Chemical Analysis Report

WQAP-2017-04-18-01

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

Event Description: **ESOC Pilot Study - 5 samples + 1 field blank**
Request ID: **RQ-2017-03-27-06**
Customer: **WQAP**
Project ID: **ESOCPILOT**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
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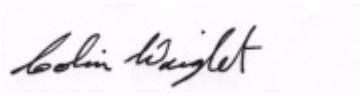
Certified by: Colin Wright, Program Administrator

Date Certified: 16-MAY-2017 12:56



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: SP-OCHLCK **Collection Date/Time: 04/17/2017 12:15**

Field ID: SP-OCHLCK Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889460	EPA 8321B	Glyphosate**	10	U	ug/L	P323576	
		Sucralose**	0.63		ug/L	P323547	
	USGS O-2060-01	2,4-D	0.019		ug/L	P323473	
		Diuron	0.030		ug/L	P323473	
		Fenuron	0.010	U	ug/L	P323473	
		Imidacloprid	0.013		ug/L	P323473	
		Bentazon	0.0030	I	ug/L	P323473	
		Linuron	0.010	U	ug/L	P323473	
		Acetaminophen**	0.30		ug/L	P323473	
		MCPP	0.0040	U	ug/L	P323473	
		Carbamazepine**	0.0060		ug/L	P323473	
		Triclopyr**	0.010	U	ug/L	P323473	
		Primidone**	0.020	U	ug/L	P323473	
		Fluridone**	5.0E-04	U	ug/L	P323473	
1889463	EPA 8321B	Aldicarb	0.020	UJ	ug/L	P323473	MS, RPD, SUR
		Aldicarb Sulfone	0.0020	UJ	ug/L	P323473	SUR
		Aldicarb Sulfoxide	0.0020	UJ	ug/L	P323473	SUR
		Carbaryl	0.0020	UJ	ug/L	P323473	SUR
		Carbofuran	0.0020	UJ	ug/L	P323473	SUR
		3-Hydroxycarbofuran	0.0020	UJ	ug/L	P323473	SUR
		Methiocarb	0.0020	UJ	ug/L	P323473	SUR
		Methomyl	0.0020	UJ	ug/L	P323473	SUR
		Oxamyl	0.0020	UJ	ug/L	P323473	SUR
		Propoxur	0.0020	UJ	ug/L	P323473	SUR
1889468	EPA 8270D	Aldrin	4.2	UJ	ng/L	P323465	RPD, SUR
		Alpha-BHC	2.1	UJ	ng/L	P323465	SUR
		Beta-BHC	4.2	UJ	ng/L	P323465	SUR
		Delta-BHC	4.2	UJ	ng/L	P323465	SUR
		Gamma-BHC	4.2	UJ	ng/L	P323465	SUR
		Carbophenothion	4.2	UJ	ng/L	P323465	SUR
		Chlorothalonil	2.1	UJ	ng/L	P323465	SUR
		Cypermethrin	21	UJ	ng/L	P323465	SUR
		DDD-p,p'	2.1	UJ	ng/L	P323465	SUR
		DDE-p,p'	3.1	UJ	ng/L	P323465	SUR
		DDT-p,p'	3.1	UJ	ng/L	P323465	SUR
		Dieldrin	4.2	UJ	ng/L	P323465	SUR
		Endosulfan I	4.2	UJ	ng/L	P323465	SUR
		Endosulfan II	4.2	UJ	ng/L	P323465	SUR
		Endosulfan Sulfate	2.1	UJ	ng/L	P323465	SUR
		Endrin	2.1	UJ	ng/L	P323465	SUR
		Endrin Aldehyde	2.1	UJ	ng/L	P323465	SUR
		Heptachlor	1.6	UJ	ng/L	P323465	SUR
		Heptachlor Epoxide	2.1	UJ	ng/L	P323465	SUR

Field ID: SP-OCHLCK Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889468	EPA 8270D	Methoxychlor	4.2	UJ	ng/L	P323465	SUR
		Mirex	2.1	UJ	ng/L	P323465	SUR
		Permethrin	10	UJ	ng/L	P323465	SUR
		Trifluralin	1.0	UJ	ng/L	P323465	SUR
		Alpha-Chlordane	1.0	UJ	ng/L	P323465	SUR
		Gamma-Chlordane	1.0	UJ	ng/L	P323465	SUR
		Endrin Ketone	2.1	UJ	ng/L	P323465	SUR
		Dicofol	31	UJ	ng/L	P323465	SUR
	EPA 8276	Chlordane**	2.6	U	ng/L	P323465	
		Toxaphene**	13	U	ng/L	P323465	
1889471	EPA 8270D	Ametryn	0.37	I	ng/L	P323644	
		Atrazine	19		ng/L	P323644	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P323644	
		Chlorpyrifos Methyl	0.097	U	ng/L	P323644	
		Disulfoton	0.32	U	ng/L	P323644	
		Ethion	0.15	U	ng/L	P323644	
		Ethoprop	0.097	U	ng/L	P323644	
		Hexazinone	1.4	I	ng/L	P323644	
		Malathion	0.34	U	ng/L	P323644	
		Metribuzin	0.19	U	ng/L	P323644	
		Mevinphos	0.48	U	ng/L	P323644	
		Norflurazon	1.5	I	ng/L	P323644	
		Phorate	0.24	U	ng/L	P323644	
		Prometryn	0.19	U	ng/L	P323644	
		Simazine	3.7		ng/L	P323644	
		Atrazine Desethyl	2.8	I	ng/L	P323644	
		Prometon	33		ng/L	P323644	
		Fipronil	0.33	I	ng/L	P323644	
		Molinate	0.29	U	ng/L	P323644	
		Pendimethalin	1.5	U	ng/L	P323644	
		Terbufos	0.097	U	ng/L	P323644	
		EPTC	1.2	U	ng/L	P323644	
		Terbuthylazine	0.41	U	ng/L	P323644	
		Bromacil	2.9		ng/L	P323644	
		Fipronil Sulfide	0.15	U	ng/L	P323644	
		Fipronil Sulfone	0.22	I	ng/L	P323644	
		Alachlor	0.24	U	ng/L	P323644	
		Azinphos Methyl	2.2	U	ng/L	P323644	
		Butylate	0.39	U	ng/L	P323644	
		Demeton	1.9	U	ng/L	P323644	
		Diazinon	0.12	U	ng/L	P323644	
		Fenamiphos	0.24	U	ng/L	P323644	
		Fonofos	0.19	U	ng/L	P323644	
		Metalaxyl	1.1		ng/L	P323644	
		Metolachlor	55		ng/L	P323644	

Field ID: SP-OCHLCK Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889471	EPA 8270D	Acetochlor	3.0		ng/L	P323644	
		Cyanazine	0.48	U	ng/L	P323644	
		Parathion Ethyl	0.24	U	ng/L	P323644	
		Parathion Methyl	0.24	U	ng/L	P323644	

Ref. Method and Comment:
USGS O-2060-01: MS accuracy and precision for acetaminophen could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Results confirmed. Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Reported results qualified with J due to surrogate below control limits: the sample was subsequently re-extracted and re-analyzed with acceptable surrogate recovery and the same analytical results were obtained.
EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked.

Sample Location: SP-WITHLAC **Collection Date/Time: 04/17/2017 15:10**

Field ID: SP-WITHLAC Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889461	EPA 8321B	Glyphosate**	10	U	ug/L	P323576	
		Sucralose**	0.31		ug/L	P323547	
	USGS O-2060-01	2,4-D	0.050		ug/L	P323473	
		Diuron	0.021		ug/L	P323473	
		Fenuron	0.010	U	ug/L	P323473	
		Imidacloprid	0.012		ug/L	P323473	
		Bentazon	0.0054		ug/L	P323473	
		Linuron	0.010	U	ug/L	P323473	
		Acetaminophen**	0.16		ug/L	P323473	
		MCPP	0.0040	U	ug/L	P323473	
		Carbamazepine**	0.0026		ug/L	P323473	
		Triclopyr**	0.010	U	ug/L	P323473	
		Primidone**	0.020	U	ug/L	P323473	
		Fluridone**	0.0072		ug/L	P323473	
1889464	EPA 8321B	Aldicarb	0.020	UJ	ug/L	P323473	MS, RPD, SUR
		Aldicarb Sulfone	0.0020	UJ	ug/L	P323473	SUR
		Aldicarb Sulfoxide	0.0020	UJ	ug/L	P323473	SUR
		Carbaryl	0.0020	UJ	ug/L	P323473	SUR
		Carbofuran	0.0020	UJ	ug/L	P323473	SUR
		3-Hydroxycarbofuran	0.0020	UJ	ug/L	P323473	SUR
		Methiocarb	0.0020	UJ	ug/L	P323473	SUR
		Methomyl	0.0020	UJ	ug/L	P323473	SUR
		Oxamyl	0.0020	UJ	ug/L	P323473	SUR
		Propoxur	0.0020	UJ	ug/L	P323473	SUR
1889469	EPA 8270D	Aldrin	4.4	UJ	ng/L	P323465	RPD
		Alpha-BHC	2.2	U	ng/L	P323465	
		Beta-BHC	4.4	U	ng/L	P323465	
		Delta-BHC	4.4	U	ng/L	P323465	
		Gamma-BHC	4.4	U	ng/L	P323465	
		Carbophenothion	4.4	U	ng/L	P323465	
		Chlorothalonil	2.2	U	ng/L	P323465	
		Cypermethrin	22	U	ng/L	P323465	

Field ID: SP-WITHLAC Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889469	EPA 8270D	DDD-p,p'	2.2	U	ng/L	P323465	
		DDE-p,p'	3.3	U	ng/L	P323465	
		DDT-p,p'	3.3	U	ng/L	P323465	
		Dieldrin	4.4	U	ng/L	P323465	
		Endosulfan I	4.4	U	ng/L	P323465	
		Endosulfan II	4.4	U	ng/L	P323465	
		Endosulfan Sulfate	2.2	U	ng/L	P323465	
		Endrin	2.2	U	ng/L	P323465	
		Endrin Aldehyde	2.2	U	ng/L	P323465	
		Heptachlor	1.7	U	ng/L	P323465	
		Heptachlor Epoxide	2.2	U	ng/L	P323465	
		Methoxychlor	4.4	U	ng/L	P323465	
		Mirex	2.2	U	ng/L	P323465	
		Permethrin	11	U	ng/L	P323465	
		Trifluralin	1.1	U	ng/L	P323465	
		Alpha-Chlordane	1.1	U	ng/L	P323465	
		Gamma-Chlordane	1.1	U	ng/L	P323465	
		Endrin Ketone	2.2	U	ng/L	P323465	
		Dicofol	33	U	ng/L	P323465	
	EPA 8276	Chlordane**	2.8	U	ng/L	P323465	
		Toxaphene**	14	U	ng/L	P323465	
1889472	EPA 8270D	Ametryn	0.31	U	ng/L	P323644	
		Atrazine	27		ng/L	P323644	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P323644	
		Chlorpyrifos Methyl	0.095	U	ng/L	P323644	
		Disulfoton	0.31	U	ng/L	P323644	
		Ethion	0.14	U	ng/L	P323644	
		Ethoprop	0.095	U	ng/L	P323644	
		Hexazinone	1.3	I	ng/L	P323644	
		Malathion	0.33	U	ng/L	P323644	
		Metribuzin	0.19	U	ng/L	P323644	
		Mevinphos	0.47	U	ng/L	P323644	
		Norflurazon	0.47	U	ng/L	P323644	
		Phorate	0.24	U	ng/L	P323644	
		Prometryn	0.19	U	ng/L	P323644	
		Simazine	2.4		ng/L	P323644	
		Atrazine Desethyl	3.0	I	ng/L	P323644	
		Prometon	1.5	I	ng/L	P323644	
		Fipronil	0.38	I	ng/L	P323644	
		Molinate	0.28	U	ng/L	P323644	
		Pendimethalin	1.4	U	ng/L	P323644	
		Terbufos	0.095	U	ng/L	P323644	
		EPTC	1.2	U	ng/L	P323644	
		Terbuthylazine	0.40	U	ng/L	P323644	
		Bromacil	1.2	I	ng/L	P323644	

Field ID: SP-WITHLAC Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889472	EPA 8270D	Fipronil Sulfide	0.16	I	ng/L	P323644	
		Fipronil Sulfone	0.23	I	ng/L	P323644	
		Alachlor	0.24	U	ng/L	P323644	
		Azinphos Methyl	2.1	U	ng/L	P323644	
		Butylate	0.38	U	ng/L	P323644	
		Demeton	1.9	U	ng/L	P323644	
		Diazinon	0.12	U	ng/L	P323644	
		Fenamiphos	0.24	U	ng/L	P323644	
		Fonofos	0.19	U	ng/L	P323644	
		Metalaxyl	5.8		ng/L	P323644	
		Metolachlor	51		ng/L	P323644	
		Acetochlor	0.45	I	ng/L	P323644	
		Cyanazine	0.47	U	ng/L	P323644	
		Parathion Ethyl	0.24	U	ng/L	P323644	
		Parathion Methyl	0.24	U	ng/L	P323644	

Ref. Method and Comment:
USGS O-2060-01: MS accuracy and precision for acetaminophen could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Results confirmed. Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked.

Sample Location: SP-APALACH **Collection Date/Time: 04/17/2017 09:55**

Field ID: SP-APALACH Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889462	EPA 8321B	Glyphosate**	10	U	ug/L	P323576	
		Sucralose**	0.51		ug/L	P323547	
	USGS O-2060-01	2,4-D	0.014	I	ug/L	P323473	
		Diuron	0.012		ug/L	P323473	
		Fenuron	0.010	U	ug/L	P323473	
		Imidacloprid	0.0034	I	ug/L	P323473	
		Bentazon	0.0014	I	ug/L	P323473	
		Linuron	0.010	U	ug/L	P323473	
		Acetaminophen**	0.020	U	ug/L	P323473	
		MCPP	0.0040	U	ug/L	P323473	
		Carbamazepine**	0.0018	I	ug/L	P323473	
		Triclopyr**	0.010	U	ug/L	P323473	
		Primidone**	0.020	U	ug/L	P323473	
		Fluridone**	0.0014	I	ug/L	P323473	
1889465	EPA 8321B	Aldicarb	0.020	U	ug/L	P323473	MS, RPD
		Aldicarb Sulfone	0.0020	U	ug/L	P323473	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P323473	
		Carbaryl	0.0020	U	ug/L	P323473	
		Carbofuran	0.0020	U	ug/L	P323473	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P323473	
		Methiocarb	0.0020	U	ug/L	P323473	
		Methomyl	0.0020	U	ug/L	P323473	

Field ID: SP-APALACH Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889465	EPA 8321B	Oxamyl	0.0020	U	ug/L	P323473	
		Propoxur	0.0020	U	ug/L	P323473	
1889470	EPA 8270D	Aldrin	4.4	UJ	ng/L	P323465	RPD
		Alpha-BHC	2.2	U	ng/L	P323465	
		Beta-BHC	4.4	U	ng/L	P323465	
		Delta-BHC	4.4	U	ng/L	P323465	
		Gamma-BHC	4.4	U	ng/L	P323465	
		Carbophenothion	4.4	U	ng/L	P323465	
		Chlorothalonil	2.2	U	ng/L	P323465	
		Cypermethrin	22	U	ng/L	P323465	
		DDD-p,p'	2.2	U	ng/L	P323465	
		DDE-p,p'	3.3	U	ng/L	P323465	
		DDT-p,p'	3.3	U	ng/L	P323465	
		Dieldrin	4.4	U	ng/L	P323465	
		Endosulfan I	4.4	U	ng/L	P323465	
		Endosulfan II	4.4	U	ng/L	P323465	
		Endosulfan Sulfate	2.2	U	ng/L	P323465	
		Endrin	2.2	U	ng/L	P323465	
		Endrin Aldehyde	2.2	U	ng/L	P323465	
		Heptachlor	1.6	U	ng/L	P323465	
		Heptachlor Epoxide	2.2	U	ng/L	P323465	
		Methoxychlor	4.4	U	ng/L	P323465	
		Mirex	2.2	U	ng/L	P323465	
		Permethrin	11	U	ng/L	P323465	
		Trifluralin	1.1	U	ng/L	P323465	
		Alpha-Chlordane	1.1	U	ng/L	P323465	
		Gamma-Chlordane	1.1	U	ng/L	P323465	
		Endrin Ketone	2.2	U	ng/L	P323465	
		Dicofol	33	U	ng/L	P323465	
	EPA 8276	Chlordane**	2.7	U	ng/L	P323465	
		Toxaphene**	14	U	ng/L	P323465	
1889473	EPA 8270D	Ametryn	0.32	U	ng/L	P323644	
		Atrazine	33		ng/L	P323644	
		Chlorpyrifos Ethyl	0.72	I	ng/L	P323644	
		Chlorpyrifos Methyl	0.10	U	ng/L	P323644	
		Disulfoton	0.32	U	ng/L	P323644	
		Ethion	0.15	U	ng/L	P323644	
		Ethoprop	0.10	U	ng/L	P323644	
		Hexazinone	1.2	I	ng/L	P323644	
		Malathion	0.35	U	ng/L	P323644	
		Metribuzin	0.20	U	ng/L	P323644	
		Mevinphos	0.50	U	ng/L	P323644	
		Norflurazon	0.50	U	ng/L	P323644	
		Phorate	0.25	U	ng/L	P323644	
		Prometryn	0.20	U	ng/L	P323644	

Field ID: SP-APALACH Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889473	EPA 8270D	Simazine	24		ng/L	P323644	
		Atrazine Desethyl	2.9	I	ng/L	P323644	
		Prometon	0.90	U	ng/L	P323644	
		Fipronil	0.25	U	ng/L	P323644	
		Molinate	0.30	U	ng/L	P323644	
		Pendimethalin	1.5	U	ng/L	P323644	
		Terbufos	0.10	U	ng/L	P323644	
		EPTC	1.2	U	ng/L	P323644	
		Terbuthylazine	0.42	U	ng/L	P323644	
		Bromacil	1.1	I	ng/L	P323644	
		Fipronil Sulfide	0.15	U	ng/L	P323644	
		Fipronil Sulfone	0.17	I	ng/L	P323644	
		Alachlor	0.25	U	ng/L	P323644	
		Azinphos Methyl	2.2	U	ng/L	P323644	
		Butylate	0.40	U	ng/L	P323644	
		Demeton	2.0	U	ng/L	P323644	
		Diazinon	0.12	U	ng/L	P323644	
		Fenamiphos	0.25	U	ng/L	P323644	
		Fonofos	0.20	U	ng/L	P323644	
		Metalaxyl	0.38	I	ng/L	P323644	
		Metolachlor	9.9		ng/L	P323644	
		Acetochlor	0.37	I	ng/L	P323644	
		Cyanazine	0.50	U	ng/L	P323644	
		Parathion Ethyl	0.25	U	ng/L	P323644	
		Parathion Methyl	0.25	U	ng/L	P323644	

Ref. Method and Comment:
USGS O-2060-01: MS accuracy and precision for acetaminophen could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked.

Sample Location: 0802517010101000 **Collection Date/Time: 04/17/2017 10:15**

Field ID: QA/QC BLANK SW FIELD Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889466	EPA 8321B	Glyphosate**	10	U	ug/L	P323576	
		Sucralose**	0.010	U	ug/L	P323547	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323473	
		Diuron	0.0020	U	ug/L	P323473	
		Fenuron	0.010	U	ug/L	P323473	
		Imidacloprid	0.0020	U	ug/L	P323473	
		Bentazon	0.0010	U	ug/L	P323473	
		Linuron	0.010	U	ug/L	P323473	
		Acetaminophen**	0.020	U	ug/L	P323473	
		MCPP	0.0040	U	ug/L	P323473	
		Carbamazepine**	5.0E-04	U	ug/L	P323473	
		Triclopyr**	0.010	U	ug/L	P323473	

Field ID: QA/QC BLANK SW FIELD Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889466	USGS O-2060-01	Primidone**	0.020	U	ug/L	P323473	
		Fluridone**	5.0E-04	U	ug/L	P323473	
1889467	EPA 8321B	Aldicarb	0.020	U	ug/L	P323473	MS, RPD
		Aldicarb Sulfone	0.0020	U	ug/L	P323473	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P323473	
		Carbaryl	0.0020	U	ug/L	P323473	
		Carbofuran	0.0020	U	ug/L	P323473	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P323473	
		Methiocarb	0.0020	U	ug/L	P323473	
		Methomyl	0.0020	U	ug/L	P323473	
		Oxamyl	0.0020	U	ug/L	P323473	
		Propoxur	0.0020	U	ug/L	P323473	
1889474	EPA 8270D	Aldrin	4.4	UJ	ng/L	P323465	RPD
		Alpha-BHC	2.2	U	ng/L	P323465	
		Beta-BHC	4.4	U	ng/L	P323465	
		Delta-BHC	4.4	U	ng/L	P323465	
		Gamma-BHC	4.4	U	ng/L	P323465	
		Carbophenothion	4.4	U	ng/L	P323465	
		Chlorothalonil	2.2	U	ng/L	P323465	
		Cypermethrin	22	U	ng/L	P323465	
		DDD-p,p'	2.2	U	ng/L	P323465	
		DDE-p,p'	3.3	U	ng/L	P323465	
		DDT-p,p'	3.3	U	ng/L	P323465	
		Dieldrin	4.4	U	ng/L	P323465	
		Endosulfan I	4.4	U	ng/L	P323465	
		Endosulfan II	4.4	U	ng/L	P323465	
		Endosulfan Sulfate	2.2	U	ng/L	P323465	
		Endrin	2.2	U	ng/L	P323465	
		Endrin Aldehyde	2.2	U	ng/L	P323465	
		Heptachlor	1.7	U	ng/L	P323465	
		Heptachlor Epoxide	2.2	U	ng/L	P323465	
		Methoxychlor	4.4	U	ng/L	P323465	
		Mirex	2.2	U	ng/L	P323465	
		Permethrin	11	U	ng/L	P323465	
		Trifluralin	1.1	U	ng/L	P323465	
		Alpha-Chlordane	1.1	U	ng/L	P323465	
		Gamma-Chlordane	1.1	U	ng/L	P323465	
		Endrin Ketone	2.2	U	ng/L	P323465	
		Dicofol	33	U	ng/L	P323465	
	EPA 8276	Chlordane**	2.8	U	ng/L	P323465	
		Toxaphene**	14	U	ng/L	P323465	
1889475	EPA 8270D	Ametryn	0.31	U	ng/L	P323644	
		Atrazine	0.24	U	ng/L	P323644	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P323644	
		Chlorpyrifos Methyl	0.096	U	ng/L	P323644	

Field ID: QA/QC BLANK SW FIELD Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1889475	EPA 8270D	Disulfoton	0.31	U	ng/L	P323644	
		Ethion	0.14	U	ng/L	P323644	
		Ethoprop	0.096	U	ng/L	P323644	
		Hexazinone	0.48	U	ng/L	P323644	
		Malathion	0.34	U	ng/L	P323644	
		Metribuzin	0.19	U	ng/L	P323644	
		Mevinphos	0.48	U	ng/L	P323644	
		Norflurazon	0.48	U	ng/L	P323644	
		Phorate	0.24	U	ng/L	P323644	
		Prometryn	0.19	U	ng/L	P323644	
		Simazine	0.48	U	ng/L	P323644	
		Atrazine Desethyl	1.4	U	ng/L	P323644	
		Prometon	0.87	U	ng/L	P323644	
		Fipronil	0.24	U	ng/L	P323644	
		Molinate	0.29	U	ng/L	P323644	
		Pendimethalin	1.4	U	ng/L	P323644	
		Terbufos	0.096	U	ng/L	P323644	
		EPTC	1.2	U	ng/L	P323644	
		Terbuthylazine	0.41	U	ng/L	P323644	
		Bromacil	0.48	U	ng/L	P323644	
		Fipronil Sulfide	0.14	U	ng/L	P323644	
		Fipronil Sulfone	0.14	U	ng/L	P323644	
		Alachlor	0.24	U	ng/L	P323644	
		Azinphos Methyl	2.2	U	ng/L	P323644	
		Butylate	0.38	U	ng/L	P323644	
		Demeton	1.9	U	ng/L	P323644	
		Diazinon	0.12	U	ng/L	P323644	
		Fenamiphos	0.24	U	ng/L	P323644	
		Fonofos	0.19	U	ng/L	P323644	
		Metalaxyl	0.19	U	ng/L	P323644	
		Metolachlor	0.24	U	ng/L	P323644	
		Acetochlor	0.24	U	ng/L	P323644	
		Cyanazine	0.48	U	ng/L	P323644	
		Parathion Ethyl	0.24	U	ng/L	P323644	
		Parathion Methyl	0.24	U	ng/L	P323644	

Ref. Method and Comment:
USGS O-2060-01: MS accuracy and precision for acetaminophen could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P323465

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P323465

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	2.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	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
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D
Batch ID: P323644

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P323644

Component	Result	Code	Units
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P323465

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	12	U	ng/L

Reference Method: EPA 8321B
Batch ID: P323473

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: P323547

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P323576

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P323576

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P323473

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.020	U	ug/L
Bentazon	0.0010	U	ug/L
Carbamazepine	5.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.010	U	ug/L
Fluridone	5.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.010	U	ug/L
MCPP	0.0040	U	ug/L
Primidone	0.020	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P323465

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	58.5	43.1	P/P	30 - 83.0
Alpha-BHC	95.1	89.3	P/P	62 - 119
Alpha-Chlordane	107	92.7	P/P	56 - 119
Beta-BHC	113	103	P/P	54 - 141
Carbophenothion	123	105	P/P	33 - 147
Chlorothalonil	100	97.0	P/P	25 - 175
Cypermethrin	119	101	P/P	50 - 155
DDD-p,p'	106	103	P/P	56 - 135
DDE-p,p'	110	95.8	P/P	48 - 120
DDT-p,p'	120	95.9	P/P	51 - 121
Delta-BHC	112	121	P/P	65 - 163
Dicofol	84.1	75.5	P/P	15 - 112
Dieldrin	116	98.2	P/P	59 - 134
Endosulfan I	113	93.4	P/P	65 - 142
Endosulfan II	121	108	P/P	65 - 154
Endosulfan Sulfate	98.6	100	P/P	65 - 136
Endrin	114	101	P/P	53 - 156
Endrin Aldehyde	111	109	P/P	47 - 156
Endrin Ketone	100	94.3	P/P	70 - 124
Gamma-BHC	101	97.6	P/P	64 - 142
Gamma-Chlordane	106	90.7	P/P	55 - 114
Heptachlor	99.8	79.0	P/P	42 - 105
Heptachlor Epoxide	107	93.0	P/P	67 - 120
Methoxychlor	113	96.8	P/P	63 - 134
Mirex	84.6	74.5	P/P	40 - 90.0

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P323465

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Permethrin	106	91.2	P/P	36 - 144
Trifluralin	130	117	P/P	40 - 170

Reference Method: EPA 8270D
Batch ID: P323644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	88.1	95.3	P/P	78 - 118
Alachlor	87.1	97.1	P/P	77 - 119
Ametryn	103	114	P/P	61 - 136
Atrazine	93.5	98.3	P/P	73 - 120
Atrazine Desethyl	73.1	84.1	P/P	16 - 122
Azinphos Methyl	124	125	P/P	69 - 186
Bromacil	69.1	85.1	P/P	40 - 125
Butylate	56.3	60.0	P/P	32 - 87.0
Chlorpyrifos Ethyl	86.4	89.7	P/P	53 - 110
Chlorpyrifos Methyl	91.3	89.5	P/P	31 - 119
Cyanazine	104	113	P/P	36 - 224
Demeton	86.0	103	P/P	39 - 122
Diazinon	90.2	101	P/P	75 - 119
Disulfoton	81.6	91.3	P/P	42 - 139
EPTC	57.5	59.4	P/P	33 - 96.0
Ethion	90.0	95.4	P/P	63 - 127
Ethoprop	86.7	103	P/P	65 - 107
Fenamiphos	105	107	P/P	64 - 137
Fipronil	94.3	103	P/P	60 - 126
Fipronil Sulfide	96.4	95.3	P/P	58 - 124
Fipronil Sulfone	89.3	89.3	P/P	57 - 126
Fonofos	88.6	97.5	P/P	65 - 111
Hexazinone	89.5	95.3	P/P	46 - 151
Malathion	96.1	97.7	P/P	68 - 132
Metalaxyl	87.9	95.3	P/P	51 - 132
Metolachlor	90.4	98.2	P/P	78 - 119
Metribuzin	95.9	100	P/P	64 - 138
Mevinphos	106	118	P/P	34 - 128
Molinate	62.9	67.4	P/P	44 - 101
Norflurazon	93.4	97.9	P/P	63 - 129
Parathion Ethyl	90.4	98.1	P/P	80 - 109
Parathion Methyl	92.5	95.4	P/P	74 - 125
Pendimethalin	90.6	99.2	P/P	48 - 134
Phorate	87.0	114	P/P	52 - 119
Prometon	94.8	106	P/P	69 - 124
Prometryn	102	114	P/P	66 - 124
Simazine	92.7	100	P/P	61 - 134
Terbufos	87.1	98.2	P/P	58 - 115
Terbuthylazine	88.5	93.0	P/P	77 - 113

Reference Method: EPA 8276
Batch ID: P323465

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	96.4	85.7	P/P	44 - 118

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P323465

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	113	102	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P323473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	130		P	40 - 140
Aldicarb	124		P	40 - 140
Aldicarb Sulfone	131		P	40 - 140
Aldicarb Sulfoxide	118		P	40 - 140
Carbaryl	106		P	40 - 140
Carbofuran	96.4		P	40 - 140
Methiocarb	88.4		P	40 - 140
Methomyl	104		P	40 - 140
Oxamyl	116		P	40 - 140
Propoxur	113		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P323547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	110		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P323576

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	97.2		P	40 - 140

Reference Method: USGS O-2060-01
Batch ID: P323473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	91.4		P	40 - 140
Acetaminophen	58.0		P	40 - 140
Bentazon	102		P	40 - 140
Carbamazepine	127		P	40 - 140
Diuron	102		P	40 - 140
Fenuron	111		P	40 - 140
Fluridone	117		P	40 - 140
Imidacloprid	88.8		P	40 - 160
Linuron	103		P	40 - 140
MCPP	93.6		P	40 - 140
Primidone	98.8		P	40 - 140
Triclopyr	91.4		P	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P323465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889376	Aldrin	42.8	42.7	P/P	30 - 83.0
1889376	Alpha-BHC	92.8	87.2	P/P	62 - 119
1889376	Alpha-Chlordane	92.1	91.4	P/P	56 - 119
1889376	Beta-BHC	112	105	P/P	54 - 141
1889376	Carbophenothion	108	104	P/P	33 - 147
1889376	Chlorothalonil	134	146	P/P	25 - 175
1889376	Cypermethrin	98.0	103	P/P	50 - 155
1889376	DDD-p,p'	99.9	98.7	P/P	56 - 135
1889376	DDE-p,p'	97.5	95.8	P/P	48 - 120
1889376	DDT-p,p'	97.8	92.6	P/P	51 - 121
1889376	Delta-BHC	138	136	P/P	65 - 163
1889376	Dicofol	60.4	53.2	P/P	15 - 112
1889376	Dieldrin	98.4	93.6	P/P	59 - 134
1889376	Endosulfan I	99.9	104	P/P	65 - 142
1889376	Endosulfan II	112	116	P/P	65 - 154
1889376	Endosulfan Sulfate	96.1	95.9	P/P	65 - 136
1889376	Endrin	98.5	94.0	P/P	53 - 156
1889376	Endrin Aldehyde	99.3	92.7	P/P	47 - 156
1889376	Endrin Ketone	93.0	93.1	P/P	70 - 124
1889376	Gamma-BHC	108	102	P/P	64 - 142
1889376	Gamma-Chlordane	90.8	89.7	P/P	55 - 114
1889376	Heptachlor	84.1	78.7	P/P	42 - 105
1889376	Heptachlor Epoxide	93.6	90.4	P/P	67 - 120
1889376	Methoxychlor	100	93.4	P/P	63 - 134
1889376	Mirex	72.9	74.5	P/P	40 - 90.0
1889376	Permethrin	93.6	93.8	P/P	36 - 144
1889376	Trifluralin	118	127	P/P	40 - 170

Reference Method: EPA 8270D
Batch ID: P323644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889748	Acetochlor	90.3	89.8	P/P	74 - 123
1889748	Alachlor	87.9	89.9	P/P	73 - 124
1889748	Ametryn	123	119	P/P	56 - 149
1889748	Atrazine Desethyl	70.6	76.0	P/P	12 - 103
1889748	Azinphos Methyl	116	114	P/P	60 - 202
1889748	Bromacil	85.4	94.1	P/P	42 - 133
1889748	Butylate	35.7	34.5	P/P	10 - 85.0
1889748	Chlorpyrifos Ethyl	81.9	84.8	P/P	53 - 113
1889748	Chlorpyrifos Methyl	84.7	87.3	P/P	40 - 115
1889748	Cyanazine	101	104	P/P	22 - 210
1889748	Demeton	96.8	93.2	P/P	17 - 149
1889748	Diazinon	92.5	95.1	P/P	72 - 124
1889748	Disulfoton	93.5	89.3	P/P	43 - 139
1889748	EPTC	36.3	33.1	P/P	10 - 86.0
1889748	Ethion	85.8	76.5	P/P	65 - 131
1889748	Ethoprop	85.4	87.9	P/P	59 - 110
1889748	Fenamiphos	100	102	P/P	57 - 138
1889748	Fipronil	97.5	97.3	P/P	40 - 130
1889748	Fipronil Sulfide	83.7	93.8	P/P	36 - 128
1889748	Fipronil Sulfone	85.2	86.1	P/P	16 - 145

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P323644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889748	Fonofos	86.6	86.2	P/P	60 - 112
1889748	Hexazinone	87.4	86.1	P/P	69 - 142
1889748	Malathion	94.5	96.2	P/P	68 - 132
1889748	Metalaxyl	88.6	88.4	P/P	66 - 118
1889748	Metolachlor	90.7	90.8	P/P	71 - 124
1889748	Metribuzin	97.1	103	P/P	61 - 140
1889748	Mevinphos	91.4	99.8	P/P	38 - 130
1889748	Molinate	49.1	47.6	P/P	23 - 99.0
1889748	Norflurazon	89.2	86.5	P/P	39 - 139
1889748	Parathion Ethyl	91.6	93.3	P/P	75 - 111
1889748	Parathion Methyl	91.7	95.9	P/P	64 - 130
1889748	Pendimethalin	99.0	96.8	P/P	26 - 173
1889748	Phorate	97.6	99.5	P/P	43 - 127
1889748	Prometon	114	115	P/P	50 - 144
1889748	Prometryn	111	114	P/P	69 - 126
1889748	Simazine	108	112	P/P	51 - 152
1889748	Terbufos	89.8	90.4	P/P	54 - 125
1889748	Terbuthylazine	88.4	89.6	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P323465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889334	Chlordane	71.3	73.6	P/P	44 - 118
1889334	Toxaphene	84.8	88.0	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P323473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889462	3-Hydroxycarbofuran	108	110	P/P	40 - 140
1889462	Aldicarb	56.4	39.3	P/F	40 - 140
1889462	Aldicarb Sulfone	102	92.0	P/P	40 - 140
1889462	Aldicarb Sulfoxide	104	87.6	P/P	40 - 140
1889462	Carbaryl	54.8	49.6	P/P	40 - 140
1889462	Carbofuran	50.0	54.0	P/P	40 - 140
1889462	Methiocarb	82.4	72.0	P/P	40 - 140
1889462	Methomyl	78.0	78.0	P/P	40 - 140
1889462	Oxamyl	112	115	P/P	40 - 140
1889462	Propoxur	49.6	46.0	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P323547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889460	Sucralose	79.2	83.2	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P323576

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889460	Glyphosate	72.6	73.0	P/P	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P323473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889462	2,4-D	104	101	P/P	40 - 140
1889462	Bentazon	67.6	67.6	P/P	40 - 140
1889462	Carbamazepine	119	125	P/P	40 - 140
1889462	Diuron	87.6	94.8	P/P	40 - 140
1889462	Fenuron	93.6	93.2	P/P	40 - 140
1889462	Fluridone	93.4	101	P/P	40 - 140
1889462	Imidacloprid	138	141	P/P	40 - 160
1889462	Linuron	101	90.0	P/P	40 - 140
1889462	MCPP	82.6	83.6	P/P	40 - 140
1889462	Primidone	99.6	110	P/P	40 - 140
1889462	Triclopyr	83.4	78.2	P/P	40 - 140

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P323465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889376	Aldrin	0.0561	Spike	P	0 - 30
1889376	Alpha-BHC	6.18	Spike	P	0 - 30
1889376	Alpha-Chlordane	0.734	Spike	P	0 - 30
1889376	Beta-BHC	6.83	Spike	P	0 - 30
1889376	Carbophenothion	3.79	Spike	P	0 - 30
1889376	Chlorothalonil	8.88	Spike	P	0 - 30
1889376	Cypermethrin	4.83	Spike	P	0 - 30
1889376	DDD-p,p'	1.28	Spike	P	0 - 30
1889376	DDE-p,p'	1.78	Spike	P	0 - 30
1889376	DDT-p,p'	5.45	Spike	P	0 - 30
1889376	Delta-BHC	1.42	Spike	P	0 - 30
1889376	Dicofol	12.6	Spike	P	0 - 30
1889376	Dieldrin	5.02	Spike	P	0 - 30
1889376	Endosulfan I	3.60	Spike	P	0 - 30
1889376	Endosulfan II	3.26	Spike	P	0 - 30
1889376	Endosulfan Sulfate	0.137	Spike	P	0 - 30
1889376	Endrin	4.67	Spike	P	0 - 30
1889376	Endrin Aldehyde	6.86	Spike	P	0 - 30
1889376	Endrin Ketone	0.111	Spike	P	0 - 30
1889376	Gamma-BHC	5.57	Spike	P	0 - 30
1889376	Gamma-Chlordane	1.24	Spike	P	0 - 30
1889376	Heptachlor	6.61	Spike	P	0 - 30
1889376	Heptachlor Epoxide	3.47	Spike	P	0 - 30
1889376	Methoxychlor	6.91	Spike	P	0 - 30
1889376	Mirex	2.26	Spike	P	0 - 30
1889376	Permethrin	0.270	Spike	P	0 - 30
1889376	Trifluralin	6.61	Spike	P	0 - 30
LFB	Aldrin	30.3	LCS	F	0 - 30
LFB	Alpha-BHC	6.28	LCS	P	0 - 30
LFB	Alpha-Chlordane	14.1	LCS	P	0 - 30
LFB	Beta-BHC	9.39	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P323465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	15.6	LCS	P	0 - 30
LFB	Chlorothalonil	3.56	LCS	P	0 - 30
LFB	Cypermethrin	17.0	LCS	P	0 - 30
LFB	DDD-p,p'	2.98	LCS	P	0 - 30
LFB	DDE-p,p'	13.8	LCS	P	0 - 30
LFB	DDT-p,p'	21.9	LCS	P	0 - 30
LFB	Delta-BHC	7.61	LCS	P	0 - 30
LFB	Dicofol	10.7	LCS	P	0 - 30
LFB	Dieldrin	16.8	LCS	P	0 - 30
LFB	Endosulfan I	19.0	LCS	P	0 - 30
LFB	Endosulfan II	11.2	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.55	LCS	P	0 - 30
LFB	Endrin	11.6	LCS	P	0 - 30
LFB	Endrin Aldehyde	2.28	LCS	P	0 - 30
LFB	Endrin Ketone	6.35	LCS	P	0 - 30
LFB	Gamma-BHC	3.51	LCS	P	0 - 30
LFB	Gamma-Chlordane	15.1	LCS	P	0 - 30
LFB	Heptachlor	23.3	LCS	P	0 - 30
LFB	Heptachlor Epoxide	14.5	LCS	P	0 - 30
LFB	Methoxychlor	15.2	LCS	P	0 - 30
LFB	Mirex	12.8	LCS	P	0 - 30
LFB	Permethrin	14.9	LCS	P	0 - 30
LFB	Trifluralin	10.3	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P323644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889748	Acetochlor	0.541	Spike	P	0 - 30
1889748	Alachlor	2.20	Spike	P	0 - 30
1889748	Ametryn	3.16	Spike	P	0 - 30
1889748	Atrazine	0.455	Spike	P	0 - 30
1889748	Atrazine Desethyl	5.03	Spike	P	0 - 30
1889748	Azinphos Methyl	1.88	Spike	P	0 - 30
1889748	Bromacil	6.23	Spike	P	0 - 30
1889748	Butylate	3.28	Spike	P	0 - 30
1889748	Chlorpyrifos Ethyl	3.58	Spike	P	0 - 30
1889748	Chlorpyrifos Methyl	3.06	Spike	P	0 - 30
1889748	Cyanazine	2.31	Spike	P	0 - 30
1889748	Demeton	3.81	Spike	P	0 - 30
1889748	Diazinon	2.70	Spike	P	0 - 30
1889748	Disulfoton	4.54	Spike	P	0 - 30
1889748	EPTC	9.27	Spike	P	0 - 30
1889748	Ethion	11.5	Spike	P	0 - 30
1889748	Ethoprop	2.97	Spike	P	0 - 30
1889748	Fenamiphos	1.85	Spike	P	0 - 30
1889748	Fipronil	0.185	Spike	P	0 - 30
1889748	Fipronil Sulfide	9.44	Spike	P	0 - 30
1889748	Fipronil Sulfone	0.369	Spike	P	0 - 30
1889748	Fonofos	0.379	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P323644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889748	Hexazinone	1.51	Spike	P	0 - 30
1889748	Malathion	1.79	Spike	P	0 - 30
1889748	Metalaxyl	0.322	Spike	P	0 - 30
1889748	Metolachlor	0.102	Spike	P	0 - 30
1889748	Metribuzin	6.18	Spike	P	0 - 30
1889748	Mevinphos	8.82	Spike	P	0 - 30
1889748	Molinate	3.04	Spike	P	0 - 30
1889748	Norflurazon	3.02	Spike	P	0 - 30
1889748	Parathion Ethyl	1.87	Spike	P	0 - 30
1889748	Parathion Methyl	4.54	Spike	P	0 - 30
1889748	Pendimethalin	2.28	Spike	P	0 - 30
1889748	Phorate	1.86	Spike	P	0 - 30
1889748	Prometon	0.918	Spike	P	0 - 30
1889748	Prometryn	2.89	Spike	P	0 - 30
1889748	Simazine	2.69	Spike	P	0 - 30
1889748	Terbufos	0.726	Spike	P	0 - 30
1889748	Terbuthylazine	1.36	Spike	P	0 - 30
LFB	Acetochlor	7.88	LCS	P	0 - 30
LFB	Alachlor	10.8	LCS	P	0 - 30
LFB	Ametryn	10.2	LCS	P	0 - 30
LFB	Atrazine	5.00	LCS	P	0 - 30
LFB	Atrazine Desethyl	13.9	LCS	P	0 - 30
LFB	Azinphos Methyl	0.259	LCS	P	0 - 30
LFB	Bromacil	20.6	LCS	P	0 - 30
LFB	Butylate	6.46	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.72	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.00	LCS	P	0 - 30
LFB	Cyanazine	8.63	LCS	P	0 - 30
LFB	Demeton	17.9	LCS	P	0 - 30
LFB	Diazinon	10.9	LCS	P	0 - 30
LFB	Disulfoton	11.2	LCS	P	0 - 30
LFB	EPTC	3.27	LCS	P	0 - 30
LFB	Ethion	5.86	LCS	P	0 - 30
LFB	Ethoprop	16.8	LCS	P	0 - 30
LFB	Fenamiphos	2.38	LCS	P	0 - 30
LFB	Fipronil	9.08	LCS	P	0 - 30
LFB	Fipronil Sulfide	1.10	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.00980	LCS	P	0 - 30
LFB	Fonofos	9.63	LCS	P	0 - 30
LFB	Hexazinone	6.23	LCS	P	0 - 30
LFB	Malathion	1.66	LCS	P	0 - 30
LFB	Metalaxyl	8.11	LCS	P	0 - 30
LFB	Metolachlor	8.26	LCS	P	0 - 30
LFB	Metribuzin	4.53	LCS	P	0 - 30
LFB	Mevinphos	11.1	LCS	P	0 - 30
LFB	Molinate	6.92	LCS	P	0 - 30
LFB	Norflurazon	4.65	LCS	P	0 - 30
LFB	Parathion Ethyl	8.22	LCS	P	0 - 30
LFB	Parathion Methyl	3.09	LCS	P	0 - 30
LFB	Pendimethalin	9.01	LCS	P	0 - 30
LFB	Phorate	27.3	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P323644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometon	11.2	LCS	P	0 - 30
LFB	Prometryn	10.6	LCS	P	0 - 30
LFB	Simazine	7.92	LCS	P	0 - 30
LFB	Terbufos	12.0	LCS	P	0 - 30
LFB	Terbuthylazine	5.02	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P323465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889334	Chlordane	3.19	Spike	P	0 - 30
1889334	Toxaphene	3.68	Spike	P	0 - 30
LFB	Chlordane	11.7	LCS	P	0 - 30
LFB	Toxaphene	9.72	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P323473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889462	3-Hydroxycarbofuran	1.10	Spike	P	0 - 30
1889462	Aldicarb	35.8	Spike	F	0 - 30
1889462	Aldicarb Sulfone	9.92	Spike	P	0 - 30
1889462	Aldicarb Sulfoxide	16.7	Spike	P	0 - 30
1889462	Carbaryl	9.96	Spike	P	0 - 30
1889462	Carbofuran	7.69	Spike	P	0 - 30
1889462	Methiocarb	13.5	Spike	P	0 - 30
1889462	Methomyl	0.0	Spike	P	0 - 30
1889462	Oxamyl	2.46	Spike	P	0 - 30
1889462	Propoxur	7.53	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P323547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889460	Sucralose	2.90	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P323576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889460	Glyphosate	0.549	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P323473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits

Quality Assurance Report
Precision

Reference Method: USGS O-2060-01
Batch ID: P323473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889462	2,4-D	2.91	Spike	P	0 - 30
1889462	Bentazon	0.0	Spike	P	0 - 30
1889462	Carbamazepine	5.34	Spike	P	0 - 30
1889462	Diuron	7.00	Spike	P	0 - 30
1889462	Fenuron	0.428	Spike	P	0 - 30
1889462	Fluridone	7.90	Spike	P	0 - 30
1889462	Imidacloprid	1.82	Spike	P	0 - 30
1889462	Linuron	11.3	Spike	P	0 - 30
1889462	MCPP	1.20	Spike	P	0 - 30
1889462	Primidone	9.56	Spike	P	0 - 30
1889462	Triclopyr	6.44	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report
Surrogates

Lab Sample ID: 1889460
Field Sample ID: SP-OCHLCK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	76.8	P	40 - 150
EPA 8321B	Sucralose-d6	69.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	104	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	97.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	114	P	30 - 160
USGS O-2060-01	Diuron-d6	87.9	P	30 - 150
USGS O-2060-01	Primidone-d5	79.3	P	30 - 150

Lab Sample ID: 1889461
Field Sample ID: SP-WITHLAC

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	47.4	P	40 - 150
EPA 8321B	Sucralose-d6	76.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	100	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	93.3	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	115	P	30 - 160
USGS O-2060-01	Diuron-d6	89.0	P	30 - 150
USGS O-2060-01	Primidone-d5	79.3	P	30 - 150

Lab Sample ID: 1889462
Field Sample ID: SP-APALACH

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	67.6	P	40 - 150
EPA 8321B	Sucralose-d6	76.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	76.0	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	81.7	P	30 - 150

Quality Assurance Report
Surrogates

Lab Sample ID: 1889462
Field Sample ID: SP-APALACH

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Carbamazepine-d10	99.7	P	30 - 160
USGS O-2060-01	Diuron-d6	86.8	P	30 - 150
USGS O-2060-01	Primidone-d5	75.6	P	30 - 150

Lab Sample ID: 1889463
Field Sample ID: SP-OCHLCK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	38.0	F	40 - 150

Lab Sample ID: 1889464
Field Sample ID: SP-WITHLAC

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	38.0	F	40 - 150

Lab Sample ID: 1889465
Field Sample ID: SP-APALACH

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	52.2	P	40 - 150

Lab Sample ID: 1889466
Field Sample ID: QA/QC BLANK SW FIELD

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	91.2	P	40 - 150
EPA 8321B	Sucralose-d6	112	P	40 - 150
USGS O-2060-01	2,4-D-d3	72.7	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	63.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	97.7	P	30 - 160
USGS O-2060-01	Diuron-d6	85.6	P	30 - 150
USGS O-2060-01	Primidone-d5	65.8	P	30 - 150

Lab Sample ID: 1889467
Field Sample ID: QA/QC BLANK SW FIELD

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	112	P	40 - 150

Lab Sample ID: 1889468
Field Sample ID: SP-OCHLCK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	58.3	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	27.0	F	31 - 111
EPA 8276	Decachlorobiphenyl	48.9	P	41 - 106

Lab Sample ID: 1889469
Field Sample ID: SP-WITHLAC

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits

Quality Assurance Report
Surrogates

Lab Sample ID: 1889469
Field Sample ID: SP-WITHLAC

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	68.9	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	42.6	P	31 - 111
EPA 8276	Decachlorobiphenyl	54.5	P	41 - 106

Lab Sample ID: 1889470
Field Sample ID: SP-APALACH

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	60.3	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	35.3	P	31 - 111
EPA 8276	Decachlorobiphenyl	52.1	P	41 - 106

Lab Sample ID: 1889471
Field Sample ID: SP-OCHLCK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	88.9	P	62 - 132
EPA 8270D	Simazine-d10	87.3	P	72 - 127

Lab Sample ID: 1889472
Field Sample ID: SP-WITHLAC

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	85.3	P	62 - 132
EPA 8270D	Simazine-d10	81.1	P	72 - 127

Lab Sample ID: 1889473
Field Sample ID: SP-APALACH

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	92.4	P	62 - 132
EPA 8270D	Simazine-d10	92.4	P	72 - 127

Lab Sample ID: 1889474
Field Sample ID: QA/QC BLANK SW FIELD

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	69.2	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	64.1	P	31 - 111
EPA 8276	Decachlorobiphenyl	60.9	P	41 - 106

Lab Sample ID: 1889475
Field Sample ID: QA/QC BLANK SW FIELD

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	66.1	P	62 - 132
EPA 8270D	Simazine-d10	97.8	P	72 - 127

Quality Assurance Report
Calibration Verification

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A75899
Included Lab Sample IDs: 1889460, 1889461, 1889462, 1889466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	122	81.6	P/P	60 - 150
Sucralose	81.6	93.9	P/P	60 - 150
Sucralose	83.1	84.2	P/P	60 - 150

Reference Method: EPA 8321B
Run ID: A75930
Included Lab Sample IDs: 1889460, 1889461, 1889462, 1889466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	74.8	84.0	P/P	70 - 130
Glyphosate	84.0	90.2	P/P	70 - 130

Reference Method: EPA 8321B
Run ID: A75936
Included Lab Sample IDs: 1889463, 1889464, 1889465, 1889467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	140	137	P/P	60 - 150
Aldicarb	145	146	P/P	50 - 150
Aldicarb Sulfone	116	122	P/P	60 - 150
Aldicarb Sulfoxide	108	108	P/P	60 - 150
Carbaryl	128	112	P/P	60 - 150
Carbofuran	107	109	P/P	60 - 150
Methiocarb	113	125	P/P	60 - 150
Methomyl	107	126	P/P	60 - 150
Oxamyl	108	103	P/P	60 - 150
Propoxur	122	113	P/P	60 - 150

Reference Method: EPA 8276
Run ID: A75954
Included Lab Sample IDs: 1889468, 1889469, 1889470, 1889474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.5		P	80 - 120
Chlordane	99.0		P	80 - 120
Toxaphene	106		P	80 - 120
Toxaphene	97.9		P	80 - 120

Reference Method: EPA 8270D
Run ID: A75960
Included Lab Sample IDs: 1889468, 1889469, 1889470, 1889474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.0		P	80 - 120
Alpha-BHC	99.0		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	102		P	80 - 120
Carbophenothion	103		P	80 - 120
Chlorothalonil	108		P	80 - 120
Cypermethrin	101		P	80 - 120
DDD-p,p'	103		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A75960
Included Lab Sample IDs: 1889468, 1889469, 1889470, 1889474

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDE-p,p'	104		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	95.1		P	80 - 120
Dicofol	97.9		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	96.3		P	80 - 120
Endosulfan II	94.9		P	80 - 120
Endosulfan Sulfate	96.6		P	80 - 120
Endrin	106		P	80 - 120
Endrin Aldehyde	95.0		P	80 - 120
Endrin Ketone	96.2		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	98.7		P	80 - 120
Methoxychlor	110		P	80 - 120
Mirex	97.8		P	80 - 120
Permethrin	98.2		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76262
Included Lab Sample IDs: 1889471, 1889472, 1889473, 1889475

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.7		P	80 - 120
Alachlor	99.2		P	80 - 120
Ametryn	99.9		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	99.7		P	80 - 120
Azinphos Methyl	99.7		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	97.7		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	89.9		P	80 - 120
Demeton	99.5		P	80 - 120
Diazinon	100		P	80 - 120
Disulfoton	95.6		P	80 - 120
EPTC	104		P	80 - 120
Ethion	95.2		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	96.6		P	80 - 120
Fipronil	96.7		P	80 - 120
Fipronil Sulfide	98.6		P	80 - 120
Fipronil Sulfone	97.7		P	80 - 120
Fonofos	98.4		P	80 - 120
Hexazinone	101		P	80 - 120
Malathion	98.1		P	80 - 120
Metalaxyl	99.2		P	80 - 120
Metolachlor	103		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A76262
Included Lab Sample IDs: 1889471, 1889472, 1889473, 1889475

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Metribuzin	94.9		P	80 - 120
Mevinphos	117		P	80 - 120
Molinate	103		P	80 - 120
Norflurazon	99.5		P	80 - 120
Parathion Ethyl	98.8		P	80 - 120
Parathion Methyl	94.4		P	80 - 120
Pendimethalin	91.9		P	80 - 120
Phorate	95.3		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	95.6		P	80 - 120
Simazine	99.5		P	80 - 120
Terbufos	95.4		P	80 - 120
Terbuthylazine	100		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76309
Included Lab Sample IDs: 1889473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	99.4		P	80 - 120
Metolachlor	100		P	80 - 120
Simazine	93.2		P	80 - 120

Reference Method: USGS O-2060-01
Run ID: A76387
Included Lab Sample IDs: 1889460, 1889461, 1889462, 1889466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.8	97.1	P/P	50 - 150
2,4-D	97.1	94.4	P/P	50 - 150
Acetaminophen	105	110	P/P	60 - 150
Acetaminophen	113	105	P/P	60 - 150
Bentazon	66.6	67.5	P/P	50 - 150
Bentazon	66.8	66.6	P/P	50 - 150
Carbamazepine	87.4	95.6	P/P	60 - 150
Carbamazepine	96.8	87.4	P/P	60 - 150
Diuron	84.6	95.8	P/P	60 - 150
Diuron	97.4	84.6	P/P	60 - 150
Fenuron	105	99.9	P/P	60 - 150
Fenuron	99.9	108	P/P	60 - 150
Fluridone	75.8	81.6	P/P	60 - 150
Fluridone	82.3	75.8	P/P	60 - 150
Imidacloprid	87.2	96.4	P/P	60 - 150
Imidacloprid	96.0	87.2	P/P	60 - 150
Linuron	102	92.3	P/P	60 - 150
Linuron	92.3	103	P/P	60 - 150
MCPP	91.0	95.8	P/P	50 - 150
MCPP	96.3	91.0	P/P	50 - 150
Primidone	104	90.0	P/P	60 - 150
Primidone	90.0	94.0	P/P	60 - 150
Triclopyr	93.1	96.3	P/P	50 - 150

Quality Assurance Report
Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A76387
Included Lab Sample IDs: 1889460, 1889461, 1889462, 1889466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	97.1	93.1	P/P	50 - 150

* 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 8270D	Acetochlor	88.1	95.3	90.3	89.8	7.88		0.541
	Alachlor	87.1	97.1	87.9	89.9	10.8		2.20
	Aldrin	58.5	43.1	42.7	42.8	30.3		0.0561
	Alpha-BHC	95.1	89.3	87.2	92.8	6.28		6.18
	Alpha-Chlordane	107	92.7	92.1	91.4	14.1		0.734
	Ametryn	103	114	123	119	10.2		3.16
	Atrazine	93.5	98.3			5.00		0.455
	Atrazine Desethyl	73.1	84.1	70.6	76.0	13.9		5.03
	Azinphos Methyl	124	125	116	114	0.259		1.88
	Beta-BHC	113	103	105	112	9.39		6.83
	Bromacil	69.1	85.1	85.4	94.1	20.6		6.23
	Butylate	56.3	60.0	35.7	34.5	6.46		3.28
	Carbophenothion	123	105	104	108	15.6		3.79
	Chlorothalonil	100	97.0	146	134	3.56		8.88
	Chlorpyrifos Ethyl	86.4	89.7	81.9	84.8	3.72		3.58
	Chlorpyrifos Methyl	91.3	89.5	84.7	87.3	2.00		3.06
	Cyanazine	104	113	101	104	8.63		2.31
	Cypermethrin	119	101	103	98.0	17.0		4.83
	DDD-p,p'	106	103	98.7	99.9	2.98		1.28
	DDE-p,p'	110	95.8	95.8	97.5	13.8		1.78
	DDT-p,p'	120	95.9	92.6	97.8	21.9		5.45
	Delta-BHC	112	121	136	138	7.61		1.42
	Demeton	86.0	103	96.8	93.2	17.9		3.81
	Diazinon	90.2	101	92.5	95.1	10.9		2.70
	Dicofol	84.1	75.5	53.2	60.4	10.7		12.6
	Dieldrin	116	98.2	93.6	98.4	16.8		5.02
	Disulfoton	81.6	91.3	93.5	89.3	11.2		4.54
	Endosulfan I	113	93.4	104	99.9	19.0		3.60
	Endosulfan II	121	108	116	112	11.2		3.26
	Endosulfan Sulfate	98.6	100	95.9	96.1	1.55		0.137
	Endrin	114	101	94.0	98.5	11.6		4.67
	Endrin Aldehyde	111	109	92.7	99.3	2.28		6.86
	Endrin Ketone	100	94.3	93.0	93.1	6.35		0.111
	EPTC	57.5	59.4	36.3	33.1	3.27		9.27
	Ethion	90.0	95.4	85.8	76.5	5.86		11.5
	Ethoprop	86.7	103	85.4	87.9	16.8		2.97
	Fenamiphos	105	107	100	102	2.38		1.85
	Fipronil	94.3	103	97.5	97.3	9.08		0.185
	Fipronil Sulfide	96.4	95.3	83.7	93.8	1.10		9.44

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Fipronil Sulfone	89.3	89.3	85.2	86.1	0.0098		0.369
	Fonofos	88.6	97.5	86.6	86.2	9.63		0.379
	Gamma-BHC	101	97.6	108	102	3.51		5.57
	Gamma-Chlordane	106	90.7	90.8	89.7	15.1		1.24
	Heptachlor	99.8	79.0	84.1	78.7	23.3		6.61
	Heptachlor Epoxide	107	93.0	93.6	90.4	14.5		3.47
	Hexazinone	89.5	95.3	87.4	86.1	6.23		1.51
	Malathion	96.1	97.7	94.5	96.2	1.66		1.79
	Metalaxyl	87.9	95.3	88.6	88.4	8.11		0.322
	Methoxychlor	113	96.8	100	93.4	15.2		6.91
	Metolachlor	90.4	98.2	90.7	90.8	8.26		0.102
	Metribuzin	95.9	100	97.1	103	4.53		6.18
	Mevinphos	106	118	91.4	99.8	11.1		8.82
	Mirex	84.6	74.5	72.9	74.5	12.8		2.26
	Molinate	62.9	67.4	49.1	47.6	6.92		3.04
	Norflurazon	93.4	97.9	89.2	86.5	4.65		3.02
	Parathion Ethyl	90.4	98.1	91.6	93.3	8.22		1.87
	Parathion Methyl	92.5	95.4	91.7	95.9	3.09		4.54
	Pendimethalin	90.6	99.2	99.0	96.8	9.01		2.28
	Permethrin	106	91.2	93.6	93.8	14.9		0.270
	Phorate	87.0	114	97.6	99.5	27.3		1.86
	Prometon	94.8	106	114	115	11.2		0.918
	Prometryn	102	114	111	114	10.6		2.89
	Simazine	92.7	100	108	112	7.92		2.69
	Terbufos	87.1	98.2	89.8	90.4	12.0		0.726
	Terbuthylazine	88.5	93.0	88.4	89.6	5.02		1.36
	Trifluralin	130	117	118	127	10.3		6.61
EPA 8276	Chlordane	96.4	85.7	71.3	73.6	11.7		3.19
	Toxaphene	113	102	84.8	88.0	9.72		3.68
EPA 8321B	3-Hydroxycarbofuran	130		108	110			1.10
	Aldicarb	124		56.4	39.3			35.8
	Aldicarb Sulfone	131		102	92.0			9.92
	Aldicarb Sulfoxide	118		104	87.6			16.7
	Carbaryl	106		54.8	49.6			9.96
	Carbofuran	96.4		50.0	54.0			7.69
	Glyphosate	97.2		72.6	73.0			0.549
	Methiocarb	88.4		82.4	72.0			13.5
	Methomyl	104		78.0	78.0			0.0
	Oxamyl	116		112	115			2.46
	Propoxur	113		49.6	46.0			7.53
	Sucralose	110		79.2	83.2			2.90
USGS O-2060-01	2,4-D	91.4		104	101			2.91
	Acetaminophen	58.0						
	Bentazon	102		67.6	67.6			0.0
	Carbamazepine	127		119	125			5.34
	Diuron	102		87.6	94.8			7.00
	Fenuron	111		93.6	93.2			0.428
	Fluridone	117		93.4	101			7.90
	Imidacloprid	88.8		138	141			1.82
	Linuron	103		101	90.0			11.3
	MCPP	93.6		82.6	83.6			1.20
	Primidone	98.8		99.6	110			9.56
	Triclopyr	91.4		83.4	78.2			6.44

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1889468, 1889469, 1889470, 1889474
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1889471, 1889472, 1889473, 1889475
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1889468, 1889469, 1889470, 1889474
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1889463, 1889464, 1889465, 1889467
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1889460, 1889461, 1889462, 1889466
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1889460, 1889461, 1889462, 1889466
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1889460, 1889461, 1889462, 1889466
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1889460, 1889461, 1889462, 1889466

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270D	04/18/2017	04/18/2017	Fe-Val Siddell	04/21/2017	Vandana T. Nagar	1889468, 1889469, 1889470, 1889474
	04/18/2017	04/20/2017	Rasheda Ghaffari	04/28/2017	Marek Topolski	1889471, 1889472, 1889473, 1889475
	04/18/2017	04/20/2017	Rasheda Ghaffari	05/02/2017	Marek Topolski	1889473
EPA 8276	04/18/2017	04/18/2017	Fe-Val Siddell	04/22/2017	Vandana T. Nagar	1889468, 1889469, 1889470, 1889474
EPA 8321B	04/18/2017	04/19/2017	Hoor Shaik	04/20/2017	Juyoung Kim	1889463, 1889464, 1889465, 1889467
	04/18/2017	04/19/2017	Mohammad Ghaffari	04/19/2017	Mohammad Ghaffari	1889460, 1889461, 1889462, 1889466
	04/18/2017	04/21/2017	Juyoung Kim	04/21/2017	Juyoung Kim	1889460, 1889461, 1889462, 1889466
USGS O-2060-01	04/18/2017	04/19/2017	Hoor Shaik	05/06/2017	Juyoung Kim	1889460, 1889461, 1889462
	04/18/2017	04/19/2017	Hoor Shaik	05/07/2017	Juyoung Kim	1889466