P392528	
		Ethion	0.15	U	ng/L	P392528	
		Ethoprop	0.099	U	ng/L	P392528	
		Fenamiphos	0.49	U	ng/L	P392528	
		Fenbuconazole**	0.12	U	ng/L	P392528	
		Fipronil	0.25	U	ng/L	P392528	
		Fipronil Desulfinyl**	0.66		ng/L	P392528	
		Fipronil Sulfide	0.52	I	ng/L	P392528	
		Fipronil Sulfone	1.8		ng/L	P392528	
		Fluazifop-P-butyl**	0.099	U	ng/L	P392528	
		Fludioxonil**	0.12	U	ng/L	P392528	
		Flumioxazin**	1.7	U	ng/L	P392528	
		Flutolanil**	1.4		ng/L	P392528	
		Fluxapyroxad**	3.3		ng/L	P392528	
		Fonofos	0.20	U	ng/L	P392528	
		Hexazinone	14		ng/L	P392528	
		Imazalil**	0.74	U	ng/L	P392528	
		Iprodione**	0.59	U	ng/L	P392528	
		Malathion	0.34	U	ng/L	P392528	
		Metalaxyl	0.74	U	ng/L	P392528	
		Metolachlor	0.34	U	ng/L	P392528	
		Metribuzin	3.2	U	ng/L	P392528	
		Mevinphos	1.0	U	ng/L	P392528	
		Molinate	0.30	U	ng/L	P392528	
		Myclobutanil**	0.25	U	ng/L	P392528	

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219379	EPA 8270E	Naled**	1.5	U	ng/L	P392528	
		Norflurazon	0.49	U	ng/L	P392528	
		Oxadiazon	8.8		ng/L	P392528	
		Oxyfluorfen**	0.15	U	ng/L	P392528	
		Parathion Ethyl	0.25	U	ng/L	P392528	
		Parathion Methyl	0.54	U	ng/L	P392528	
		Pendimethalin	0.99	U	ng/L	P392528	
		Phorate	0.52	U	ng/L	P392528	
		Prodiamine**	0.17	U	ng/L	P392528	
		Prometon	0.89	U	ng/L	P392528	
		Prometryn	0.20	U	ng/L	P392528	
		Pronamide**	0.15	U	ng/L	P392528	
		Propiconazole**	0.49	U	ng/L	P392528	
		Pyriproxyfen**	0.12	U	ng/L	P392528	
		Simazine	13		ng/L	P392528	
		Sulfentrazone**	7.9		ng/L	P392528	
		Tebuconazole**	0.49	U	ng/L	P392528	
		Terbufos	0.099	U	ng/L	P392528	
		Terbuthylazine	0.42	U	ng/L	P392528	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes 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.

Sample Location: Gottfried Creek @ Deer Creek Mobile Home **Collection Date/Time: 01/14/2021 12:05**

Field ID: G2SD0028 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219363	EPA 180.1 Rev. 2.0	Turbidity	1.6	A	NTU	P392474	
	EPA 300.0 Rev. 2.1	Bromide	49		mg Br/L	P393037	
	SM 2320 B-2011	Total Alkalinity	142	A	mg CaCO3/L	P392589	
	SM 2540 D-2011	TSS	3	U	mg/L	P392972	
	SM 4500 F-C-2011	Fluoride	0.95		mg F/L	P392591	
2219365	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P392481	
2219380	EPA 8270E	Aldrin	0.75	U	ng/L	P392378	
		Dieldrin	0.40	U	ng/L	P392378	
		Alpha-BHC	2.0	U	ng/L	P392378	
		Kepone**	5.5	U	ng/L	P392378	
		Alpha-Chlordane	1.0	U	ng/L	P392378	
		Beta-BHC	8.0	U	ng/L	P392378	
		Beta-Cyfluthrin**	15	U	ng/L	P392378	
		Bifenthrin**	4.0	U	ng/L	P392378	
		Delta-BHC	8.0	U	ng/L	P392378	
		Gamma-BHC	8.0	U	ng/L	P392378	
		Carbophenothion	10	U	ng/L	P392378	
		Chlorothalonil	2.0	UJ	ng/L	P392378	RPD
		Cis-Nonachlor**	1.0	U	ng/L	P392378	
		Cypermethrin	20	U	ng/L	P392378	
		Dacthal**	1.0	U	ng/L	P392378	
		DDD-p,p'	5.0	U	ng/L	P392378	
		DDE-p,p'	5.0	U	ng/L	P392378	
		DDT-p,p'	6.0	U	ng/L	P392378	
		Deltamethrin**	20	U	ng/L	P392378	
		Dicofol	30	U	ng/L	P392378	
		Endosulfan I	4.0	U	ng/L	P392378	
		Endosulfan II	4.0	U	ng/L	P392378	
		Endosulfan Sulfate	2.0	U	ng/L	P392378	
		Endrin	2.0	U	ng/L	P392378	
		Endrin Aldehyde	2.0	U	ng/L	P392378	
		Endrin Ketone	2.0	U	ng/L	P392378	
		Ethalfluralin**	3.0	U	ng/L	P392378	
		Gamma-Chlordane	1.0	U	ng/L	P392378	
		Dichlobenil**	2.0	U	ng/L	P392378	
		Esfenvalerate**	20	U	ng/L	P392378	
		Fenpropathrin**	10	U	ng/L	P392378	RPD
		Heptachlor	1.5	U	ng/L	P392378	
		Heptachlor Epoxide	2.0	U	ng/L	P392378	
		Hexachlorobenzene	2.0	U	ng/L	P392378	
		Lambda-Cyhalothrin**	15	U	ng/L	P392378	
		Methoxychlor	4.0	U	ng/L	P392378	
		Mirex	2.0	U	ng/L	P392378	

Field ID: G2SD0028 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219380	EPA 8270E	MGK-264**	3.0	U	ng/L	P392378	
		Permethrin	10	U	ng/L	P392378	
		Phenothrin**	30	U	ng/L	P392378	
		Piperonyl Butoxide**	1.5	U	ng/L	P392378	
		Prallethrin**	25	U	ng/L	P392378	
		Tau-Fluvalinate**	3.5	U	ng/L	P392378	
		Tetramethrin**	8.0	U	ng/L	P392378	
		Trans-Nonachlor**	1.0	U	ng/L	P392378	
		Triclosan Methyl**	1.0	U	ng/L	P392378	
		Trifluralin	2.5	U	ng/L	P392378	
2219381	EPA 200.7 Rev. 4.4	Calcium	326		mg/L	P392522	
		Chromium	10	I	ug/L	P392522	
		Iron	120	U	ug/L	P392522	
		Magnesium	969		mg/L	P392522	
		Manganese	4.0	U	ug/L	P392522	
		Zinc	20	U	ug/L	P392522	
	EPA 200.8 Rev. 5.4	Aluminum	45	I	ug/L	P392522	
		Antimony	0.23	I	ug/L	P392522	
		Arsenic	1.94		ug/L	P392522	
		Beryllium	0.040	U	ug/L	P392522	
		Cadmium	0.080	U	ug/L	P392522	
		Copper	1.6	U	ug/L	P392522	
		Lead	2.0	U	ug/L	P392522	
		Nickel	2.0	U	ug/L	P392522	
		Selenium	0.80	U	ug/L	P392522	
		Silver	0.040	U	ug/L	P392522	
		Thallium	1.0	U	ug/L	P392522	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: 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.

Sample Location: Upperlemonincanal **Collection Date/Time: 01/14/2021 11:40**

Field ID: G2SD0045 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219375	EPA 8321B	2,4-D	0.0020	U	ug/L	P392448	
		Acesulfame K**	0.10	U	ug/L	P392508	MS
		AMPA**	0.10	UJ	ug/L	P392508	SUR
		Sucralose**	0.13		ug/L	P392508	
		Acetaminophen**	0.0080	U	ug/L	P392448	
		Acetamiprid**	0.0020	U	ug/L	P392448	
		Endothall**	0.25	U	ug/L	P392508	
		Glufosinate**	0.10	UJ	ug/L	P392508	SUR
		Glyphosate**	0.10	UJ	ug/L	P392508	SUR
		Afidopyropen**	0.0020	U	ug/L	P392448	
		Bentazon	0.0012	I	ug/L	P392448	
		Benzovindiflupyr**	0.0020	U	ug/L	P392448	
		Carbamazepine**	8.0E-04	U	ug/L	P392448	
		Clothianidin**	0.0020	U	ug/L	P392448	
		Dinotefuran**	0.0020	U	ug/L	P392448	
		Diuron	0.0020	U	ug/L	P392448	
		Fenuron	0.016	U	ug/L	P392448	
		Fluridone**	0.0022	I	ug/L	P392448	
		Imazapyr**	0.022		ug/L	P392448	
		Hydrocodone**	0.0020	U	ug/L	P392448	
		Ibuprofen**	0.020	U	ug/L	P392448	
		Imidacloprid	0.0020	U	ug/L	P392448	
		Linuron	0.0040	U	ug/L	P392448	
		Mandestrobin**	0.0020	U	ug/L	P392448	
		MCPP	0.0020	U	ug/L	P392448	
		Naproxen**	0.0080	U	ug/L	P392448	
		Primidone**	0.0040	U	ug/L	P392448	
		Pyraclostrobin**	0.0020	U	ug/L	P392448	
		Thiamethoxam**	0.0020	U	ug/L	P392448	
		Tolfenpyrad**	0.0020	U	ug/L	P392448	
		Triclopyr**	0.0040	U	ug/L	P392448	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: AlligatorCRK @ ShamrockDR **Collection Date/Time: 01/14/2021 10:30**

Field ID: G2SD0048 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2219374	EPA 8321B	2,4-D	0.0021	I	ug/L	P392448	
		Acesulfame K**	0.12	I	ug/L	P392508	MS
		AMPA**	0.10	UJ	ug/L	P392508	SUR
		Sucralose**	2.5		ug/L	P392508	
		Acetaminophen**	0.0080	U	ug/L	P392448	
		Acetamiprid**	0.0020	U	ug/L	P392448	
		Endothall**	0.25	U	ug/L	P392508	
		Glufosinate**	0.10	UJ	ug/L	P392508	SUR
		Glyphosate**	8.1	J	ug/L	P392508	SUR
		Afidopyropen**	0.0020	U	ug/L	P392448	
		Bentazon	0.0081		ug/L	P392448	
		Benzovindiflupyr**	0.0020	U	ug/L	P392448	
		Carbamazepine**	0.0078		ug/L	P392448	
		Clothianidin**	0.0020	U	ug/L	P392448	
		Dinotefuran**	0.0020	U	ug/L	P392448	
		Diuron	0.0020	U	ug/L	P392448	
		Fenuron	0.016	U	ug/L	P392448	
		Fluridone**	0.0091		ug/L	P392448	
		Imazapyr**	0.40		ug/L	P392448	
		Hydrocodone**	0.0020	U	ug/L	P392448	
		Ibuprofen**	0.020	U	ug/L	P392448	
		Imidacloprid	0.0053	I	ug/L	P392448	
		Linuron	0.0040	U	ug/L	P392448	
		Mandestrobin**	0.0020	U	ug/L	P392448	
		MCPP	0.0020	U	ug/L	P392448	
		Naproxen**	0.0080	U	ug/L	P392448	
		Primidone**	0.018		ug/L	P392448	
		Pyraclostrobin**	0.0020	U	ug/L	P392448	
		Thiamethoxam**	0.0020	U	ug/L	P392448	
		Tolfenpyrad**	0.0020	U	ug/L	P392448	
		Triclopyr**	0.0040	U	ug/L	P392448	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392474

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P392522

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: P392522

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 300.0 Rev. 2.1
Batch ID: P393037

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392481

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P392378

Component	Result	Code	Units
Aldrin	0.75	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L
Beta-Cyfluthrin	15	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P392378

Component	Result	Code	Units
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
Dichlobenil	2.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Esfenvalerate	20	U	ng/L
Ethalfluralin	3.0	U	ng/L
Fenpropathrin	10	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Kepone	5.5	U	ng/L
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
MGK-264	3.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Piperonyl Butoxide	1.5	U	ng/L
Prallethrin	25	U	ng/L
Tau-Fluvalinate	3.5	U	ng/L
Tetramethrin	8.0	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Triclosan Methyl	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8270E
Batch ID: P392528

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P392528

Component	Result	Code	Units
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P392528

Component	Result	Code	Units
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P392378

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

Reference Method: EPA 8321B
Batch ID: P392377

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: P392448

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P392448

Component	Result	Code	Units
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: P392508

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: SM 2320 B-2011
Batch ID: P392589

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 D-2011
Batch ID: P392972

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P392591

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P392522

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Chromium	102		P	85 - 115
Iron	105		P	85 - 115
Magnesium	104		P	85 - 115
Manganese	101		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P392522

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	94.7		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	97.6		P	85 - 115
Beryllium	88.8		P	85 - 115
Cadmium	95.2		P	85 - 115
Copper	100		P	85 - 115
Lead	100		P	85 - 115
Nickel	95.4		P	85 - 115
Selenium	96.0		P	85 - 115
Silver	103		P	85 - 115
Thallium	99.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393037

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.1		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P392378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	52.3	50.6	P/P	20 - 110
Alpha-BHC	85.4	80.3	P/P	58 - 130
Alpha-Chlordane	73.3	74.7	P/P	61 - 105
Beta-BHC	92.8	95.6	P/P	53 - 164
Beta-Cyfluthrin	82.0	83.5	P/P	40 - 140
Bifenthrin	61.1	67.9	P/P	44 - 122
Carbophenothion	65.0	63.4	P/P	20 - 161
Chlorothalonil	67.4	46.8	P/P	20 - 201
Cis-Nonachlor	76.8	76.7	P/P	60 - 110
Cypermethrin	67.9	73.1	P/P	43 - 131
Dacthal	87.6	86.9	P/P	76 - 108
DDD-p,p'	82.6	84.0	P/P	68 - 118
DDE-p,p'	68.8	74.0	P/P	56 - 107

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P392378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDT-p,p'	73.7	74.5	P/P	55 - 122
Delta-BHC	113	113	P/P	60 - 181
Deltamethrin	68.7	78.1	P/P	51 - 139
Dichlobenil	79.7	80.7	P/P	20 - 106
Dicofol	91.7	94.0	P/P	56 - 130
Dieldrin	72.1	66.8	P/P	58 - 112
Endosulfan I	84.9	84.2	P/P	68 - 115
Endosulfan II	93.9	90.3	P/P	69 - 133
Endosulfan Sulfate	88.2	90.8	P/P	65 - 126
Endrin	85.9	83.0	P/P	66 - 118
Endrin Aldehyde	109	96.9	P/P	60 - 132
Endrin Ketone	86.5	89.0	P/P	68 - 121
Esfenvalerate	63.4	69.6	P/P	42 - 116
Ethalfluralin	72.6	71.2	P/P	50 - 118
Fenpropathrin	73.1	94.1	P/P	55 - 132
Gamma-BHC	94.5	93.4	P/P	65 - 147
Gamma-Chlordane	66.8	68.9	P/P	56 - 103
Heptachlor	58.1	63.2	P/P	47 - 95.0
Heptachlor Epoxide	78.3	79.2	P/P	67 - 107
Hexachlorobenzene	59.4	65.0	P/P	45 - 99.0
Kepone	74.7	90.0	P/P	28 - 128
Lambda-Cyhalothrin	73.4	77.1	P/P	41 - 135
Methoxychlor	88.9	90.2	P/P	61 - 138
MGK-264	67.8	66.2	P/P	20 - 109
Mirex	48.2	54.2	P/P	36 - 92.0
Permethrin	58.9	63.4	P/P	45 - 111
Phenothrin	44.3	52.0	P/P	22 - 88.0
Piperonyl Butoxide	88.2	87.1	P/P	67 - 120
Prallethrin	62.4	61.9	P/P	28 - 92.0
Tau-Fluvalinate	75.8	82.7	P/P	38 - 145
Tetramethrin	104	101	P/P	29 - 150
Trans-Nonachlor	69.7	71.7	P/P	54 - 105
Triclosan Methyl	92.6	93.3	P/P	76 - 115
Trifluralin	70.5	72.6	P/P	53 - 111

Reference Method: EPA 8270E
Batch ID: P392528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	104	108	P/P	70 - 121
Alachlor	105	107	P/P	70 - 119
Ametryn	102	104	P/P	61 - 135
Atrazine	103	106	P/P	76 - 123
Atrazine Desethyl	84.1	88.1	P/P	35 - 140
Azinphos Methyl	160	130	P/P	57 - 163
Azoxystrobin	133	153	P/P	43 - 231
Bromacil	93.7	102	P/P	42 - 123
Butylate	63.3	66.8	P/P	34 - 92.0
Carbophenothion	77.9	83.0	P/P	61 - 121
Carfentrazone Ethyl	94.2	101	P/P	62 - 139
Chlorpyrifos Ethyl	86.2	89.3	P/P	67 - 121
Chlorpyrifos Methyl	93.1	95.0	P/P	67 - 120

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P392528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	138	150	P/P	20 - 226
Demeton	90.0	93.0	P/P	35 - 125
Diazinon	98.1	104	P/P	70 - 122
Difenoconazole	159	171	P/P	56 - 186
Dimethenamid	95.1	101	P/P	67 - 119
Disulfoton	84.5	88.6	P/P	47 - 120
Dithiopyr	86.3	92.5	P/P	67 - 118
EPTC	65.8	64.7	P/P	33 - 90.0
Ethion	78.1	82.0	P/P	40 - 133
Ethoprop	91.8	94.3	P/P	61 - 121
Fenamiphos	96.9	103	P/P	31 - 139
Fenbuconazole	112	118	P/P	66 - 141
Fipronil	90.8	96.0	P/P	62 - 129
Fipronil Desulfinyl	93.2	97.4	P/P	59 - 126
Fipronil Sulfide	85.1	87.2	P/P	63 - 117
Fipronil Sulfone	89.6	94.0	P/P	57 - 117
Fluazifop-P-butyl	85.9	89.2	P/P	63 - 124
Fludioxonil	92.5	101	P/P	63 - 123
Flumioxazin	198	210	P/P	34 - 245
Flutolanil	86.5	91.8	P/P	56 - 131
Fluxapyroxad	70.0	78.0	P/P	57 - 117
Fonofos	92.4	94.1	P/P	61 - 116
Hexazinone	97.9	97.8	P/P	55 - 138
Imazalil	102	113	P/P	33 - 143
Iprodione	89.9	91.7	P/P	59 - 118
Malathion	109	113	P/P	62 - 138
Metalaxyl	102	109	P/P	24 - 147
Metolachlor	108	107	P/P	68 - 118
Metribuzin	94.3	111	P/P	20 - 239
Mevinphos	98.2	100	P/P	46 - 124
Molinate	79.5	82.2	P/P	46 - 100
Myclobutanil	93.3	96.1	P/P	32 - 149
Naled	52.0	50.0	P/P	32 - 95.0
Norflurazon	94.1	98.9	P/P	57 - 127
Oxadiazon	88.5	91.5	P/P	63 - 118
Oxyfluorfen	104	102	P/P	69 - 137
Parathion Ethyl	88.0	101	P/P	70 - 113
Parathion Methyl	112	112	P/P	71 - 130
Pendimethalin	73.3	79.3	P/P	55 - 118
Phorate	80.6	78.9	P/P	46 - 125
Prodiamine	54.8	57.6	P/P	20 - 141
Prometon	96.2	98.6	P/P	54 - 122
Prometryn	95.4	104	P/P	66 - 124
Pronamide	98.4	104	P/P	79 - 122
Propiconazole	87.2	93.0	P/P	61 - 126
Pyriproxyfen	84.0	83.8	P/P	52 - 131
Simazine	110	115	P/P	75 - 128
Sulfentrazone	80.7	89.6	P/P	20 - 132
Tebuconazole	60.0	61.9	P/P	20 - 116
Terbufos	81.9	85.2	P/P	61 - 117
Terbuthylazine	101	107	P/P	74 - 116

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P392378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	96.4	91.4	P/P	56 - 117
Toxaphene	94.6	88.2	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P392377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	77.5		P	30 - 160
Aldicarb	60.2		P	30 - 160
Aldicarb Sulfone	81.3		P	30 - 160
Aldicarb Sulfoxide	106		P	30 - 160
Carbaryl	49.0		P	30 - 160
Carbofuran	54.4		P	30 - 160
Methiocarb	60.1		P	30 - 160
Methomyl	77.2		P	30 - 160
Oxamyl	85.0		P	30 - 160
Propoxur	57.6		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	144		P	30 - 160
Acetaminophen	80.3		P	30 - 160
Acetamiprid	101		P	30 - 160
Afidopyropen	82.0		P	30 - 160
Bentazon	80.4		P	30 - 160
Benzovindiflupyr	81.1		P	30 - 160
Carbamazepine	74.1		P	30 - 160
Clothianidin	88.6		P	30 - 160
Dinotefuran	86.6		P	30 - 160
Diuron	54.3		P	30 - 160
Fenuron	81.9		P	30 - 160
Fluridone	83.2		P	30 - 160
Hydrocodone	83.7		P	30 - 160
Ibuprofen	83.3		P	30 - 160
Imazapyr	104		P	30 - 160
Imidacloprid	117		P	30 - 160
Linuron	67.8		P	30 - 160
Mandestrobin	83.1		P	30 - 160
MCPP	111		P	30 - 160
Naproxen	62.2		P	30 - 160
Primidone	97.9		P	30 - 160
Pyraclostrobin	74.7		P	30 - 160
Thiamethoxam	76.8		P	30 - 160
Tolfenpyrad	53.9		P	30 - 160
Triclopyr	126		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392508

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P392508

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	77.5		P	40 - 150
AMPA	107		P	40 - 150
Endothall	97.1		P	40 - 150
Glufosinate	94.6		P	40 - 150
Glyphosate	102		P	40 - 140
Sucralose	95.3		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P392589

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.9		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P392591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	90 - 106

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P392522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217629	Chromium	98.9	100	P/P	70 - 130
2217629	Iron	106	109	P/P	70 - 130
2217629	Manganese	98.2	97.4	P/P	70 - 130
2217629	Zinc	105	105	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P392522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2217629	Aluminum	103	108	P/P	70 - 130
2217629	Antimony	106	108	P/P	70 - 130
2217629	Arsenic	104	108	P/P	70 - 130
2217629	Beryllium	112	119	P/P	70 - 130
2217629	Cadmium	91.2	93.5	P/P	70 - 130
2217629	Copper	111	111	P/P	70 - 130
2217629	Lead	105	106	P/P	70 - 130
2217629	Nickel	99.3	100	P/P	70 - 130
2217629	Selenium	102	105	P/P	70 - 130
2217629	Silver	96.2	98.2	P/P	70 - 130
2217629	Thallium	103	106	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219957	Bromide	90.3		P	90 - 110
2220312	Bromide	97.8	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219454	O-Phosphate-P	90.3	92.8	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P392378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219134	Alpha-BHC	81.9	84.9	P/P	53 - 147
2219134	Alpha-Chlordane	76.2	78.3	P/P	56 - 107
2219134	Beta-BHC	108	99.9	P/P	43 - 182
2219134	Beta-Cyfluthrin	98.1	88.3	P/P	42 - 157
2219134	Bifenthrin	70.4	69.3	P/P	52 - 124
2219134	Carbophenothion	84.2	80.2	P/P	40 - 172
2219134	Chlorothalonil	54.2	72.3	P/P	10 - 265
2219134	Cis-Nonachlor	81.1	83.8	P/P	55 - 112
2219134	Cypermethrin	82.6	80.5	P/P	46 - 144
2219134	Dacthal	91.1	90.8	P/P	72 - 110
2219134	DDD-p,p'	84.7	89.6	P/P	58 - 123
2219134	DDE-p,p'	75.3	73.7	P/P	52 - 106
2219134	DDT-p,p'	72.0	69.3	P/P	50 - 127
2219134	Delta-BHC	146	138	P/P	56 - 222

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P392378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219134	Deltamethrin	93.9	85.6	P/P	47 - 152
2219134	Dichlobenil	69.7	69.3	P/P	22 - 99.0
2219134	Dicofol	80.4	89.5	P/P	38 - 145
2219134	Endosulfan I	89.7	93.2	P/P	64 - 124
2219134	Endosulfan II	100	100	P/P	52 - 159
2219134	Endosulfan Sulfate	92.5	89.2	P/P	62 - 136
2219134	Endrin	85.7	89.7	P/P	57 - 126
2219134	Endrin Aldehyde	96.3	96.0	P/P	41 - 128
2219134	Endrin Ketone	89.0	87.4	P/P	67 - 129
2219134	Esfenvalerate	77.7	78.4	P/P	50 - 120
2219134	Ethalfluralin	68.5	67.8	P/P	41 - 125
2219134	Fenpropathrin	70.4	97.6	P/P	40 - 202
2219134	Gamma-BHC	108	104	P/P	58 - 180
2219134	Gamma-Chlordane	71.7	72.8	P/P	54 - 103
2219134	Heptachlor	59.2	55.6	P/P	46 - 94.0
2219134	Heptachlor Epoxide	79.8	82.0	P/P	62 - 111
2219134	Hexachlorobenzene	58.5	55.6	P/P	42 - 95.0
2219134	Lambda-Cyhalothrin	92.3	85.3	P/P	37 - 162
2219134	Methoxychlor	83.5	84.7	P/P	52 - 143
2219134	MGK-264	70.7	79.9	P/P	37 - 102
2219134	Mirex	57.5	55.8	P/P	43 - 91.0
2219134	Permethrin	67.3	66.6	P/P	48 - 113
2219134	Phenothrin	61.1	57.2	P/P	30 - 104
2219134	Piperonyl Butoxide	86.6	90.1	P/P	67 - 127
2219134	Prallethrin	62.6	68.5	P/P	28 - 102
2219134	Tau-Fluvalinate	100	98.8	P/P	46 - 174
2219134	Tetramethrin	98.7	111	P/P	28 - 176
2219134	Trans-Nonachlor	75.1	75.5	P/P	51 - 103
2219134	Triclosan Methyl	91.9	94.2	P/P	67 - 116
2219134	Trifluralin	70.0	67.3	P/P	47 - 118
2219378	Aldrin	53.0	54.6	P/P	22 - 127
2219378	Dieldrin	72.5	76.8	P/P	52 - 123
2219378	Kepone	65.4	57.4	P/P	18 - 138

Reference Method: EPA 8270E
Batch ID: P392528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219984	Acetochlor	115	99.7	P/P	66 - 122
2219984	Alachlor	111	93.5	P/P	65 - 122
2219984	Ametryn	114	100	P/P	45 - 173
2219984	Atrazine	113	95.6	P/P	70 - 134
2219984	Atrazine Desethyl	96.6	84.2	P/P	25 - 150
2219984	Azinphos Methyl	136	116	P/P	44 - 174
2219984	Azoxystrobin	157	141	P/P	10 - 268
2219984	Bromacil	107	91.3	P/P	31 - 145
2219984	Butylate	65.2	65.4	P/P	15 - 97.0
2219984	Carbophenothion	99.6	87.5	P/P	42 - 129
2219984	Carfentrazone Ethyl	107	91.8	P/P	62 - 145
2219984	Chlorpyrifos Ethyl	105	94.1	P/P	60 - 124
2219984	Chlorpyrifos Methyl	105	91.4	P/P	66 - 119
2219984	Cyanazine	155	139	P/P	17 - 225

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P392528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219984	Demeton	98.6	89.7	P/P	36 - 142
2219984	Diazinon	109	94.9	P/P	70 - 128
2219984	Difenoconazole	188	159	P/P	33 - 222
2219984	Dimethenamid	105	91.2	P/P	54 - 125
2219984	Disulfoton	96.8	85.6	P/P	49 - 133
2219984	Dithiopyr	109	89.0	P/P	55 - 123
2219984	EPTC	64.9	55.8	P/P	19 - 91.0
2219984	Ethion	85.9	72.6	P/P	13 - 143
2219984	Ethoprop	100	88.5	P/P	49 - 144
2219984	Fenamiphos	89.4	95.8	P/P	32 - 136
2219984	Fenbuconazole	121	108	P/P	73 - 148
2219984	Fipronil	108	90.2	P/P	57 - 129
2219984	Fipronil Desulfinyl	103	89.6	P/P	49 - 127
2219984	Fipronil Sulfide	99.9	85.3	P/P	44 - 127
2219984	Fipronil Sulfone	103	88.6	P/P	35 - 126
2219984	Fluazifop-P-butyl	111	88.5	P/P	67 - 129
2219984	Fludioxonil	108	93.7	P/P	61 - 126
2219984	Flumioxazin	245	210	P/P	38 - 279
2219984	Flutolanil	100	87.4	P/P	55 - 136
2219984	Fluxapyroxad	78.5	64.5	P/P	33 - 140
2219984	Fonofos	100	84.9	P/P	58 - 125
2219984	Hexazinone	112	95.1	P/P	57 - 148
2219984	Imazalil	111	102	P/P	10 - 221
2219984	Iprodione	98.3	86.1	P/P	32 - 140
2219984	Malathion	120	106	P/P	52 - 138
2219984	Metalaxyl	107	95.6	P/P	46 - 134
2219984	Metolachlor	119	98.8	P/P	58 - 122
2219984	Metribuzin	119	106	P/P	16 - 272
2219984	Mevinphos	102	89.5	P/P	45 - 140
2219984	Molinate	84.8	71.5	P/P	41 - 103
2219984	Myclobutanil	95.4	86.1	P/P	60 - 134
2219984	Naled	50.7	45.5	P/P	20 - 113
2219984	Norflurazon	104	87.3	P/P	51 - 123
2219984	Oxadiazon	106	90.5	P/P	44 - 125
2219984	Oxyfluorfen	114	92.6	P/P	66 - 176
2219984	Parathion Ethyl	98.9	97.2	P/P	57 - 132
2219984	Parathion Methyl	115	107	P/P	59 - 156
2219984	Pendimethalin	93.2	80.4	P/P	59 - 129
2219984	Phorate	88.6	80.9	P/P	47 - 136
2219984	Prodiamine	63.4	53.3	P/P	10 - 159
2219984	Prometon	107	93.9	P/P	59 - 127
2219984	Prometryn	113	91.2	P/P	59 - 129
2219984	Pronamide	109	98.9	P/P	65 - 145
2219984	Propiconazole	99.8	82.3	P/P	28 - 165
2219984	Pyriproxyfen	105	85.0	P/P	21 - 180
2219984	Simazine	121	94.1	P/P	63 - 147
2219984	Sulfentrazone	95.0	81.9	P/P	32 - 136
2219984	Tebuconazole	64.7	54.4	P/P	10 - 117
2219984	Terbufos	94.9	84.6	P/P	61 - 131
2219984	Terbuthylazine	112	90.5	P/P	62 - 126

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P392378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219378	Chlordane	87.7	83.7	P/P	47 - 128
2219378	Toxaphene	139	121	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P392377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219256	3-Hydroxycarbofuran	59.1	68.9	P/P	30 - 160
2219256	Aldicarb	50.5	35.8	P/P	30 - 160
2219256	Aldicarb Sulfone	82.9	78.5	P/P	30 - 160
2219256	Aldicarb Sulfoxide	37.4	35.7	P/P	30 - 160
2219256	Carbaryl	30.2	28.8	P/F	30 - 160
2219256	Carbofuran	31.5	30.6	P/P	30 - 160
2219256	Methiocarb	45.9	47.8	P/P	30 - 160
2219256	Methomyl	57.9	52.4	P/P	30 - 160
2219256	Oxamyl	59.6	69.2	P/P	30 - 160
2219256	Propoxur	31.1	32.1	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219194	Acetaminophen	69.9	66.1	P/P	30 - 160
2219194	Acetamiprid	67.7	53.9	P/P	30 - 160
2219194	Afidopyropen	73.2	58.7	P/P	30 - 160
2219194	Benzovindiflupyr	68.1	62.2	P/P	30 - 160
2219194	Carbamazepine	56.2	52.8	P/P	30 - 160
2219194	Clothianidin	69.1	75.2	P/P	30 - 160
2219194	Dinotefuran	94.9	86.4	P/P	30 - 160
2219194	Diuron	37.5	34.5	P/P	30 - 160
2219194	Fenuron	50.3	48.0	P/P	30 - 160
2219194	Hydrocodone	70.2	67.0	P/P	30 - 160
2219194	Ibuprofen	90.3	87.2	P/P	30 - 160
2219194	Imidacloprid	120	122	P/P	30 - 160
2219194	Linuron	53.4	52.0	P/P	30 - 160
2219194	Mandestrobin	69.9	67.9	P/P	30 - 160
2219194	MCPP	77.5	75.7	P/P	30 - 160
2219194	Naproxen	66.2	62.8	P/P	30 - 160
2219194	Primidone	77.4	77.9	P/P	30 - 160
2219194	Pyraclostrobin	73.3	65.9	P/P	30 - 160
2219194	Thiamethoxam	78.3	75.1	P/P	30 - 160
2219194	Tolfenpyrad	53.6	55.5	P/P	30 - 160
2219194	Triclopyr	107	107	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219257	Acesulfame K	30.0	39.7	F/F	40 - 150
2219257	AMPA	73.8	98.7	P/P	40 - 150
2219257	Endothall	68.1	87.7	P/P	40 - 150
2219257	Glufosinate	60.7	82.1	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P392508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219257	Glyphosate	64.4	81.9	P/P	40 - 140
2219257	Sucralose	71.8	80.1	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P392591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2219363	Fluoride	99.4	102	P/P	94 - 107

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392474

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219363	Turbidity	1.93	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P392522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217629	Calcium	2.31	Spike	P	0 - 20
2217629	Chromium	1.34	Spike	P	0 - 20
2217629	Iron	2.12	Spike	P	0 - 20
2217629	Magnesium	2.72	Spike	P	0 - 20
2217629	Manganese	0.685	Spike	P	0 - 20
2217629	Zinc	0.0614	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P392522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2217629	Aluminum	4.63	Spike	P	0 - 20
2217629	Antimony	1.61	Spike	P	0 - 20
2217629	Arsenic	3.76	Spike	P	0 - 20
2217629	Beryllium	5.70	Spike	P	0 - 20
2217629	Cadmium	2.47	Spike	P	0 - 20
2217629	Copper	0.0114	Spike	P	0 - 20
2217629	Lead	1.38	Spike	P	0 - 20
2217629	Nickel	0.659	Spike	P	0 - 20
2217629	Selenium	2.58	Spike	P	0 - 20
2217629	Silver	2.04	Spike	P	0 - 20
2217629	Thallium	3.07	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220312	Bromide	0.421	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219454	O-Phosphate-P	2.73	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P392378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219134	Alpha-BHC	3.59	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P392378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219134	Alpha-Chlordane	2.72	Spike	P	0 - 30
2219134	Beta-BHC	7.42	Spike	P	0 - 30
2219134	Beta-Cyfluthrin	10.5	Spike	P	0 - 30
2219134	Bifenthrin	1.58	Spike	P	0 - 30
2219134	Carbophenothion	4.86	Spike	P	0 - 30
2219134	Chlorothalonil	28.6	Spike	P	0 - 30
2219134	Cis-Nonachlor	3.24	Spike	P	0 - 30
2219134	Cypermethrin	2.59	Spike	P	0 - 30
2219134	Dacthal	0.386	Spike	P	0 - 30
2219134	DDD-p,p'	5.65	Spike	P	0 - 30
2219134	DDE-p,p'	2.13	Spike	P	0 - 30
2219134	DDT-p,p'	3.83	Spike	P	0 - 30
2219134	Delta-BHC	5.96	Spike	P	0 - 30
2219134	Deltamethrin	9.27	Spike	P	0 - 30
2219134	Dichlobenil	0.646	Spike	P	0 - 30
2219134	Dicofol	10.7	Spike	P	0 - 30
2219134	Endosulfan I	3.87	Spike	P	0 - 30
2219134	Endosulfan II	0.140	Spike	P	0 - 30
2219134	Endosulfan Sulfate	3.68	Spike	P	0 - 30
2219134	Endrin	4.53	Spike	P	0 - 30
2219134	Endrin Aldehyde	0.300	Spike	P	0 - 30
2219134	Endrin Ketone	1.71	Spike	P	0 - 30
2219134	Esfenvalerate	0.892	Spike	P	0 - 30
2219134	Ethalfluralin	0.966	Spike	P	0 - 30
2219134	Fenpropathrin	32.4	Spike	F	0 - 30
2219134	Gamma-BHC	3.82	Spike	P	0 - 30
2219134	Gamma-Chlordane	1.43	Spike	P	0 - 30
2219134	Heptachlor	6.31	Spike	P	0 - 30
2219134	Heptachlor Epoxide	2.80	Spike	P	0 - 30
2219134	Hexachlorobenzene	5.05	Spike	P	0 - 30
2219134	Lambda-Cyhalothrin	7.96	Spike	P	0 - 30
2219134	Methoxychlor	1.40	Spike	P	0 - 30
2219134	MGK-264	12.2	Spike	P	0 - 30
2219134	Mirex	3.02	Spike	P	0 - 30
2219134	Permethrin	1.03	Spike	P	0 - 30
2219134	Phenothrin	6.48	Spike	P	0 - 30
2219134	Piperonyl Butoxide	3.90	Spike	P	0 - 30
2219134	Prallethrin	8.93	Spike	P	0 - 30
2219134	Tau-Fluvalinate	1.34	Spike	P	0 - 30
2219134	Tetramethrin	11.4	Spike	P	0 - 30
2219134	Trans-Nonachlor	0.439	Spike	P	0 - 30
2219134	Triclosan Methyl	2.47	Spike	P	0 - 30
2219134	Trifluralin	3.88	Spike	P	0 - 30
2219378	Aldrin	2.99	Spike	P	0 - 30
2219378	Dieldrin	5.87	Spike	P	0 - 30
2219378	Kepone	12.9	Spike	P	0 - 30
LFB	Aldrin	3.43	LCS	P	0 - 30
LFB	Alpha-BHC	6.08	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.89	LCS	P	0 - 30
LFB	Beta-BHC	2.94	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	1.88	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P392378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Bifenthrin	10.5	LCS	P	0 - 30
LFB	Carbophenothion	2.60	LCS	P	0 - 30
LFB	Chlorothalonil	36.1	LCS	F	0 - 30
LFB	Cis-Nonachlor	0.102	LCS	P	0 - 30
LFB	Cypermethrin	7.33	LCS	P	0 - 30
LFB	Dacthal	0.818	LCS	P	0 - 30
LFB	DDD-p,p'	1.64	LCS	P	0 - 30
LFB	DDE-p,p'	7.22	LCS	P	0 - 30
LFB	DDT-p,p'	1.11	LCS	P	0 - 30
LFB	Delta-BHC	0.350	LCS	P	0 - 30
LFB	Deltamethrin	12.8	LCS	P	0 - 30
LFB	Dichlobenil	1.22	LCS	P	0 - 30
LFB	Dicofol	2.48	LCS	P	0 - 30
LFB	Dieldrin	7.68	LCS	P	0 - 30
LFB	Endosulfan I	0.816	LCS	P	0 - 30
LFB	Endosulfan II	3.91	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.91	LCS	P	0 - 30
LFB	Endrin	3.49	LCS	P	0 - 30
LFB	Endrin Aldehyde	11.7	LCS	P	0 - 30
LFB	Endrin Ketone	2.88	LCS	P	0 - 30
LFB	Esfenvalerate	9.31	LCS	P	0 - 30
LFB	Ethalfluralin	1.96	LCS	P	0 - 30
LFB	Fenpropathrin	25.1	LCS	P	0 - 30
LFB	Gamma-BHC	1.17	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.16	LCS	P	0 - 30
LFB	Heptachlor	8.46	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.06	LCS	P	0 - 30
LFB	Hexachlorobenzene	8.99	LCS	P	0 - 30
LFB	Kepone	18.7	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	5.03	LCS	P	0 - 30
LFB	Methoxychlor	1.38	LCS	P	0 - 30
LFB	MGK-264	2.39	LCS	P	0 - 30
LFB	Mirex	11.6	LCS	P	0 - 30
LFB	Permethrin	7.44	LCS	P	0 - 30
LFB	Phenothrin	16.1	LCS	P	0 - 30
LFB	Piperonyl Butoxide	1.21	LCS	P	0 - 30
LFB	Prallethrin	0.878	LCS	P	0 - 30
LFB	Tau-Fluvalinate	8.76	LCS	P	0 - 30
LFB	Tetramethrin	3.12	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.71	LCS	P	0 - 30
LFB	Triclosan Methyl	0.797	LCS	P	0 - 30
LFB	Trifluralin	2.88	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P392528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219984	Acetochlor	14.3	Spike	P	0 - 30
2219984	Alachlor	16.8	Spike	P	0 - 30
2219984	Ametryn	13.2	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P392528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219984	Atrazine	13.9	Spike	P	0 - 30
2219984	Atrazine Desethyl	13.7	Spike	P	0 - 30
2219984	Azinphos Methyl	15.6	Spike	P	0 - 30
2219984	Azoxystrobin	11.1	Spike	P	0 - 30
2219984	Bromacil	15.4	Spike	P	0 - 30
2219984	Butylate	0.261	Spike	P	0 - 30
2219984	Carbophenothion	12.9	Spike	P	0 - 30
2219984	Carfentrazone Ethyl	15.5	Spike	P	0 - 30
2219984	Chlorpyrifos Ethyl	10.6	Spike	P	0 - 30
2219984	Chlorpyrifos Methyl	13.7	Spike	P	0 - 30
2219984	Cyanazine	10.9	Spike	P	0 - 30
2219984	Demeton	9.47	Spike	P	0 - 30
2219984	Diazinon	14.2	Spike	P	0 - 30
2219984	Difenoconazole	16.6	Spike	P	0 - 30
2219984	Dimethenamid	13.9	Spike	P	0 - 30
2219984	Disulfoton	12.2	Spike	P	0 - 30
2219984	Dithiopyr	20.2	Spike	P	0 - 30
2219984	EPTC	15.1	Spike	P	0 - 30
2219984	Ethion	16.8	Spike	P	0 - 30
2219984	Ethoprop	12.7	Spike	P	0 - 30
2219984	Fenamiphos	6.86	Spike	P	0 - 30
2219984	Fenbuconazole	12.0	Spike	P	0 - 30
2219984	Fipronil	18.3	Spike	P	0 - 30
2219984	Fipronil Desulfinyl	13.5	Spike	P	0 - 30
2219984	Fipronil Sulfide	15.7	Spike	P	0 - 30
2219984	Fipronil Sulfone	15.0	Spike	P	0 - 30
2219984	Fluazifop-P-butyl	22.7	Spike	P	0 - 30
2219984	Fludioxonil	13.7	Spike	P	0 - 30
2219984	Flumioxazin	15.6	Spike	P	0 - 30
2219984	Flutolanil	13.8	Spike	P	0 - 30
2219984	Fluxapyroxad	19.6	Spike	P	0 - 30
2219984	Fonofos	16.6	Spike	P	0 - 30
2219984	Hexazinone	14.9	Spike	P	0 - 30
2219984	Imazalil	8.39	Spike	P	0 - 30
2219984	Iprodione	13.3	Spike	P	0 - 30
2219984	Malathion	12.7	Spike	P	0 - 30
2219984	Metalaxyl	11.3	Spike	P	0 - 30
2219984	Metolachlor	18.7	Spike	P	0 - 30
2219984	Metribuzin	11.6	Spike	P	0 - 30
2219984	Mevinphos	13.4	Spike	P	0 - 30
2219984	Molinate	17.0	Spike	P	0 - 30
2219984	Myclobutanil	10.2	Spike	P	0 - 30
2219984	Naled	10.9	Spike	P	0 - 30
2219984	Norflurazon	17.1	Spike	P	0 - 30
2219984	Oxadiazon	16.0	Spike	P	0 - 30
2219984	Oxyfluorfen	20.4	Spike	P	0 - 30
2219984	Parathion Ethyl	1.72	Spike	P	0 - 30
2219984	Parathion Methyl	7.10	Spike	P	0 - 30
2219984	Pendimethalin	14.6	Spike	P	0 - 30
2219984	Phorate	9.06	Spike	P	0 - 30
2219984	Prodiamine	17.3	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P392528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219984	Prometon	13.3	Spike	P	0 - 30
2219984	Prometryn	21.7	Spike	P	0 - 30
2219984	Pronamide	9.90	Spike	P	0 - 30
2219984	Propiconazole	19.3	Spike	P	0 - 30
2219984	Pyriproxyfen	21.2	Spike	P	0 - 30
2219984	Simazine	12.5	Spike	P	0 - 30
2219984	Sulfentrazone	14.8	Spike	P	0 - 30
2219984	Tebuconazole	17.3	Spike	P	0 - 30
2219984	Terbufos	11.5	Spike	P	0 - 30
2219984	Terbuthylazine	21.4	Spike	P	0 - 30
LFB	Acetochlor	3.52	LCS	P	0 - 30
LFB	Alachlor	2.43	LCS	P	0 - 30
LFB	Ametryn	1.50	LCS	P	0 - 30
LFB	Atrazine	3.18	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.64	LCS	P	0 - 30
LFB	Azinphos Methyl	20.3	LCS	P	0 - 30
LFB	Azoxystrobin	14.1	LCS	P	0 - 30
LFB	Bromacil	8.59	LCS	P	0 - 30
LFB	Butylate	5.28	LCS	P	0 - 30
LFB	Carbophenothion	6.32	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	7.36	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.53	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.99	LCS	P	0 - 30
LFB	Cyanazine	8.25	LCS	P	0 - 30
LFB	Demeton	3.20	LCS	P	0 - 30
LFB	Diazinon	6.02	LCS	P	0 - 30
LFB	Difenoconazole	7.09	LCS	P	0 - 30
LFB	Dimethenamid	5.70	LCS	P	0 - 30
LFB	Disulfoton	4.66	LCS	P	0 - 30
LFB	Dithiopyr	6.92	LCS	P	0 - 30
LFB	EPTC	1.68	LCS	P	0 - 30
LFB	Ethion	4.90	LCS	P	0 - 30
LFB	Ethoprop	2.70	LCS	P	0 - 30
LFB	Fenamiphos	6.13	LCS	P	0 - 30
LFB	Fenbuconazole	5.89	LCS	P	0 - 30
LFB	Fipronil	5.63	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	4.46	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.45	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.74	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	3.78	LCS	P	0 - 30
LFB	Fludioxonil	8.43	LCS	P	0 - 30
LFB	Flumioxazin	5.88	LCS	P	0 - 30
LFB	Flutolanil	5.88	LCS	P	0 - 30
LFB	Fluxapyroxad	10.8	LCS	P	0 - 30
LFB	Fonofos	1.79	LCS	P	0 - 30
LFB	Hexazinone	0.104	LCS	P	0 - 30
LFB	Imazalil	9.88	LCS	P	0 - 30
LFB	Iprodione	1.95	LCS	P	0 - 30
LFB	Malathion	3.59	LCS	P	0 - 30
LFB	Metalaxyl	6.28	LCS	P	0 - 30
LFB	Metolachlor	1.29	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P392528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Metribuzin	16.4	LCS	P	0 - 30
LFB	Mevinphos	2.15	LCS	P	0 - 30
LFB	Molinate	3.28	LCS	P	0 - 30
LFB	Myclobutanil	2.98	LCS	P	0 - 30
LFB	Naled	3.94	LCS	P	0 - 30
LFB	Norflurazon	4.97	LCS	P	0 - 30
LFB	Oxadiazon	3.35	LCS	P	0 - 30
LFB	Oxyfluorfen	1.97	LCS	P	0 - 30
LFB	Parathion Ethyl	13.3	LCS	P	0 - 30
LFB	Parathion Methyl	0.510	LCS	P	0 - 30
LFB	Pendimethalin	7.86	LCS	P	0 - 30
LFB	Phorate	2.12	LCS	P	0 - 30
LFB	Prodiamine	5.11	LCS	P	0 - 30
LFB	Prometon	2.52	LCS	P	0 - 30
LFB	Prometryn	9.01	LCS	P	0 - 30
LFB	Pronamide	5.50	LCS	P	0 - 30
LFB	Propiconazole	6.47	LCS	P	0 - 30
LFB	Pyriproxyfen	0.241	LCS	P	0 - 30
LFB	Simazine	4.90	LCS	P	0 - 30
LFB	Sulfentrazone	10.4	LCS	P	0 - 30
LFB	Tebuconazole	3.22	LCS	P	0 - 30
LFB	Terbufos	3.98	LCS	P	0 - 30
LFB	Terbuthylazine	6.04	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P392378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219378	Chlordane	4.22	Spike	P	0 - 30
2219378	Toxaphene	13.5	Spike	P	0 - 30
LFB	Chlordane	5.28	LCS	P	0 - 30
LFB	Toxaphene	7.04	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P392377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219256	3-Hydroxycarbofuran	15.2	Spike	P	0 - 30
2219256	Aldicarb	34.0	Spike	F	0 - 30
2219256	Aldicarb Sulfone	5.45	Spike	P	0 - 30
2219256	Aldicarb Sulfoxide	4.76	Spike	P	0 - 30
2219256	Carbaryl	4.83	Spike	P	0 - 30
2219256	Carbofuran	3.04	Spike	P	0 - 30
2219256	Methiocarb	4.11	Spike	P	0 - 30
2219256	Methomyl	9.87	Spike	P	0 - 30
2219256	Oxamyl	14.8	Spike	P	0 - 30
2219256	Propoxur	3.11	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P392448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219194	2,4-D	3.93	Spike	P	0 - 30
2219194	Acetaminophen	5.62	Spike	P	0 - 30
2219194	Acetamiprid	22.8	Spike	P	0 - 30
2219194	Afidopyropen	21.9	Spike	P	0 - 30
2219194	Bentazon	3.54	Spike	P	0 - 30
2219194	Benzovindiflupyr	9.10	Spike	P	0 - 30
2219194	Carbamazepine	6.21	Spike	P	0 - 30
2219194	Clothianidin	8.39	Spike	P	0 - 30
2219194	Dinotefuran	9.33	Spike	P	0 - 30
2219194	Diuron	7.53	Spike	P	0 - 30
2219194	Fenuron	4.78	Spike	P	0 - 30
2219194	Fluridone	1.55	Spike	P	0 - 30
2219194	Hydrocodone	4.64	Spike	P	0 - 30
2219194	Ibuprofen	3.39	Spike	P	0 - 30
2219194	Imazapyr	1.93	Spike	P	0 - 30
2219194	Imidacloprid	1.58	Spike	P	0 - 30
2219194	Linuron	2.68	Spike	P	0 - 30
2219194	Mandestrobin	2.94	Spike	P	0 - 30
2219194	MCPP	1.45	Spike	P	0 - 30
2219194	Naproxen	5.27	Spike	P	0 - 30
2219194	Primidone	0.635	Spike	P	0 - 30
2219194	Pyraclostrobin	10.5	Spike	P	0 - 30
2219194	Thiamethoxam	4.07	Spike	P	0 - 30
2219194	Tolfenpyrad	3.33	Spike	P	0 - 30
2219194	Triclopyr	0.577	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P392508

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219257	Acesulfame K	27.8	Spike	P	0 - 30
2219257	AMPA	28.9	Spike	P	0 - 30
2219257	Endothall	25.2	Spike	P	0 - 30
2219257	Glufosinate	29.9	Spike	P	0 - 30
2219257	Glyphosate	24.0	Spike	P	0 - 30
2219257	Sucralose	2.47	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P392589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219363	Total Alkalinity	1.76	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P392591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2219363	Fluoride	1.91	Spike	P	0 - 2.8

Quality Assurance Report
Precision

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2219374
Field Sample ID: G2SD0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	63.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	46.5	P	30 - 160
EPA 8321B	Diuron-d6	42.5	P	30 - 160
EPA 8321B	Endothall-d6	62.0	P	40 - 160
EPA 8321B	Endothall-d6	62.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	40 - 160
EPA 8321B	Ibuprofen-d3	65.9	P	30 - 160
EPA 8321B	Primidone-d5	64.2	P	30 - 160
EPA 8321B	Sucralose-d6	97.7	P	30 - 160
EPA 8321B	Sucralose-d6	97.7	P	30 - 160

Lab Sample ID: 2219375
Field Sample ID: G2SD0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	Acetaminophen-d4	63.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.8	P	30 - 160
EPA 8321B	Diuron-d6	51.8	P	30 - 160
EPA 8321B	Endothall-d6	88.2	P	40 - 160
EPA 8321B	Endothall-d6	88.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	40 - 160
EPA 8321B	Ibuprofen-d3	86.0	P	30 - 160
EPA 8321B	Primidone-d5	77.6	P	30 - 160
EPA 8321B	Sucralose-d6	75.1	P	30 - 160
EPA 8321B	Sucralose-d6	75.1	P	30 - 160

Lab Sample ID: 2219376
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	32.4	P	30 - 160

Lab Sample ID: 2219377
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.0	P	30 - 160
EPA 8321B	Diuron-d6	42.5	P	30 - 160
EPA 8321B	Endothall-d6	98.8	P	40 - 160
EPA 8321B	Endothall-d6	98.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	65.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	65.5	P	40 - 160
EPA 8321B	Ibuprofen-d3	80.2	P	30 - 160
EPA 8321B	Primidone-d5	70.3	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2219378
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	78.7	P	40 - 123
EPA 8270E	Decachlorobiphenyl	57.1	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	39.2	P	31 - 100
EPA 8270E	Tetrachloro-m-xylene	39.7	P	33 - 102
EPA 8276	Decachlorobiphenyl	47.5	P	29 - 92.0
EPA 8276	PCNB	60.9	P	43 - 134

Lab Sample ID: 2219379
Field Sample ID: G2SD0026

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	99.3	P	73 - 135
EPA 8270E	Terbufos-d10	81.6	P	58 - 130

Lab Sample ID: 2219380
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	92.6	P	40 - 123
EPA 8270E	Decachlorobiphenyl	78.7	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	54.4	P	31 - 100
EPA 8270E	Tetrachloro-m-xylene	55.4	P	33 - 102

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A103090
Included Lab Sample IDs: 2219363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A103092
Included Lab Sample IDs: 2219365

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.2	98.5	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A103130
Included Lab Sample IDs: 2219363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.2	96.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A103130
Included Lab Sample IDs: 2219363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A103136
Included Lab Sample IDs: 2219376

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	115	118	P/P	60 - 150
Aldicarb	90.3	106	P/P	60 - 150
Aldicarb Sulfone	111	111	P/P	50 - 150
Aldicarb Sulfoxide	119	112	P/P	50 - 150
Carbaryl	111	113	P/P	60 - 150
Carbofuran	102	110	P/P	50 - 150
Methiocarb	114	102	P/P	50 - 150
Methomyl	109	112	P/P	50 - 150
Oxamyl	109	99.8	P/P	50 - 150
Propoxur	112	109	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A103146
Included Lab Sample IDs: 2219381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	102	P/P	90 - 110
Chromium	99.5	100	P/P	90 - 110
Iron	100	104	P/P	90 - 110
Magnesium	100	102	P/P	90 - 110
Manganese	99.7	103	P/P	90 - 110
Zinc	104	104	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A103148
Included Lab Sample IDs: 2219378, 2219380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.9		P	80 - 120
Dieldrin	100		P	80 - 120
Kepone	84.0		P	80 - 120

Reference Method: EPA 8276
Run ID: A103156
Included Lab Sample IDs: 2219378

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	91.4		P	80 - 120
Toxaphene	93.5		P	80 - 120

Reference Method: EPA 8270E
Run ID: A103170
Included Lab Sample IDs: 2219378, 2219380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	94.6		P	80 - 120
Beta-BHC	93.3		P	80 - 120
Beta-Cyfluthrin	97.5		P	80 - 120
Bifenthrin	97.7		P	80 - 120
Carbophenothion	93.6		P	80 - 120
Chlorothalonil	81.7		P	80 - 120
Cis-Nonachlor	94.3		P	80 - 120
Cypermethrin	91.8		P	80 - 120
Dacthal	97.5		P	80 - 120
DDD-p,p'	94.4		P	80 - 120
DDE-p,p'	100		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	94.6		P	80 - 120
Deltamethrin	97.3		P	80 - 120
Dichlobenil	98.5		P	80 - 120
Dicofol	90.1		P	80 - 120
Endosulfan I	92.3		P	80 - 120
Endosulfan II	92.8		P	80 - 120
Endosulfan Sulfate	97.1		P	80 - 120
Endrin	96.0		P	80 - 120
Endrin Aldehyde	109		P	80 - 120
Endrin Ketone	101		P	80 - 120
Esfenvalerate	88.1		P	80 - 120
Ethalfluralin	95.9		P	80 - 120
Fenpropathrin	94.5		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	93.5		P	80 - 120
Heptachlor	92.0		P	80 - 120
Heptachlor Epoxide	93.6		P	80 - 120
Hexachlorobenzene	104		P	80 - 120
Lambda-Cyhalothrin	91.8		P	80 - 120
Methoxychlor	100		P	80 - 120
MGK-264	91.2		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A103170
Included Lab Sample IDs: 2219378, 2219380

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	97.7		P	80 - 120
Permethrin	90.6		P	80 - 120
Phenothrin	94.5		P	80 - 120
Piperonyl Butoxide	89.0		P	80 - 120
Prallethrin	84.3		P	80 - 120
Tau-Fluvalinate	92.1		P	80 - 120
Tetramethrin	94.8		P	80 - 120
Trans-Nonachlor	95.3		P	80 - 120
Triclosan Methyl	98.5		P	80 - 120
Trifluralin	97.1		P	80 - 120

Reference Method: EPA 8270E
Run ID: A103174
Included Lab Sample IDs: 2219379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.5		P	80 - 120
Alachlor	94.8		P	80 - 120
Ametryn	103		P	80 - 120
Atrazine	99.1		P	80 - 120
Atrazine Desethyl	102		P	80 - 120
Bromacil	108		P	80 - 120
Butylate	90.7		P	80 - 120
Carbophenothion	100		P	80 - 120
Carfentrazone Ethyl	95.5		P	80 - 120
Chlorpyrifos Ethyl	104		P	80 - 120
Chlorpyrifos Methyl	97.9		P	80 - 120
Demeton	94.8		P	80 - 120
Diazinon	89.9		P	80 - 120
Dimethenamid	94.6		P	80 - 120
Disulfoton	105		P	80 - 120
Dithiopyr	96.7		P	80 - 120
EPTC	95.4		P	80 - 120
Ethion	98.7		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	94.0		P	80 - 120
Fenbuconazole	86.8		P	80 - 120
Fipronil	95.6		P	80 - 120
Fipronil Desulfinyl	99.9		P	80 - 120
Fipronil Sulfide	114		P	80 - 120
Fipronil Sulfone	118		P	80 - 120
Fluazifop-P-butyl	92.4		P	80 - 120
Fludioxonil	103		P	80 - 120
Flutolanil	97.5		P	80 - 120
Fonofos	105		P	80 - 120
Hexazinone	105		P	80 - 120
Imazalil	105		P	80 - 120
Iprodione	109		P	80 - 120
Malathion	96.3		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	98.8		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A103174
Included Lab Sample IDs: 2219379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Metribuzin	97.8		P	80 - 120
Mevinphos	89.6		P	80 - 120
Molinate	89.6		P	80 - 120
Myclobutanil	105		P	80 - 120
Naled	118		P	80 - 120
Norflurazon	98.6		P	80 - 120
Oxadiazon	102		P	80 - 120
Oxyfluorfen	102		P	80 - 120
Parathion Ethyl	90.8		P	80 - 120
Parathion Methyl	90.9		P	80 - 120
Pendimethalin	96.6		P	80 - 120
Phorate	102		P	80 - 120
Prodiamine	103		P	80 - 120
Prometon	89.3		P	80 - 120
Prometryn	95.6		P	80 - 120
Pronamide	88.7		P	80 - 120
Propiconazole	105		P	80 - 120
Simazine	96.4		P	80 - 120
Tebuconazole	106		P	80 - 120
Terbufos	92.9		P	80 - 120
Terbuthylazine	99.3		P	80 - 120

Reference Method: EPA 8321B
Run ID: A103179
Included Lab Sample IDs: 2219374, 2219375, 2219377

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	70.1	63.0	P/P	60 - 160
Acesulfame K	87.0	70.1	P/P	60 - 160
AMPA	71.8	88.5	P/P	60 - 160
AMPA	88.5	95.2	P/P	60 - 160
Endothall	86.8	90.1	P/P	60 - 160
Endothall	90.1	97.6	P/P	60 - 160
Glufosinate	84.6	88.1	P/P	60 - 160
Glufosinate	88.1	86.2	P/P	60 - 160
Glyphosate	104	79.7	P/P	60 - 160
Glyphosate	79.7	99.3	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A103185
Included Lab Sample IDs: 2219374, 2219375, 2219377

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	110	P/P	50 - 150
Acetaminophen	74.3	87.3	P/P	60 - 160
Acetamiprid	104	93.5	P/P	50 - 150
Afidopyropen	93.1	93.7	P/P	50 - 150
Bentazon	101	95.3	P/P	50 - 160
Benzovindiflupyr	105	101	P/P	50 - 160
Carbamazepine	102	102	P/P	60 - 150
Clothianidin	91.3	98.1	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A103185
Included Lab Sample IDs: 2219374, 2219375, 2219377

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dinotefuran	93.2	89.6	P/P	50 - 150
Diuron	99.3	99.3	P/P	60 - 160
Fenuron	90.9	83.2	P/P	60 - 150
Fluridone	105	99.5	P/P	60 - 160
Hydrocodone	99.9	91.5	P/P	60 - 150
Ibuprofen	81.9	85.6	P/P	50 - 160
Imazapyr	103	103	P/P	50 - 160
Imidacloprid	100	101	P/P	60 - 150
Linuron	95.3	100	P/P	60 - 150
Mandestrobin	114	111	P/P	50 - 150
MCPP	115	111	P/P	50 - 150
Naproxen	100	88.4	P/P	50 - 160
Primidone	97.7	98.0	P/P	60 - 150
Pyraclostrobin	98.8	95.5	P/P	60 - 150
Thiamethoxam	86.8	83.4	P/P	50 - 150
Tolfenpyrad	123	126	P/P	60 - 150
Triclopyr	127	112	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A103189
Included Lab Sample IDs: 2219374, 2219375, 2219377

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	91.3	93.0	P/P	60 - 160
Sucralose	91.4	91.3	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A103204
Included Lab Sample IDs: 2219381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.0	99.4	P/P	90 - 110
Antimony	100	101	P/P	90 - 110
Arsenic	100	100	P/P	90 - 110
Beryllium	101	107	P/P	90 - 110
Cadmium	97.1	97.0	P/P	90 - 110
Copper	105	105	P/P	90 - 110
Lead	100	99.9	P/P	90 - 110
Nickel	97.5	98.7	P/P	90 - 110
Selenium	100	100	P/P	90 - 110
Silver	104	104	P/P	90 - 110
Thallium	101	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A103266
Included Lab Sample IDs: 2219363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	96.0	96.5	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A103335
Included Lab Sample IDs: 2219379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Azinphos Methyl	120*		F	80 - 120
Azoxystrobin	82.6		P	80 - 120
Cyanazine	88.0		P	80 - 120
Difenoconazole	89.3		P	80 - 120
Flumioxazin	88.9		P	80 - 120
Fluxapyroxad	95.0		P	80 - 120
Pyriproxyfen	116		P	80 - 120
Sulfentrazone	98.5		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 180.1 Rev. 2.0	Turbidity							1.93	
EPA 200.7 Rev. 4.4	Calcium	105							2.31
	Chromium	102		98.9	100				1.34
	Iron	105		106	109				2.12
	Magnesium	104							2.72
	Manganese	101		98.2	97.4				0.685
	Zinc	106		105	105				0.0614
EPA 200.8 Rev. 5.4	Aluminum	94.7		103	108				4.63
	Antimony	102		106	108				1.61
	Arsenic	97.6		104	108				3.76
	Beryllium	88.8		112	119				5.70
	Cadmium	95.2		91.2	93.5				2.47
	Copper	100		111	111				0.0114
	Lead	100		105	106				1.38
	Nickel	95.4		99.3	100				0.659
	Selenium	96.0		102	105				2.58
	Silver	103		96.2	98.2				2.04
	Thallium	99.6		103	106				3.07
EPA 300.0 Rev. 2.1	Bromide	99.0		97.8	97.3	90.3			0.421
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1		90.3	92.8				2.73
EPA 8270E	Acetochlor	108	104	115	99.7		3.52		14.3
	Alachlor	107	105	111	93.5		2.43		16.8
	Aldrin	52.3	50.6	53.0	54.6		3.43		2.99
	Alpha-BHC	85.4	80.3	81.9	84.9		6.08		3.59
	Alpha-Chlordane	73.3	74.7	76.2	78.3		1.89		2.72
	Ametryn	104	102	114	100		1.50		13.2
	Atrazine	106	103	113	95.6		3.18		13.9
	Atrazine Desethyl	88.1	84.1	96.6	84.2		4.64		13.7
	Azinphos Methyl	160	130	136	116		20.3		15.6
	Azoxystrobin	133	153	157	141		14.1		11.1
	Beta-BHC	92.8	95.6	108	99.9		2.94		7.42
	Beta-Cyfluthrin	82.0	83.5	98.1	88.3		1.88		10.5
	Bifenthrin	61.1	67.9	70.4	69.3		10.5		1.58
	Bromacil	93.7	102	107	91.3		8.59		15.4
	Butylate	63.3	66.8	65.2	65.4		5.28		0.261
	Carbophenothion	65.0	63.4	84.2	80.2		2.60		4.86
	Carbophenothion	83.0	77.9	99.6	87.5		6.32		12.9
	Carfentrazone Ethyl	101	94.2	107	91.8		7.36		15.5
	Chlorothalonil	67.4	46.8	54.2	72.3		36.1		28.6
	Chlorpyrifos Ethyl	89.3	86.2	105	94.1		3.53		10.6
	Chlorpyrifos Methyl	95.0	93.1	105	91.4		1.99		13.7
	Cis-Nonachlor	76.8	76.7	81.1	83.8		0.102		3.24
	Cyanazine	138	150	155	139		8.25		10.9
	Cypermethrin	67.9	73.1	82.6	80.5		7.33		2.59
	Dacthal	87.6	86.9	91.1	90.8		0.818		0.386
	DDD-p,p'	82.6	84.0	84.7	89.6		1.64		5.65
	DDE-p,p'	68.8	74.0	75.3	73.7		7.22		2.13
	DDT-p,p'	73.7	74.5	72.0	69.3		1.11		3.83
	Delta-BHC	113	113	146	138		0.350		5.96
	Deltamethrin	68.7	78.1	93.9	85.6		12.8		9.27
	Demeton	93.0	90.0	98.6	89.7		3.20		9.47
	Diazinon	104	98.1	109	94.9		6.02		14.2
	Dichlobenil	79.7	80.7	69.7	69.3		1.22		0.646
	Dicofol	91.7	94.0	80.4	89.5		2.48		10.7

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Dieldrin	72.1	66.8	72.5	76.8	7.68		5.87
	Difenoconazole	159	171	188	159	7.09		16.6
	Dimethenamid	101	95.1	105	91.2	5.70		13.9
	Disulfoton	88.6	84.5	96.8	85.6	4.66		12.2
	Dithiopyr	92.5	86.3	109	89.0	6.92		20.2
	Endosulfan I	84.9	84.2	89.7	93.2	0.816		3.87
	Endosulfan II	93.9	90.3	100	100	3.91		0.140
	Endosulfan Sulfate	88.2	90.8	92.5	89.2	2.91		3.68
	Endrin	85.9	83.0	85.7	89.7	3.49		4.53
	Endrin Aldehyde	109	96.9	96.3	96.0	11.7		0.300
	Endrin Ketone	86.5	89.0	89.0	87.4	2.88		1.71
	EPTC	64.7	65.8	64.9	55.8	1.68		15.1
	Esfenvalerate	63.4	69.6	77.7	78.4	9.31		0.892
	Ethalfluralin	72.6	71.2	68.5	67.8	1.96		0.966
	Ethion	82.0	78.1	85.9	72.6	4.90		16.8
	Ethoprop	94.3	91.8	100	88.5	2.70		12.7
	Fenamiphos	103	96.9	89.4	95.8	6.13		6.86
	Fenbuconazole	118	112	121	108	5.89		12.0
	Fenpropathrin	73.1	94.1	70.4	97.6	25.1		32.4
	Fipronil	96.0	90.8	108	90.2	5.63		18.3
	Fipronil Desulfinyl	97.4	93.2	103	89.6	4.46		13.5
	Fipronil Sulfide	87.2	85.1	99.9	85.3	2.45		15.7
	Fipronil Sulfone	94.0	89.6	103	88.6	4.74		15.0
	Fluazifop-P-butyl	89.2	85.9	111	88.5	3.78		22.7
	Fludioxonil	101	92.5	108	93.7	8.43		13.7
	Flumioxazin	198	210	245	210	5.88		15.6
	Flutolanil	91.8	86.5	100	87.4	5.88		13.8
	Fluxapyroxad	70.0	78.0	78.5	64.5	10.8		19.6
	Fonofos	94.1	92.4	100	84.9	1.79		16.6
	Gamma-BHC	94.5	93.4	108	104	1.17		3.82
	Gamma-Chlordane	66.8	68.9	71.7	72.8	3.16		1.43
	Heptachlor	58.1	63.2	59.2	55.6	8.46		6.31
	Heptachlor Epoxide	78.3	79.2	79.8	82.0	1.06		2.80
	Hexachlorobenzene	59.4	65.0	58.5	55.6	8.99		5.05
	Hexazinone	97.8	97.9	112	95.1	0.104		14.9
	Imazalil	113	102	111	102	9.88		8.39
	Iprodione	91.7	89.9	98.3	86.1	1.95		13.3
	Kepone	74.7	90.0	65.4	57.4	18.7		12.9
	Lambda-Cyhalothrin	73.4	77.1	92.3	85.3	5.03		7.96
	Malathion	113	109	120	106	3.59		12.7
	Metalaxyl	109	102	107	95.6	6.28		11.3
	Methoxychlor	88.9	90.2	83.5	84.7	1.38		1.40
	Metolachlor	107	108	119	98.8	1.29		18.7
	Metribuzin	111	94.3	119	106	16.4		11.6
	Mevinphos	100	98.2	102	89.5	2.15		13.4
	MGK-264	67.8	66.2	70.7	79.9	2.39		12.2
	Mirex	48.2	54.2	57.5	55.8	11.6		3.02
	Molinate	82.2	79.5	84.8	71.5	3.28		17.0
	Myclobutanil	96.1	93.3	95.4	86.1	2.98		10.2
	Naled	50.0	52.0	50.7	45.5	3.94		10.9
	Norflurazon	98.9	94.1	104	87.3	4.97		17.1
	Oxadiazon	91.5	88.5	106	90.5	3.35		16.0
	Oxyfluorfen	102	104	114	92.6	1.97		20.4
	Parathion Ethyl	101	88.0	98.9	97.2	13.3		1.72

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Parathion Methyl	112	112	115	107	0.510		7.10
	Pendimethalin	79.3	73.3	93.2	80.4	7.86		14.6
	Permethrin	58.9	63.4	67.3	66.6	7.44		1.03
	Phenothrin	44.3	52.0	61.1	57.2	16.1		6.48
	Phorate	78.9	80.6	88.6	80.9	2.12		9.06
	Piperonyl Butoxide	88.2	87.1	86.6	90.1	1.21		3.90
	Prallethrin	62.4	61.9	62.6	68.5	0.878		8.93
	Prodiamine	57.6	54.8	63.4	53.3	5.11		17.3
	Prometon	98.6	96.2	107	93.9	2.52		13.3
	Prometryn	95.4	104	113	91.2	9.01		21.7
	Pronamide	98.4	104	109	98.9	5.50		9.90
	Propiconazole	87.2	93.0	99.8	82.3	6.47		19.3
	Pyriproxyfen	84.0	83.8	105	85.0	0.241		21.2
	Simazine	110	115	121	94.1	4.90		12.5
	Sulfentrazone	80.7	89.6	95.0	81.9	10.4		14.8
	Tau-Fluvalinate	75.8	82.7	100	98.8	8.76		1.34
	Tebuconazole	60.0	61.9	64.7	54.4	3.22		17.3
	Terbufos	81.9	85.2	94.9	84.6	3.98		11.5
	Terbuthylazine	101	107	112	90.5	6.04		21.4
	Tetramethrin	104	101	98.7	111	3.12		11.4
	Trans-Nonachlor	69.7	71.7	75.1	75.5	2.71		0.439
	Triclosan Methyl	92.6	93.3	91.9	94.2	0.797		2.47
	Trifluralin	70.5	72.6	70.0	67.3	2.88		3.88
EPA 8276	Chlordane	96.4	91.4	87.7	83.7	5.28		4.22
	Toxaphene	94.6	88.2	139	121	7.04		13.5
EPA 8321B	2,4-D	144						3.93
	3-Hydroxycarbofuran	77.5		59.1	68.9			15.2
	Acesulfame K	77.5		30.0	39.7			27.8
	Acetaminophen	80.3		69.9	66.1			5.62
	Acetamiprid	101		67.7	53.9			22.8
	Afidopyropen	82.0		73.2	58.7			21.9
	Aldicarb	60.2		50.5	35.8			34.0
	Aldicarb Sulfone	81.3		82.9	78.5			5.45
	Aldicarb Sulfoxide	106		37.4	35.7			4.76
	AMPA	107		73.8	98.7			28.9
	Bentazon	80.4						3.54
	Benzovindiflupyr	81.1		68.1	62.2			9.10
	Carbamazepine	74.1		56.2	52.8			6.21
	Carbaryl	49.0		30.2	28.8			4.83
	Carbofuran	54.4		31.5	30.6			3.04
	Clothianidin	88.6		69.1	75.2			8.39
	Dinotefuran	86.6		94.9	86.4			9.33
	Diuron	54.3		37.5	34.5			7.53
	Endothall	97.1		68.1	87.7			25.2
	Fenuron	81.9		50.3	48.0			4.78
	Fluridone	83.2						1.55
	Glufosinate	94.6		60.7	82.1			29.9
	Glyphosate	102		64.4	81.9			24.0
	Hydrocodone	83.7		70.2	67.0			4.64
	Ibuprofen	83.3		90.3	87.2			3.39
	Imazapyr	104						1.93
	Imidacloprid	117		120	122			1.58
	Linuron	67.8		53.4	52.0			2.68
	Mandestrobin	83.1		69.9	67.9			2.94

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	MCPP	111	77.5	75.7			1.45
	Methiocarb	60.1	45.9	47.8			4.11
	Methomyl	77.2	57.9	52.4			9.87
	Naproxen	62.2	66.2	62.8			5.27
	Oxamyl	85.0	59.6	69.2			14.8
	Primidone	97.9	77.4	77.9			0.635
	Propoxur	57.6	31.1	32.1			3.11
	Pyraclostrobin	74.7	73.3	65.9			10.5
	Sucralose	95.3	71.8	80.1			2.47
	Thiamethoxam	76.8	78.3	75.1			4.07
	Tolfenpyrad	53.9	53.6	55.5			3.33
	Triclopyr	126	107	107			0.577
SM 2320 B-2011	Total Alkalinity	95.9				1.76	
SM 4500 F-C-2011	Fluoride	97.0	99.4	102			1.91

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2219363
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2219381
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2219381
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2219363
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2219365
EPA 8270E	Dieldrin (ultra low level) in water matrices by GC/MS/MS	2219378, 2219380
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2219378, 2219380
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2219379
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2219378
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2219376
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2219374, 2219375, 2219377
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2219374, 2219375, 2219377
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2219363
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2219363
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2219363

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	01/15/2021			01/15/2021 14:50	Yen Ta	2219363
EPA 200.7 Rev. 4.4	01/15/2021	01/19/2021 15:45	Elliott D. Healy	01/20/2021 18:32	Betina Topolski	2219381
	01/15/2021	01/19/2021 15:45	Elliott D. Healy	01/20/2021 18:41	Betina Topolski	2219381
EPA 200.8 Rev. 5.4	01/15/2021	01/19/2021 15:45	Elliott D. Healy	01/22/2021 17:55	Alexander Thompson	2219381
	01/15/2021	01/19/2021 15:45	Elliott D. Healy	01/22/2021 19:02	Alexander Thompson	2219381
EPA 300.0 Rev. 2.1	01/15/2021			01/27/2021 16:25	Lipi Saha	2219363
EPA 365.1 Rev. 2.0 dissolved	01/15/2021			01/15/2021 16:25	Ping Hua	2219365
EPA 8270E	01/15/2021	01/19/2021 08:00	Fe-Val Siddell	01/20/2021 19:46	Michael Poppell	2219378
	01/15/2021	01/19/2021 08:00	Fe-Val Siddell	01/20/2021 20:50	Michael Poppell	2219380
	01/15/2021	01/19/2021 08:00	Fe-Val Siddell	01/22/2021 01:30	Arthur Maknenko	2219378
	01/15/2021	01/19/2021 08:00	Fe-Val Siddell	01/22/2021 02:02	Arthur Maknenko	2219380
	01/15/2021	01/20/2021 08:00	Rasheda Ghaffari	01/21/2021 17:11	Vandana T. Nagar	2219379
	01/15/2021	01/20/2021 08:00	Rasheda Ghaffari	01/22/2021 21:16	Vandana T. Nagar	2219379
EPA 8276	01/15/2021	01/19/2021 08:00	Fe-Val Siddell	01/20/2021 23:54	Michael Poppell	2219378
EPA 8321B	01/15/2021	01/19/2021 12:15	Rebecca Ware	01/19/2021 14:01	Rebecca Ware	2219374
	01/15/2021	01/19/2021 12:15	Rebecca Ware	01/19/2021 14:15	Rebecca Ware	2219375
	01/15/2021	01/19/2021 12:15	Rebecca Ware	01/19/2021 15:04	Rebecca Ware	2219377
	01/15/2021	01/19/2021 12:15	Rebecca Ware	01/21/2021 07:16	Rebecca Ware	2219374
	01/15/2021	01/19/2021 12:15	Rebecca Ware	01/21/2021 07:27	Rebecca Ware	2219375
	01/15/2021	01/19/2021 12:15	Rebecca Ware	01/21/2021 07:51	Rebecca Ware	2219377
	01/15/2021	01/20/2021 09:00	Hoor Shaik	01/20/2021 18:20	Juyoung Kim	2219376
	01/15/2021	01/20/2021 09:00	Hoor Shaik	01/22/2021 04:32	Juyoung Kim	2219374
	01/15/2021	01/20/2021 09:00	Hoor Shaik	01/22/2021 05:07	Juyoung Kim	2219375
	01/15/2021	01/20/2021 09:00	Hoor Shaik	01/22/2021 05:41	Juyoung Kim	2219377
SM 2320 B-2011	01/15/2021			01/20/2021 00:17	Dale L. Simmons	2219363
SM 2540 D-2011	01/15/2021			01/19/2021 14:52	Yijie Li	2219363
SM 4500 F-C-2011	01/15/2021			01/19/2021 22:54	Dale L. Simmons	2219363