

Chemical Analysis Report

SO-DIST-2018-11-08-01

Florida Department of Environmental Protection
Central Laboratory
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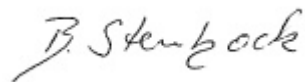
Event Description: **Sarasota Gators**
Request ID: **RQ-2018-09-24-05**
Customer: **SO-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 30-NOV-2018 14:03



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: Curry(Tidal)@AlbeeFarm

Collection Date/Time: 11/07/2018 13:20

Field ID: G3SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040336	EPA 8321B	Aldicarb	0.020	U	ug/L	P354331	
		Aldicarb Sulfone	0.0020	U	ug/L	P354331	
		Aldicarb Sulfoxide	0.0020	UJ	ug/L	P354331	MS
		Carbaryl	0.0020	U	ug/L	P354331	
		Carbofuran	0.0020	U	ug/L	P354331	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P354331	
		Methiocarb	0.0020	U	ug/L	P354331	
		Methomyl	0.0020	U	ug/L	P354331	
		Oxamyl	0.0020	U	ug/L	P354331	
		Propoxur	0.0020	U	ug/L	P354331	
2040338		2,4-D	0.038		ug/L	P354331	
		2,4-DB	0.0080	U	ug/L	P354331	
		2,4,5-T	0.0040	U	ug/L	P354331	
		Acifluorfen	0.0080	U	ug/L	P354331	
		Bentazon	0.035		ug/L	P354331	
		Dicamba	0.080	UJ	ug/L	P354331	MS
		Dichlorprop	0.0040	U	ug/L	P354331	
		Dinoseb	0.0040	U	ug/L	P354331	
		MCPA	0.0020	U	ug/L	P354331	
		MCPP	0.0036	I	ug/L	P354331	
		Picloram	0.080	UJ	ug/L	P354331	MS
		Silvex	0.0040	U	ug/L	P354331	
		Triclopyr**	0.0040	U	ug/L	P354331	
		Imidacloprid	0.021		ug/L	P354331	
		Diuron	0.0020	U	ug/L	P354331	
		Pyraclostrobin**	0.0020	U	ug/L	P354331	
		Primidone**	0.0045	I	ug/L	P354331	
		Linuron	0.0040	U	ug/L	P354331	
		Acetaminophen**	0.0080	U	ug/L	P354331	
		Fenuron	0.016	U	ug/L	P354331	
		Imazapyr**	0.12		ug/L	P354331	
		Carbamazepine**	0.0012	I	ug/L	P354331	
		Fluridone**	0.0042		ug/L	P354331	
		Hydrocodone**	8.0E-04	U	ug/L	P354331	
		Naproxen**	0.0080	U	ug/L	P354331	
		Ibuprofen**	0.020	U	ug/L	P354331	
		Sucralose**	0.75		ug/L	P354426	
		Glyphosate**	0.10	UJ	ug/L	P354426	MS, SUR
		AMPA**	0.10	UJ	ug/L	P354426	MS, SUR
		Endothall**	0.25	U	ug/L	P354426	
		Glufosinate**	0.10	UJ	ug/L	P354426	MS, SUR
		Acesulfame K**	0.11	I	ug/L	P354426	
2040341	EPA 8270D	Aldrin	4.2	U	ng/L	P354398	
		Alpha-BHC	2.1	U	ng/L	P354398	

Field ID: G3SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040341	EPA 8270D	Beta-BHC	4.2	U	ng/L	P354398	LCS, RPD
		Delta-BHC	4.2	U	ng/L	P354398	
		Gamma-BHC	4.2	U	ng/L	P354398	
		Carbophenothion	4.2	U	ng/L	P354398	
		Chlorothalonil	2.1	UJ	ng/L	P354398	
		Cypermethrin	21	U	ng/L	P354398	
		DDD-p,p'	3.1	U	ng/L	P354398	
		DDE-p,p'	3.1	U	ng/L	P354398	
		DDT-p,p'	3.1	U	ng/L	P354398	
		Dieldrin	4.2	U	ng/L	P354398	
		Endosulfan I	4.2	U	ng/L	P354398	
		Endosulfan II	4.2	U	ng/L	P354398	
		Endosulfan Sulfate	2.1	U	ng/L	P354398	
		Endrin	2.1	U	ng/L	P354398	
		Endrin Aldehyde	2.1	U	ng/L	P354398	
		Heptachlor	1.6	U	ng/L	P354398	
		Heptachlor Epoxide	2.1	U	ng/L	P354398	
		Methoxychlor	4.2	U	ng/L	P354398	
		Mirex	2.1	U	ng/L	P354398	
		Permethrin	10	U	ng/L	P354398	
		Trifluralin	1.0	U	ng/L	P354398	
		Alpha-Chlordane	1.0	U	ng/L	P354398	RPD
		Gamma-Chlordane	1.0	U	ng/L	P354398	
		Endrin Ketone	2.1	U	ng/L	P354398	
2040343	EPA 8270D	Dicofol	31	U	ng/L	P354398	CCV, RPD
		Chlordane	2.6	U	ng/L	P354398	
		Toxaphene	31	UJ	ng/L	P354398	
		Alachlor	0.24	UJ	ng/L	P354472	MS
		Ametryn	0.32	U	ng/L	P354472	
		Atrazine	21		ng/L	P354472	
		Atrazine Desethyl	4.0	I	ng/L	P354472	MS
		Azinphos Methyl	2.2	U	ng/L	P354472	
		Bromacil	4.7		ng/L	P354472	
		Butylate	0.39	U	ng/L	P354472	MS, RPD
		Chlorpyrifos Ethyl	0.24	U	ng/L	P354472	
		Chlorpyrifos Methyl	0.098	U	ng/L	P354472	
		Demeton	2.0	U	ng/L	P354472	MS, RPD
		Diazinon	0.12	UJ	ng/L	P354472	
		Disulfoton	0.49	U	ng/L	P354472	
		EPTC	1.2	U	ng/L	P354472	MS, RPD
		Ethion	0.15	UJ	ng/L	P354472	
		Ethoprop	0.098	U	ng/L	P354472	
		Fenamiphos	0.24	U	ng/L	P354472	MS, RPD
		Fipronil	0.24	U	ng/L	P354472	
		Fipronil Sulfide	0.18	I	ng/L	P354472	

Field ID: G3SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040343	EPA 8270D	Fipronil Sulfone	0.55	I	ng/L	P354472	
		Hexazinone	8.2		ng/L	P354472	
		Malathion	0.34	U	ng/L	P354472	
		Metribuzin	4.0		ng/L	P354472	
		Mevinphos	0.49	U	ng/L	P354472	
		Molinate	0.29	U	ng/L	P354472	
		Norflurazon	3.5		ng/L	P354472	
		Pendimethalin	0.98	U	ng/L	P354472	
		Phorate	0.24	U	ng/L	P354472	
		Prometon	0.88	U	ng/L	P354472	
		Prometryn	0.20	UJ	ng/L	P354472	MS, RPD
		Simazine	0.49	U	ng/L	P354472	
		Terbufos	0.098	U	ng/L	P354472	
		Terbuthylazine	0.42	UJ	ng/L	P354472	LCS, MS
		Fonofos	0.20	U	ng/L	P354472	
		Metalaxyl	1.5		ng/L	P354472	
		Metolachlor	2.6		ng/L	P354472	
		Acetochlor	0.24	UJ	ng/L	P354472	LCS
		Cyanazine	0.49	U	ng/L	P354472	
		Parathion Ethyl	0.24	U	ng/L	P354472	
		Parathion Methyl	0.24	U	ng/L	P354472	
		Dimethenamid**	0.098	UJ	ng/L	P354472	RPD
		Fipronil Desulfinyl**	0.35	IJ	ng/L	P354472	
		Dithiopyr**	0.11	I	ng/L	P354472	
		Prodiamine**	7.1		ng/L	P354472	
		Oxadiazon**	1.3		ng/L	P354472	
		Tebuconazole**	0.62	IJ	ng/L	P354472	MS, RPD

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes.

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

EPA 8321B: Precision for AMPA, glufosinate and glyphosate is not available due to no recoveries in the duplicate matrix spikes. Glyphosate 13C 15Nsurrogate spike recovery exceeding the control limits. Results confirmed in re-extraction. Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes.

EPA 8276: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Estimated value for Fipronil Desulfinyl due to the lack of the second source standard. MS accuracy for Atrazine and Prodiamine not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: HATCHETT CRK @ PINEBROOK RD

Collection Date/Time: 11/07/2018 13:55

Field ID: G3SD0103_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040333	EPA 8321B	2,4-D	0.0024	I	ug/L	P354331	
		Bentazon	0.017		ug/L	P354331	
		MCPP	0.0020	U	ug/L	P354331	
		Triclopyr**	0.0040	U	ug/L	P354331	
		Imidacloprid	0.0082		ug/L	P354331	
		Diuron	0.020		ug/L	P354331	
		Pyraclostrobin**	0.0020	U	ug/L	P354331	
		Primidone**	0.0098	I	ug/L	P354331	
		Linuron	0.0040	U	ug/L	P354331	
		Acetaminophen**	0.0080	U	ug/L	P354331	
		Fenuron	0.018	I	ug/L	P354331	
		Imazapyr**	0.85		ug/L	P354331	
		Carbamazepine**	8.0E-04	U	ug/L	P354331	
		Fluridone**	0.046		ug/L	P354331	
		Hydrocodone**	8.0E-04	U	ug/L	P354331	
		Naproxen**	0.0080	U	ug/L	P354331	
		Ibuprofen**	0.020	U	ug/L	P354331	
		Sucralose**	0.74		ug/L	P354426	
		Acesulfame K**	0.14	I	ug/L	P354426	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: HatchettCrk@PinebrookRd

Collection Date/Time: 11/07/2018 13:50

Field ID: G3SD0103

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040340	EPA 8321B	2,4-D	0.0020	I	ug/L	P354331	
		Bentazon	0.018		ug/L	P354331	
		MCP	0.0020	U	ug/L	P354331	
		Triclopyr**	0.0040	U	ug/L	P354331	
		Imidacloprid	0.0073	I	ug/L	P354331	
		Diuron	0.020		ug/L	P354331	
		Pyraclostrobin**	0.0020	U	ug/L	P354331	
		Primidone**	0.0088	I	ug/L	P354331	
		Linuron	0.0040	U	ug/L	P354331	
		Acetaminophen**	0.0080	U	ug/L	P354331	
		Fenuron	0.018	I	ug/L	P354331	
		Imazapyr**	0.78		ug/L	P354331	
		Carbamazepine**	8.4E-04	I	ug/L	P354331	
		Fluridone**	0.043		ug/L	P354331	
		Hydrocodone**	8.0E-04	U	ug/L	P354331	
		Naproxen**	0.0080	U	ug/L	P354331	
		Ibuprofen**	0.020	U	ug/L	P354331	
		Sucralose**	0.75		ug/L	P354426	
		Acesulfame K**	0.14	I	ug/L	P354426	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Alligator Tidal @ US 41

Collection Date/Time: 11/07/2018 14:25

Field ID: G2SD0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040337	EPA 8321B	Aldicarb	0.020	U	ug/L	P354331	
		Aldicarb Sulfone	0.0020	U	ug/L	P354331	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P354331	MS
		Carbaryl	0.0020	U	ug/L	P354331	
		Carbofuran	0.0020	U	ug/L	P354331	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P354331	
		Methiocarb	0.0020	U	ug/L	P354331	
		Methomyl	0.0020	U	ug/L	P354331	
		Oxamyl	0.0020	U	ug/L	P354331	
		Propoxur	0.0020	U	ug/L	P354331	
2040339		2,4-D	0.018		ug/L	P354331	
		2,4-DB	0.0080	U	ug/L	P354331	
		2,4,5-T	0.0040	U	ug/L	P354331	
		Acifluorfen	0.0080	U	ug/L	P354331	
		Bentazon	0.016		ug/L	P354331	
		Dicamba	0.080	U	ug/L	P354331	MS
		Dichlorprop	0.0040	U	ug/L	P354331	
		Dinoseb	0.0040	U	ug/L	P354331	
		MCPA	0.0020	U	ug/L	P354331	
		MCPP	0.0065	I	ug/L	P354331	
		Picloram	0.080	U	ug/L	P354331	MS
		Silvex	0.0040	U	ug/L	P354331	
		Triclopyr**	0.0040	U	ug/L	P354331	
		Imidacloprid	0.042		ug/L	P354331	
		Diuron	0.0020	U	ug/L	P354331	
		Pyraclostrobin**	0.0020	U	ug/L	P354331	
		Primidone**	0.024		ug/L	P354331	
		Linuron	0.0040	U	ug/L	P354331	
		Acetaminophen**	0.0080	U	ug/L	P354331	
		Fenuron	0.016	U	ug/L	P354331	
		Imazapyr**	0.62		ug/L	P354331	
		Carbamazepine**	0.0084		ug/L	P354331	
		Fluridone**	0.0078		ug/L	P354331	
		Hydrocodone**	8.0E-04	U	ug/L	P354331	
		Naproxen**	0.0080	U	ug/L	P354331	
		Ibuprofen**	0.020	U	ug/L	P354331	
		Sucralose**	3.0		ug/L	P354426	
		Glyphosate**	0.10	UJ	ug/L	P354426	MS, SUR
		AMPA**	0.10	UJ	ug/L	P354426	MS, SUR
		Endothall**	0.25	U	ug/L	P354426	
		Glufosinate**	0.10	UJ	ug/L	P354426	MS, SUR
		Acesulfame K**	0.47		ug/L	P354426	
2040342	EPA 8270D	Aldrin	4.2	U	ng/L	P354398	
		Alpha-BHC	2.1	U	ng/L	P354398	

Field ID: G2SD0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040342	EPA 8270D	Beta-BHC	4.2	U	ng/L	P354398	
		Delta-BHC	4.2	U	ng/L	P354398	
		Gamma-BHC	4.2	U	ng/L	P354398	
		Carbophenothion	4.2	U	ng/L	P354398	
		Chlorothalonil	2.1	UJ	ng/L	P354398	LCS, RPD
		Cypermethrin	21	U	ng/L	P354398	
		DDD-p,p'	3.1	U	ng/L	P354398	
		DDE-p,p'	3.1	U	ng/L	P354398	
		DDT-p,p'	3.1	U	ng/L	P354398	
		Dieldrin	4.2	U	ng/L	P354398	
		Endosulfan I	4.2	U	ng/L	P354398	
		Endosulfan II	4.2	U	ng/L	P354398	
		Endosulfan Sulfate	2.1	U	ng/L	P354398	
		Endrin	2.1	U	ng/L	P354398	
		Endrin Aldehyde	2.1	U	ng/L	P354398	
		Heptachlor	1.6	U	ng/L	P354398	
		Heptachlor Epoxide	2.1	U	ng/L	P354398	
		Methoxychlor	4.2	U	ng/L	P354398	
		Mirex	2.1	U	ng/L	P354398	
		Permethrin	10	U	ng/L	P354398	
		Trifluralin	1.0	U	ng/L	P354398	
		Alpha-Chlordane	1.0	U	ng/L	P354398	
		Gamma-Chlordane	1.0	U	ng/L	P354398	
		Endrin Ketone	2.1	U	ng/L	P354398	
		Dicofol	31	U	ng/L	P354398	
	EPA 8276	Chlordane	2.6	U	ng/L	P354398	RPD
		Toxaphene	31	UJ	ng/L	P354398	CCV, RPD
2040344	EPA 8270D	Alachlor	0.25	U	ng/L	P354472	MS
		Ametryn	0.32	U	ng/L	P354472	
		Atrazine	33		ng/L	P354472	
		Atrazine Desethyl	5.7	I	ng/L	P354472	
		Azinphos Methyl	2.2	U	ng/L	P354472	
		Bromacil	0.49	U	ng/L	P354472	
		Butylate	0.39	U	ng/L	P354472	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P354472	
		Chlorpyrifos Methyl	0.098	U	ng/L	P354472	
		Demeton	2.0	U	ng/L	P354472	
		Diazinon	0.12	U	ng/L	P354472	MS
		Disulfoton	0.49	U	ng/L	P354472	
		EPTC	1.2	U	ng/L	P354472	
		Ethion	0.15	U	ng/L	P354472	MS, RPD
		Ethoprop	0.098	U	ng/L	P354472	
		Fenamiphos	0.25	U	ng/L	P354472	
		Fipronil	0.56	I	ng/L	P354472	
		Fipronil Sulfide	0.66		ng/L	P354472	

Field ID: G2SD0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040344	EPA 8270D	Fipronil Sulfone	2.0		ng/L	P354472	
		Hexazinone	5.7		ng/L	P354472	
		Malathion	0.34	U	ng/L	P354472	
		Metribuzin	2.9		ng/L	P354472	
		Mevinphos	0.49	U	ng/L	P354472	
		Molinate	0.29	U	ng/L	P354472	
		Norflurazon	0.49	U	ng/L	P354472	
		Pendimethalin	0.98	U	ng/L	P354472	
		Phorate	0.25	U	ng/L	P354472	
		Prometon	0.88	U	ng/L	P354472	
		Prometryn	0.20	U	ng/L	P354472	MS, RPD
		Simazine	1.4	I	ng/L	P354472	
		Terbufos	0.098	U	ng/L	P354472	
		Terbuthylazine	0.42	UJ	ng/L	P354472	LCS, MS
		Fonofos	0.20	U	ng/L	P354472	
		Metalaxyl	1.5		ng/L	P354472	
		Metolachlor	0.25	U	ng/L	P354472	
		Acetochlor	0.25	UJ	ng/L	P354472	LCS
		Cyanazine	0.49	U	ng/L	P354472	
		Parathion Ethyl	0.25	U	ng/L	P354472	
		Parathion Methyl	0.25	U	ng/L	P354472	
		Dimethenamid**	0.098	U	ng/L	P354472	RPD
		Fipronil Desulfinyl**	1.5	J	ng/L	P354472	
		Dithiopyr**	0.25	I	ng/L	P354472	
		Prodiamine**	0.17	U	ng/L	P354472	
		Oxadiazon**	12		ng/L	P354472	
		Tebuconazole**	0.49	UJ	ng/L	P354472	MS, RPD

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: Precision for AMPA, glufosinate and glyphosate is not available due to no recoveries in the duplicate matrix spikes. Glyphosate 13C 15Nsurrogate spike recovery exceeding the control limits. Results confirmed in re-extraction. Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes.

EPA 8276: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Estimated value for Fipronil Desulfinyl due to the lack of the second source standard. MS accuracy for Atrazine and Prodiamine not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Woodmere Creek@Heron Rd

Collection Date/Time: 11/07/2018 14:55

Field ID: G2SD0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040334	EPA 8321B	2,4-D	0.11		ug/L	P354331	
		Bentazon	0.0074		ug/L	P354331	
		MCP	0.0044	I	ug/L	P354331	
		Triclopyr**	0.0040	U	ug/L	P354331	
		Imidacloprid	0.016		ug/L	P354331	
		Diuron	0.0020	U	ug/L	P354331	
		Pyraclostrobin**	0.0020	U	ug/L	P354331	
		Primidone**	0.0074	I	ug/L	P354331	
		Linuron	0.0040	U	ug/L	P354331	
		Acetaminophen**	0.0080	U	ug/L	P354331	
		Fenuron	0.016	U	ug/L	P354331	
		Imazapyr**	1.2		ug/L	P354331	
		Carbamazepine**	0.017		ug/L	P354331	
		Fluridone**	0.0013	I	ug/L	P354331	
		Hydrocodone**	8.0E-04	U	ug/L	P354331	
		Naproxen**	0.0080	U	ug/L	P354331	
		Ibuprofen**	0.020	U	ug/L	P354331	
		Sucralose**	2.1		ug/L	P354426	
		Acesulfame K**	1.7		ug/L	P354426	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Gottfried@DeerCrkMobile

Collection Date/Time: 11/07/2018 15:20

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2040335	EPA 8321B	2,4-D	0.0048	I	ug/L	P354331	
		Bentazon	0.0031	I	ug/L	P354331	
		MCP	0.0020	U	ug/L	P354331	
		Triclopyr**	0.0040	U	ug/L	P354331	
		Imidacloprid	0.0036	I	ug/L	P354331	
		Diuron	0.0020	U	ug/L	P354331	
		Pyraclostrobin**	0.0020	U	ug/L	P354331	
		Primidone**	0.0040	U	ug/L	P354331	
		Linuron	0.0040	U	ug/L	P354331	
		Acetaminophen**	0.0080	U	ug/L	P354331	
		Fenuron	0.016	U	ug/L	P354331	
		Imazapyr**	0.070		ug/L	P354331	
		Carbamazepine**	8.0E-04	U	ug/L	P354331	
		Fluridone**	0.0036		ug/L	P354331	
		Hydrocodone**	8.0E-04	U	ug/L	P354331	
		Naproxen**	0.0080	U	ug/L	P354331	
		Ibuprofen**	0.020	U	ug/L	P354331	
		Sucralose**	0.19		ug/L	P354426	
		Acesulfame K**	0.10	U	ug/L	P354426	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D
Batch ID: P354398

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'	3.0	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: P354472

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
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P354472

Component	Result	Code	Units
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
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.25	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
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P354398

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B
Batch ID: P354331

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4-DB	0.0080	U	ug/L
2,4,5-T	0.0040	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acifluorfen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Dicamba	0.080	U	ug/L
Dichlorprop	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P354331

Component	Result	Code	Units
Dinoseb	0.0040	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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
MCPA	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Oxamyl	0.0020	U	ug/L
Picloram	0.080	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P354426

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P354398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	60.3	60.1	P/P	24 - 89.0
Alpha-BHC	91.5	99.3	P/P	58 - 117
Alpha-Chlordane	84.2	84.2	P/P	56 - 115
Beta-BHC	108	115	P/P	55 - 137
Carbophenothion	83.2	86.7	P/P	37 - 145
Chlorothalonil	56.0	18.8	P/F	26 - 163
Cypermethrin	64.9	69.7	P/P	42 - 156
DDD-p,p'	84.8	89.1	P/P	59 - 129
DDE-p,p'	78.5	85.2	P/P	52 - 117
DDT-p,p'	88.0	94.6	P/P	48 - 128
Delta-BHC	113	114	P/P	59 - 158
Dicofol	85.4	96.9	P/P	19 - 124
Dieldrin	85.9	91.4	P/P	57 - 126
Endosulfan I	85.2	84.8	P/P	59 - 133
Endosulfan II	70.9	66.9	P/P	58 - 148
Endosulfan Sulfate	76.3	81.1	P/P	56 - 135
Endrin	90.1	92.3	P/P	50 - 140
Endrin Aldehyde	84.1	85.6	P/P	47 - 141
Endrin Ketone	79.4	84.1	P/P	63 - 123
Gamma-BHC	108	112	P/P	59 - 132
Gamma-Chlordane	82.5	81.7	P/P	55 - 112
Heptachlor	68.8	73.4	P/P	45 - 102
Heptachlor Epoxide	86.6	88.3	P/P	61 - 116
Methoxychlor	96.7	105	P/P	60 - 133
Mirex	64.3	65.3	P/P	40 - 98.0
Permethrin	65.2	69.3	P/P	45 - 131
Trifluralin	83.7	92.0	P/P	38 - 179

Reference Method: EPA 8270D
Batch ID: P354472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	113	123	P/F	74 - 119
Alachlor	105	115	P/P	75 - 118
Ametryn	100	108	P/P	59 - 137
Atrazine	92.2	109	P/P	73 - 120
Atrazine Desethyl	87.5	109	P/P	19 - 129
Azinphos Methyl	134	144	P/P	65 - 181
Bromacil	87.7	114	P/P	43 - 123
Butylate	66.1	81.5	P/P	28 - 85.0
Chlorpyrifos Ethyl	96.3	101	P/P	55 - 112
Chlorpyrifos Methyl	91.7	97.4	P/P	35 - 124
Cyanazine	118	138	P/P	26 - 262
Demeton	71.6	79.0	P/P	43 - 122
Diazinon	113	115	P/P	72 - 120
Dimethenamid	92.5	114	P/P	60 - 130
Disulfoton	93.5	97.0	P/P	45 - 137
Dithiopyr	114	123	P/P	60 - 130
EPTC	69.5	85.6	P/P	28 - 95.0
Ethion	68.8	86.8	P/P	63 - 127
Ethoprop	99.0	92.8	P/P	63 - 109
Fenamiphos	88.6	101	P/P	66 - 136

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P354472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil	106	119	P/P	63 - 126
Fipronil Sulfide	84.3	94.0	P/P	59 - 123
Fipronil Sulfone	79.6	86.9	P/P	56 - 122
Fonofos	96.5	98.6	P/P	64 - 114
Hexazinone	97.0	102	P/P	49 - 144
Malathion	90.9	102	P/P	68 - 131
Metalaxyl	109	120	P/P	57 - 126
Metolachlor	104	114	P/P	75 - 118
Metribuzin	128	156	P/P	46 - 169
Mevinphos	87.2	92.6	P/P	34 - 126
Molinate	54.6	60.0	P/P	37 - 101
Norflurazon	101	113	P/P	63 - 127
Oxadiazon	110	124	P/P	60 - 130
Parathion Ethyl	90.6	94.5	P/P	78 - 109
Parathion Methyl	94.4	102	P/P	74 - 123
Pendimethalin	101	107	P/P	51 - 130
Phorate	84.0	85.0	P/P	53 - 116
Prodiamine	113	109	P/P	60 - 130
Prometon	89.0	99.1	P/P	66 - 124
Prometryn	103	111	P/P	66 - 124
Simazine	99.8	107	P/P	62 - 134
Tebuconazole	42.5	61.8	P/P	30 - 100
Terbufos	98.7	101	P/P	59 - 115
Terbutylazine	111	113	P/F	76 - 113

Reference Method: EPA 8276
Batch ID: P354398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	68.3	75.1	P/P	47 - 125
Toxaphene	60.3	71.5	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P354331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.6		P	40 - 150
2,4-DB	92.4		P	40 - 150
2,4,5-T	98.7		P	40 - 150
3-Hydroxycarbofuran	91.1		P	40 - 150
Acetaminophen	71.6		P	30 - 150
Acifluorfen	94.5		P	40 - 150
Aldicarb	73.8		P	30 - 150
Aldicarb Sulfone	107		P	40 - 150
Aldicarb Sulfoxide	95.0		P	40 - 150
Bentazon	81.6		P	30 - 150
Carbamazepine	83.9		P	40 - 150
Carbaryl	75.9		P	40 - 150
Carbofuran	78.6		P	40 - 150
Dicamba	78.0		P	40 - 150
Dichlorprop	99.5		P	40 - 150
Dinoseb	85.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P354331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	67.3		P	40 - 150
Fenuron	95.9		P	40 - 150
Fluridone	83.4		P	40 - 150
Hydrocodone	93.1		P	40 - 150
Ibuprofen	105		P	40 - 150
Imazapyr	91.4		P	40 - 150
Imidacloprid	90.9		P	40 - 160
Linuron	70.7		P	40 - 150
MCPA	102		P	40 - 150
MCPP	103		P	40 - 150
Methiocarb	67.9		P	40 - 150
Methomyl	106		P	40 - 150
Naproxen	122		P	40 - 150
Oxamyl	98.3		P	40 - 150
Picloram	71.7		P	40 - 150
Primidone	87.7		P	40 - 150
Propoxur	76.4		P	40 - 150
Pyraclostrobin	68.1		P	40 - 150
Silvex	105		P	40 - 150
Triclopyr	105		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354426

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	80.3		P	40 - 150
AMPA	84.2		P	40 - 150
Endothall	92.5		P	40 - 150
Glufosinate	77.8		P	40 - 150
Glyphosate	75.8		P	40 - 140
Sucralose	98.5		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
 Batch ID: P354398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040192	Aldrin	54.9	56.5	P/P	26 - 96.0
2040192	Alpha-BHC	101	106	P/P	51 - 123
2040192	Alpha-Chlordane	80.8	81.0	P/P	45 - 120
2040192	Beta-BHC	107	115	P/P	43 - 146
2040192	Carbophenothion	78.3	80.3	P/P	26 - 179
2040192	Chlorothalonil	20.6	16.1	P/P	10 - 215
2040192	Cypermethrin	58.1	73.1	P/P	35 - 169
2040192	DDD-p,p'	87.9	82.2	P/P	49 - 131
2040192	DDE-p,p'	79.9	82.2	P/P	39 - 127
2040192	DDT-p,p'	92.5	97.6	P/P	49 - 120
2040192	Delta-BHC	119	127	P/P	49 - 187
2040192	Dicofol	89.0	95.4	P/P	10 - 129
2040192	Dieldrin	89.0	81.3	P/P	46 - 132
2040192	Endosulfan I	82.4	81.9	P/P	57 - 130
2040192	Endosulfan II	68.0	63.6	P/P	52 - 148
2040192	Endosulfan Sulfate	79.4	86.0	P/P	55 - 129
2040192	Endrin	83.6	97.5	P/P	45 - 133
2040192	Endrin Aldehyde	80.2	72.7	P/P	26 - 140
2040192	Endrin Ketone	82.6	88.4	P/P	60 - 125
2040192	Gamma-BHC	142	134	P/P	50 - 145
2040192	Gamma-Chlordane	78.2	80.1	P/P	44 - 118
2040192	Heptachlor	64.8	67.3	P/P	35 - 106
2040192	Heptachlor Epoxide	83.1	85.0	P/P	52 - 123
2040192	Methoxychlor	102	108	P/P	54 - 132
2040192	Mirex	63.8	67.3	P/P	36 - 107
2040192	Permethrin	63.0	71.2	P/P	47 - 135
2040192	Trifluralin	90.7	93.0	P/P	32 - 228

Reference Method: EPA 8270D
 Batch ID: P354472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040343	Acetochlor	106	109	P/P	67 - 125
2040343	Alachlor	136	103	F/P	69 - 123
2040343	Ametryn	93.7	88.7	P/P	52 - 151
2040343	Atrazine Desethyl	115	80.2	P/P	10 - 129
2040343	Azinphos Methyl	127	113	P/P	48 - 200
2040343	Bromacil	109	102	P/P	46 - 130
2040343	Butylate	79.4	64.2	P/P	10 - 85.0
2040343	Chlorpyrifos Ethyl	83.7	90.9	P/P	54 - 115
2040343	Chlorpyrifos Methyl	78.3	87.3	P/P	44 - 117
2040343	Cyanazine	117	104	P/P	10 - 262
2040343	Demeton	92.9	81.7	P/P	24 - 145
2040343	Diazinon	136	122	F/P	66 - 129
2040343	Dimethenamid	62.0	97.0	P/P	60 - 130
2040343	Disulfoton	96.3	93.9	P/P	45 - 139
2040343	Dithiopyr	97.5	102	P/P	60 - 130
2040343	EPTC	81.9	71.0	P/P	10 - 86.0
2040343	Ethion	20.1	56.5	F/F	59 - 133
2040343	Ethoprop	85.2	105	P/P	54 - 116
2040343	Fenamiphos	102	102	P/P	55 - 140
2040343	Fipronil	105	106	P/P	37 - 142

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
 Batch ID: P354472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040343	Fipronil Sulfide	71.0	72.0	P/P	37 - 130
2040343	Fipronil Sulfone	58.6	73.7	P/P	18 - 143
2040343	Fonofos	97.6	97.1	P/P	55 - 118
2040343	Hexazinone	71.7	116	P/P	62 - 140
2040343	Malathion	78.7	87.5	P/P	64 - 132
2040343	Metalaxyl	105	91.8	P/P	55 - 129
2040343	Metolachlor	110	99.4	P/P	56 - 137
2040343	Metribuzin	147	145	P/P	16 - 218
2040343	Mevinphos	98.9	95.1	P/P	34 - 129
2040343	Molinate	46.2	52.8	P/P	16 - 99.0
2040343	Norflurazon	99.8	93.6	P/P	43 - 135
2040343	Oxadiazon	88.6	96.5	P/P	60 - 130
2040343	Parathion Ethyl	88.1	92.1	P/P	71 - 112
2040343	Parathion Methyl	94.5	98.4	P/P	65 - 127
2040343	Pendimethalin	106	114	P/P	35 - 159
2040343	Phorate	111	93.3	P/P	41 - 129
2040343	Prometon	83.8	105	P/P	56 - 140
2040343	Prometryn	43.4	73.0	F/P	65 - 130
2040343	Simazine	121	109	P/P	54 - 148
2040343	Tebuconazole	19.8	53.9	F/P	30 - 100
2040343	Terbufos	109	105	P/P	53 - 126
2040343	Terbutylazine	117	104	F/P	73 - 114

Reference Method: EPA 8276
 Batch ID: P354398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2039411	Chlordane	85.9	59.2	P/P	41 - 134
2039411	Toxaphene	67.4	45.4	P/P	39 - 158

Reference Method: EPA 8321B
 Batch ID: P354331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040336	3-Hydroxycarbofuran	80.7	71.6	P/P	40 - 150
2040336	Aldicarb	48.1	57.3	P/P	30 - 150
2040336	Aldicarb Sulfone	90.8	83.1	P/P	40 - 150
2040336	Aldicarb Sulfoxide	40.1	38.7	P/F	40 - 150
2040336	Carbaryl	58.3	59.0	P/P	40 - 150
2040336	Carbofuran	55.7	55.1	P/P	40 - 150
2040336	Methiocarb	55.7	58.6	P/P	40 - 150
2040336	Methomyl	81.2	79.9	P/P	40 - 150
2040336	Oxamyl	84.8	70.7	P/P	40 - 150
2040336	Propoxur	53.9	53.0	P/P	40 - 150
2040338	2,4-D	125	138	P/P	40 - 150
2040338	2,4-DB	70.3	86.3	P/P	40 - 150
2040338	2,4,5-T	130	134	P/P	40 - 150
2040338	Acetaminophen	73.7	81.4	P/P	30 - 150
2040338	Acifluorfen	126	117	P/P	40 - 150
2040338	Bentazon	45.4	46.2	P/P	30 - 150
2040338	Carbamazepine	65.1	74.2	P/P	40 - 150
2040338	Dicamba	21.6	28.8	F/F	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P354331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040338	Dichlorprop	143	147	P/P	40 - 150
2040338	Dinoseb	87.1	84.2	P/P	40 - 150
2040338	Diuron	57.3	58.6	P/P	40 - 150
2040338	Fenuron	78.0	88.1	P/P	40 - 150
2040338	Fluridone	85.0	88.1	P/P	40 - 150
2040338	Hydrocodone	96.8	102	P/P	40 - 150
2040338	Ibuprofen	81.4	69.5	P/P	40 - 150
2040338	Imidacloprid	154	144	P/P	40 - 160
2040338	Linuron	61.9	62.6	P/P	40 - 150
2040338	MCPA	126	126	P/P	40 - 150
2040338	MCPP	144	134	P/P	40 - 150
2040338	Naproxen	87.4	90.5	P/P	40 - 150
2040338	Picloram	42.7	37.1	P/F	40 - 150
2040338	Primidone	88.8	77.7	P/P	40 - 150
2040338	Pyraclostrobin	70.3	73.5	P/P	40 - 150
2040338	Silvex	126	122	P/P	40 - 150
2040338	Triclopyr	139	143	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354426

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2040338	Acesulfame K	103	95.0	P/P	40 - 150
2040338	AMPA	0.0	0.0	F/F	40 - 150
2040338	Endothall	87.9	76.7	P/P	40 - 150
2040338	Glufosinate	0.0	0.0	F/F	40 - 150
2040338	Glyphosate	0.0	0.0	F/F	40 - 140
2040338	Sucralose	113	114	P/P	40 - 150

Quality Assurance Report

Precision

Reference Method: EPA 8270D
Batch ID: P354398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040192	Aldrin	2.88	Spike	P	0 - 30
2040192	Alpha-BHC	5.06	Spike	P	0 - 30
2040192	Alpha-Chlordane	0.322	Spike	P	0 - 30
2040192	Beta-BHC	7.55	Spike	P	0 - 30
2040192	Carbophenothion	2.52	Spike	P	0 - 30
2040192	Chlorothalonil	24.6	Spike	P	0 - 30
2040192	Cypermethrin	23.0	Spike	P	0 - 30
2040192	DDD-p,p'	6.62	Spike	P	0 - 30
2040192	DDE-p,p'	2.86	Spike	P	0 - 30
2040192	DDT-p,p'	5.36	Spike	P	0 - 30
2040192	Delta-BHC	5.97	Spike	P	0 - 30
2040192	Dicofol	6.99	Spike	P	0 - 30
2040192	Dieldrin	9.00	Spike	P	0 - 30
2040192	Endosulfan I	0.610	Spike	P	0 - 30
2040192	Endosulfan II	6.64	Spike	P	0 - 30
2040192	Endosulfan Sulfate	8.05	Spike	P	0 - 30
2040192	Endrin	15.4	Spike	P	0 - 30
2040192	Endrin Aldehyde	9.83	Spike	P	0 - 30
2040192	Endrin Ketone	6.80	Spike	P	0 - 30
2040192	Gamma-BHC	5.88	Spike	P	0 - 30
2040192	Gamma-Chlordane	2.47	Spike	P	0 - 30
2040192	Heptachlor	3.79	Spike	P	0 - 30
2040192	Heptachlor Epoxide	2.30	Spike	P	0 - 30
2040192	Methoxychlor	5.09	Spike	P	0 - 30
2040192	Mirex	5.33	Spike	P	0 - 30
2040192	Permethrin	12.2	Spike	P	0 - 30
2040192	Trifluralin	2.45	Spike	P	0 - 30
LFB	Aldrin	0.255	LCS	P	0 - 30
LFB	Alpha-BHC	8.10	LCS	P	0 - 30
LFB	Alpha-Chlordane	0.0695	LCS	P	0 - 30
LFB	Beta-BHC	5.71	LCS	P	0 - 30
LFB	Carbophenothion	4.22	LCS	P	0 - 30
LFB	Chlorothalonil	99.3	LCS	F	0 - 30
LFB	Cypermethrin	7.13	LCS	P	0 - 30
LFB	DDD-p,p'	4.92	LCS	P	0 - 30
LFB	DDE-p,p'	8.19	LCS	P	0 - 30
LFB	DDT-p,p'	7.21	LCS	P	0 - 30
LFB	Delta-BHC	1.67	LCS	P	0 - 30
LFB	Dicofol	12.5	LCS	P	0 - 30
LFB	Dieldrin	6.20	LCS	P	0 - 30
LFB	Endosulfan I	0.468	LCS	P	0 - 30
LFB	Endosulfan II	5.89	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.12	LCS	P	0 - 30
LFB	Endrin	2.41	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.79	LCS	P	0 - 30
LFB	Endrin Ketone	5.86	LCS	P	0 - 30
LFB	Gamma-BHC	3.93	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.942	LCS	P	0 - 30
LFB	Heptachlor	6.43	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.86	LCS	P	0 - 30
LFB	Methoxychlor	8.10	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P354398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	1.50	LCS	P	0 - 30
LFB	Permethrin	6.05	LCS	P	0 - 30
LFB	Trifluralin	9.46	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P354472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040343	Acetochlor	2.61	Spike	P	0 - 30
2040343	Alachlor	27.2	Spike	P	0 - 30
2040343	Ametryn	5.45	Spike	P	0 - 30
2040343	Atrazine	6.02	Spike	P	0 - 30
2040343	Atrazine Desethyl	28.6	Spike	P	0 - 30
2040343	Azinphos Methyl	11.4	Spike	P	0 - 30
2040343	Bromacil	4.43	Spike	P	0 - 30
2040343	Butylate	21.2	Spike	P	0 - 30
2040343	Chlorpyrifos Ethyl	8.22	Spike	P	0 - 30
2040343	Chlorpyrifos Methyl	10.8	Spike	P	0 - 30
2040343	Cyanazine	11.9	Spike	P	0 - 30
2040343	Demeton	12.8	Spike	P	0 - 30
2040343	Diazinon	10.8	Spike	P	0 - 30
2040343	Dimethenamid	44.1	Spike	F	0 - 30
2040343	Disulfoton	2.55	Spike	P	0 - 30
2040343	Dithiopyr	4.62	Spike	P	0 - 30
2040343	EPTC	14.2	Spike	P	0 - 30
2040343	Ethion	95.0	Spike	F	0 - 30
2040343	Ethoprop	20.4	Spike	P	0 - 30
2040343	Fenamiphos	0.794	Spike	P	0 - 30
2040343	Fipronil	0.288	Spike	P	0 - 30
2040343	Fipronil Sulfide	1.32	Spike	P	0 - 30
2040343	Fipronil Sulfone	16.1	Spike	P	0 - 30
2040343	Fonofos	0.465	Spike	P	0 - 30
2040343	Hexazinone	26.9	Spike	P	0 - 30
2040343	Malathion	10.5	Spike	P	0 - 30
2040343	Metalaxyl	12.2	Spike	P	0 - 30
2040343	Metolachlor	8.33	Spike	P	0 - 30
2040343	Metribuzin	1.07	Spike	P	0 - 30
2040343	Mevinphos	3.92	Spike	P	0 - 30
2040343	Molinate	13.3	Spike	P	0 - 30
2040343	Norflurazon	4.89	Spike	P	0 - 30
2040343	Oxadiazon	6.32	Spike	P	0 - 30
2040343	Parathion Ethyl	4.41	Spike	P	0 - 30
2040343	Parathion Methyl	4.03	Spike	P	0 - 30
2040343	Pendimethalin	6.77	Spike	P	0 - 30
2040343	Phorate	17.1	Spike	P	0 - 30
2040343	Prodiamine	5.61	Spike	P	0 - 30
2040343	Prometon	22.8	Spike	P	0 - 30
2040343	Prometryn	50.9	Spike	F	0 - 30
2040343	Simazine	10.3	Spike	P	0 - 30
2040343	Tebuconazole	83.5	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P354472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040343	Terbufos	4.32	Spike	P	0 - 30
2040343	Terbuthylazine	11.0	Spike	P	0 - 30
LFB	Acetochlor	8.44	LCS	P	0 - 30
LFB	Alachlor	9.15	LCS	P	0 - 30
LFB	Ametryn	7.88	LCS	P	0 - 30
LFB	Atrazine	16.8	LCS	P	0 - 30
LFB	Atrazine Desethyl	21.7	LCS	P	0 - 30
LFB	Azinphos Methyl	7.16	LCS	P	0 - 30
LFB	Bromacil	26.5	LCS	P	0 - 30
LFB	Butylate	21.0	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	5.00	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.01	LCS	P	0 - 30
LFB	Cyanazine	15.6	LCS	P	0 - 30
LFB	Demeton	9.81	LCS	P	0 - 30
LFB	Diazinon	1.61	LCS	P	0 - 30
LFB	Dimethenamid	20.6	LCS	P	0 - 30
LFB	Disulfoton	3.57	LCS	P	0 - 30
LFB	Dithiopyr	7.61	LCS	P	0 - 30
LFB	EPTC	20.8	LCS	P	0 - 30
LFB	Ethion	23.1	LCS	P	0 - 30
LFB	Ethoprop	6.41	LCS	P	0 - 30
LFB	Fenamiphos	13.2	LCS	P	0 - 30
LFB	Fipronil	11.7	LCS	P	0 - 30
LFB	Fipronil Sulfide	10.8	LCS	P	0 - 30
LFB	Fipronil Sulfone	8.72	LCS	P	0 - 30
LFB	Fonofos	2.07	LCS	P	0 - 30
LFB	Hexazinone	5.39	LCS	P	0 - 30
LFB	Malathion	11.1	LCS	P	0 - 30
LFB	Metalaxyl	9.55	LCS	P	0 - 30
LFB	Metolachlor	9.05	LCS	P	0 - 30
LFB	Metribuzin	19.5	LCS	P	0 - 30
LFB	Mevinphos	6.06	LCS	P	0 - 30
LFB	Molinate	9.36	LCS	P	0 - 30
LFB	Norflurazon	11.3	LCS	P	0 - 30
LFB	Oxadiazon	11.8	LCS	P	0 - 30
LFB	Parathion Ethyl	4.23	LCS	P	0 - 30
LFB	Parathion Methyl	7.21	LCS	P	0 - 30
LFB	Pendimethalin	6.58	LCS	P	0 - 30
LFB	Phorate	1.09	LCS	P	0 - 30
LFB	Prodiamine	3.47	LCS	P	0 - 30
LFB	Prometon	10.7	LCS	P	0 - 30
LFB	Prometryn	7.58	LCS	P	0 - 30
LFB	Simazine	7.46	LCS	P	0 - 30
LFB	Tebuconazole	36.9	LCS	F	0 - 30
LFB	Terbufos	1.89	LCS	P	0 - 30
LFB	Terbuthylazine	2.40	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P354398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2039411	Chlordane	36.8	Spike	F	0 - 30
2039411	Toxaphene	39.0	Spike	F	0 - 30
LFB	Chlordane	9.50	LCS	P	0 - 30
LFB	Toxaphene	16.9	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P354331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040336	3-Hydroxycarbofuran	12.0	Spike	P	0 - 30
2040336	Aldicarb	17.4	Spike	P	0 - 30
2040336	Aldicarb Sulfone	8.92	Spike	P	0 - 30
2040336	Aldicarb Sulfoxide	3.40	Spike	P	0 - 30
2040336	Carbaryl	1.23	Spike	P	0 - 30
2040336	Carbofuran	1.18	Spike	P	0 - 30
2040336	Methiocarb	5.04	Spike	P	0 - 30
2040336	Methomyl	1.67	Spike	P	0 - 30
2040336	Oxamyl	18.1	Spike	P	0 - 30
2040336	Propoxur	1.60	Spike	P	0 - 30
2040338	2,4-D	7.21	Spike	P	0 - 30
2040338	2,4-DB	20.4	Spike	P	0 - 30
2040338	2,4,5-T	2.87	Spike	P	0 - 30
2040338	Acetaminophen	9.89	Spike	P	0 - 30
2040338	Acifluorfen	7.14	Spike	P	0 - 30
2040338	Bentazon	0.973	Spike	P	0 - 30
2040338	Carbamazepine	12.8	Spike	P	0 - 30
2040338	Dicamba	8.65	Spike	P	0 - 30
2040338	Dichlorprop	2.66	Spike	P	0 - 30
2040338	Dinoseb	3.31	Spike	P	0 - 30
2040338	Diuron	2.15	Spike	P	0 - 30
2040338	Fenuron	12.2	Spike	P	0 - 30
2040338	Fluridone	3.39	Spike	P	0 - 30
2040338	Hydrocodone	4.90	Spike	P	0 - 30
2040338	Ibuprofen	15.7	Spike	P	0 - 30
2040338	Imazapyr	2.48	Spike	P	0 - 30
2040338	Imidacloprid	5.71	Spike	P	0 - 30
2040338	Linuron	1.09	Spike	P	0 - 30
2040338	MCPA	0.357	Spike	P	0 - 30
2040338	MCPP	7.39	Spike	P	0 - 30
2040338	Naproxen	3.49	Spike	P	0 - 30
2040338	Picloram	14.1	Spike	P	0 - 30
2040338	Primidone	12.6	Spike	P	0 - 30
2040338	Pyraclostrobin	4.41	Spike	P	0 - 30
2040338	Silvex	2.93	Spike	P	0 - 30
2040338	Triclopyr	2.80	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P354426

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2040338	Acesulfame K	8.09	Spike	P	0 - 30
2040338	Endothall	13.6	Spike	P	0 - 30
2040338	Sucralose	0.468	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: 2040333
Field Sample ID: G3SD0103_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.5	P	30 - 160
EPA 8321B	Diuron-d6	62.2	P	30 - 160
EPA 8321B	Endothall-d6	90.3	P	40 - 160
EPA 8321B	Ibuprofen-d3	112	P	30 - 160
EPA 8321B	Primidone-d5	80.2	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	40 - 160

Lab Sample ID: 2040334
Field Sample ID: G2SD0027

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.5	P	30 - 160
EPA 8321B	Diuron-d6	61.4	P	30 - 160
EPA 8321B	Endothall-d6	89.5	P	40 - 160
EPA 8321B	Ibuprofen-d3	104	P	30 - 160
EPA 8321B	Primidone-d5	84.0	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160

Lab Sample ID: 2040335
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	136	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.4	P	30 - 160
EPA 8321B	Diuron-d6	67.1	P	30 - 160
EPA 8321B	Endothall-d6	81.7	P	40 - 160
EPA 8321B	Ibuprofen-d3	93.5	P	30 - 160
EPA 8321B	Primidone-d5	80.4	P	30 - 160
EPA 8321B	Sucralose-d6	84.8	P	40 - 160

Lab Sample ID: 2040336
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	53.5	P	30 - 160

Lab Sample ID: 2040337
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	52.7	P	30 - 160

Lab Sample ID: 2040338
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2040338
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	84.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.2	P	30 - 160
EPA 8321B	Diuron-d6	62.9	P	30 - 160
EPA 8321B	Endothall-d6	78.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	40 - 160
EPA 8321B	Ibuprofen-d3	110	P	30 - 160
EPA 8321B	Primidone-d5	80.8	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	40 - 160

Lab Sample ID: 2040339
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.2	P	30 - 160
EPA 8321B	Diuron-d6	59.7	P	30 - 160
EPA 8321B	Endothall-d6	73.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	0.0	F	40 - 160
EPA 8321B	Ibuprofen-d3	114	P	30 - 160
EPA 8321B	Primidone-d5	79.2	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	40 - 160

Lab Sample ID: 2040340
Field Sample ID: G3SD0103

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	125	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	73.1	P	30 - 160
EPA 8321B	Diuron-d6	65.3	P	30 - 160
EPA 8321B	Endothall-d6	89.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	109	P	30 - 160
EPA 8321B	Primidone-d5	87.4	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	40 - 160

Lab Sample ID: 2040341
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	96.2	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	56.6	P	34 - 101
EPA 8276	Decachlorobiphenyl	71.8	P	31 - 108
EPA 8276	PCNB	90.3	P	62 - 142

Lab Sample ID: 2040342
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	89.6	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	57.7	P	34 - 101
EPA 8276	Decachlorobiphenyl	73.5	P	31 - 108

Quality Assurance Report Surrogates

Lab Sample ID: 2040342
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	PCNB	99.9	P	62 - 142

Lab Sample ID: 2040343
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	96.8	P	71 - 126
EPA 8270D	Terbufos-d10	102	P	59 - 149

Lab Sample ID: 2040344
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	91.5	P	71 - 126
EPA 8270D	Terbufos-d10	102	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A87692

Included Lab Sample IDs: 2040333, 2040334, 2040335, 2040338, 2040339, 2040340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	112	114	P/P	60 - 160
Sucralose	87.4	112	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A87717

Included Lab Sample IDs: 2040338, 2040339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	81.6	62.3	P/P	60 - 160
Glufosinate	107	107	P/P	60 - 160
Glyphosate	105	108	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A87732

Included Lab Sample IDs: 2040333, 2040334, 2040335, 2040338, 2040339, 2040340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	72.4	62.6	P/P	60 - 160
Acesulfame K	78.0	72.4	P/P	60 - 160
Endothall	95.5	100	P/P	60 - 160
Endothall	100	96.4	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A87745

Included Lab Sample IDs: 2040333, 2040334, 2040335, 2040338, 2040339, 2040340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	90.4	P/P	50 - 150
2,4-D	90.4	105	P/P	50 - 150
2,4-DB	101	72.6	P/P	50 - 150
2,4-DB	113	101	P/P	50 - 150
2,4,5-T	95.2	96.5	P/P	50 - 150
2,4,5-T	96.7	95.2	P/P	50 - 150
3-Hydroxycarbofuran	112	106	P/P	50 - 150
Acetaminophen	74.4	75.0	P/P	60 - 160
Acetaminophen	75.0	77.3	P/P	60 - 160
Acifluorfen	91.1	105	P/P	50 - 150
Acifluorfen	94.7	91.1	P/P	50 - 150
Aldicarb	101	69.2	P/P	60 - 150
Aldicarb Sulfone	107	102	P/P	50 - 150
Aldicarb Sulfoxide	93.7	92.4	P/P	50 - 150
Bentazon	91.6	91.9	P/P	50 - 160
Bentazon	91.9	82.1	P/P	50 - 160
Carbamazepine	106	105	P/P	60 - 160
Carbamazepine	114	106	P/P	60 - 160
Carbaryl	120	112	P/P	60 - 150
Carbofuran	107	110	P/P	50 - 150
Dicamba	110	96.5	P/P	50 - 150
Dicamba	89.1	110	P/P	50 - 150
Dichlorprop	90.9	94.7	P/P	50 - 150
Dichlorprop	94.7	98.4	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A87745

Included Lab Sample IDs: 2040333, 2040334, 2040335, 2040338, 2040339, 2040340

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dinoseb	102	103	P/P	50 - 150
Dinoseb	103	99.2	P/P	50 - 150
Diuron	103	99.1	P/P	60 - 150
Diuron	99.1	97.1	P/P	60 - 150
Fenuron	91.1	91.6	P/P	60 - 150
Fenuron	92.7	91.1	P/P	60 - 150
Fluridone	94.4	95.3	P/P	60 - 160
Fluridone	95.3	98.7	P/P	60 - 160
Hydrocodone	117	99.0	P/P	60 - 150
Hydrocodone	99.0	79.0	P/P	60 - 150
Ibuprofen	129	140	P/P	50 - 160
Ibuprofen	97.2	129	P/P	50 - 160
Imazapyr	105	107	P/P	50 - 150
Imazapyr	107	84.9	P/P	50 - 150
Imazapyr	88.3	75.2	P/P	50 - 150
Imidacloprid	73.4	85.7	P/P	60 - 160
Imidacloprid	93.2	73.4	P/P	60 - 160
Linuron	100	101	P/P	60 - 150
Linuron	101	96.5	P/P	60 - 150
MCPA	101	97.6	P/P	50 - 150
MCPA	92.5	101	P/P	50 - 150
MCPP	90.7	94.6	P/P	50 - 150
MCPP	94.6	96.2	P/P	50 - 150
Methiocarb	115	113	P/P	50 - 150
Methomyl	102	101	P/P	50 - 150
Naproxen	102	85.7	P/P	50 - 160
Naproxen	85.7	134	P/P	50 - 160
Oxamyl	104	118	P/P	50 - 150
Picloram	103	93.1	P/P	50 - 150
Picloram	93.1	86.2	P/P	50 - 150
Primidone	106	94.9	P/P	60 - 160
Primidone	94.9	101	P/P	60 - 160
Propoxur	104	101	P/P	50 - 150
Pyraclostrobin	105	103	P/P	60 - 150
Pyraclostrobin	107	105	P/P	60 - 150
Silvex	103	102	P/P	50 - 150
Silvex	94.4	103	P/P	50 - 150
Triclopyr	101	105	P/P	50 - 160
Triclopyr	105	99.2	P/P	50 - 160

Reference Method: EPA 8270D

Run ID: A87808

Included Lab Sample IDs: 2040341, 2040342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.6		P	80 - 120
Alpha-BHC	91.5		P	80 - 120
Alpha-Chlordane	95.4		P	80 - 120
Beta-BHC	90.9		P	80 - 120
Carbophenothion	93.3		P	80 - 120
Chlorothalonil	86.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A87808

Included Lab Sample IDs: 2040341, 2040342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cypermethrin	88.9		P	80 - 120
DDD-p,p'	96.0		P	80 - 120
DDE-p,p'	97.0		P	80 - 120
DDT-p,p'	97.4		P	80 - 120
Delta-BHC	89.8		P	80 - 120
Dicofol	96.9		P	80 - 120
Dieldrin	96.6		P	80 - 120
Endosulfan I	89.4		P	80 - 120
Endosulfan II	90.4		P	80 - 120
Endosulfan Sulfate	94.0		P	80 - 120
Endrin	92.7		P	80 - 120
Endrin Aldehyde	93.2		P	80 - 120
Endrin Ketone	94.0		P	80 - 120
Gamma-BHC	93.0		P	80 - 120
Gamma-Chlordane	96.1		P	80 - 120
Heptachlor	93.0		P	80 - 120
Heptachlor Epoxide	95.2		P	80 - 120
Methoxychlor	98.3		P	80 - 120
Mirex	95.9		P	80 - 120
Permethrin	92.0		P	80 - 120
Trifluralin	91.5		P	80 - 120

Reference Method: EPA 8276

Run ID: A87877

Included Lab Sample IDs: 2040341, 2040342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.3		P	80 - 120
Toxaphene	74.8*		F	80 - 120

Reference Method: EPA 8270D

Run ID: A87983

Included Lab Sample IDs: 2040343, 2040344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	99.1		P	80 - 120
Atrazine	95.0		P	80 - 120
Atrazine Desethyl	98.6		P	80 - 120
Azinphos Methyl	105		P	80 - 120
Bromacil	99.5		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	98.8		P	80 - 120
Cyanazine	89.4		P	80 - 120
Demeton	95.2		P	80 - 120
Diazinon	101		P	80 - 120
Dimethenamid	101		P	80 - 120
Disulfoton	94.9		P	80 - 120
Dithiopyr	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A87983

Included Lab Sample IDs: 2040343, 2040344

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
EPTC	102		P	80 - 120
Ethion	95.3		P	80 - 120
Ethoprop	96.4		P	80 - 120
Fenamiphos	97.5		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	98.0		P	80 - 120
Fipronil Sulfone	97.0		P	80 - 120
Fonofos	96.9		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	97.2		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	94.5		P	80 - 120
Mevinphos	99.2		P	80 - 120
Molinate	95.8		P	80 - 120
Norflurazon	99.7		P	80 - 120
Oxadiazon	95.4		P	80 - 120
Parathion Ethyl	96.9		P	80 - 120
Parathion Methyl	94.8		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	95.2		P	80 - 120
Prodiamine	106		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	98.6		P	80 - 120
Simazine	99.3		P	80 - 120
Tebuconazole	99.7		P	80 - 120
Terbufos	96.5		P	80 - 120
Terbutylazine	99.6		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		LCS	Precision SMP	MS
EPA 8270D	Acetochlor	113	123	106	109	8.44		2.61
	Alachlor	115	105	136	103	9.15		27.2
	Aldrin	60.1	60.3	54.9	56.5	0.255		2.88
	Alpha-BHC	99.3	91.5	101	106	8.10		5.06
	Alpha-Chlordane	84.2	84.2	80.8	81.0	0.0695		0.322
	Ametryn	108	100	93.7	88.7	7.88		5.45
	Atrazine	92.2	109			16.8		6.02
	Atrazine Desethyl	87.5	109	115	80.2	21.7		28.6
	Azinphos Methyl	134	144	127	113	7.16		11.4
	Beta-BHC	108	115	107	115	5.71		7.55
	Bromacil	87.7	114	109	102	26.5		4.43
	Butylate	66.1	81.5	79.4	64.2	21.0		21.2
	Carbophenothion	83.2	86.7	78.3	80.3	4.22		2.52
	Chlorothalonil	56.0	18.8	20.6	16.1	99.3		24.6
	Chlorpyrifos Ethyl	96.3	101	83.7	90.9	5.00		8.22
	Chlorpyrifos Methyl	91.7	97.4	78.3	87.3	6.01		10.8
	Cyanazine	118	138	117	104	15.6		11.9
	Cypermethrin	64.9	69.7	58.1	73.1	7.13		23.0
	DDD-p,p'	84.8	89.1	87.9	82.2	4.92		6.62
	DDE-p,p'	85.2	78.5	79.9	82.2	8.19		2.86
	DDT-p,p'	94.6	88.0	92.5	97.6	7.21		5.36
	Delta-BHC	113	114	119	127	1.67		5.97
	Demeton	79.0	71.6	92.9	81.7	9.81		12.8
	Diazinon	113	115	136	122	1.61		10.8
	Dicofol	85.4	96.9	89.0	95.4	12.5		6.99
	Dieldrin	91.4	85.9	89.0	81.3	6.20		9.00
	Dimethenamid	92.5	114	62.0	97.0	20.6		44.1
	Disulfoton	97.0	93.5	96.3	93.9	3.57		2.55
	Dithiopyr	114	123	97.5	102	7.61		4.62
	Endosulfan I	84.8	85.2	82.4	81.9	0.468		0.610
	Endosulfan II	66.9	70.9	68.0	63.6	5.89		6.64
	Endosulfan Sulfate	81.1	76.3	79.4	86.0	6.12		8.05
	Endrin	92.3	90.1	83.6	97.5	2.41		15.4
	Endrin Aldehyde	85.6	84.1	80.2	72.7	1.79		9.83
	Endrin Ketone	79.4	84.1	82.6	88.4	5.86		6.80
	EPTC	85.6	69.5	81.9	71.0	20.8		14.2
	Ethion	68.8	86.8	20.1	56.5	23.1		95.0
	Ethoprop	92.8	99.0	85.2	105	6.41		20.4
	Fenamiphos	101	88.6	102	102	13.2		0.794
	Fipronil	119	106	105	106	11.7		0.288
	Fipronil Sulfide	94.0	84.3	71.0	72.0	10.8		1.32
	Fipronil Sulfone	86.9	79.6	58.6	73.7	8.72		16.1
	Fonofos	96.5	98.6	97.6	97.1	2.07		0.465
	Gamma-BHC	108	112	142	134	3.93		5.88
	Gamma-Chlordane	81.7	82.5	78.2	80.1	0.942		2.47
	Heptachlor	73.4	68.8	64.8	67.3	6.43		3.79
	Heptachlor Epoxide	88.3	86.6	83.1	85.0	1.86		2.30
	Hexazinone	102	97.0	71.7	116	5.39		26.9
	Malathion	102	90.9	78.7	87.5	11.1		10.5
	Metalaxyl	109	120	105	91.8	9.55		12.2
	Methoxychlor	105	96.7	102	108	8.10		5.09
	Metolachlor	104	114	110	99.4	9.05		8.33
	Metribuzin	128	156	147	145	19.5		1.07
	Mevinphos	92.6	87.2	98.9	95.1	6.06		3.92

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Mirex	65.3	64.3	63.8	67.3	1.50	5.33
	Molinate	60.0	54.6	46.2	52.8	9.36	13.3
	Norflurazon	113	101	99.8	93.6	11.3	4.89
	Oxadiazon	110	124	88.6	96.5	11.8	6.32
	Parathion Ethyl	90.6	94.5	88.1	92.1	4.23	4.41
	Parathion Methyl	94.4	102	94.5	98.4	7.21	4.03
	Pendimethalin	101	107	106	114	6.58	6.77
	Permethrin	69.3	65.2	63.0	71.2	6.05	12.2
	Phorate	84.0	85.0	111	93.3	1.09	17.1
	Prodiamine	113	109			3.47	5.61
	Prometon	89.0	99.1	83.8	105	10.7	22.8
	Prometryn	103	111	43.4	73.0	7.58	50.9
	Simazine	99.8	107	121	109	7.46	10.3
	Tebuconazole	42.5	61.8	19.8	53.9	36.9	83.5
	Terbufos	98.7	101	109	105	1.89	4.32
	Terbuthylazine	111	113	117	104	2.40	11.0
	Trifluralin	92.0	83.7	90.7	93.0	9.46	2.45
EPA 8276	Chlordane	68.3	75.1	85.9	59.2	9.50	36.8
	Toxaphene	60.3	71.5	67.4	45.4	16.9	39.0
EPA 8321B	2,4-D	97.6		125	138		7.21
	2,4-DB	92.4		70.3	86.3		20.4
	2,4,5-T	98.7		130	134		2.87
	3-Hydroxycarbofuran	91.1		80.7	71.6		12.0
	Acesulfame K	80.3		103	95.0		8.09
	Acetaminophen	71.6		73.7	81.4		9.89
	Acifluorfen	94.5		126	117		7.14
	Aldicarb	73.8		48.1	57.3		17.4
	Aldicarb Sulfone	107		90.8	83.1		8.92
	Aldicarb Sulfoxide	95.0		40.1	38.7		3.40
	AMPA	84.2		0.0	0.0		
	Bentazon	81.6		45.4	46.2		0.973
	Carbamazepine	83.9		65.1	74.2		12.8
	Carbaryl	75.9		58.3	59.0		1.23
	Carbofuran	78.6		55.7	55.1		1.18
	Dicamba	78.0		21.6	28.8		8.65
	Dichlorprop	99.5		143	147		2.66
	Dinoseb	85.8		87.1	84.2		3.31
	Diuron	67.3		57.3	58.6		2.15
	Endothall	92.5		87.9	76.7		13.6
	Fenuron	95.9		78.0	88.1		12.2
	Fluridone	83.4		85.0	88.1		3.39
	Glufosinate	77.8		0.0	0.0		
	Glyphosate	75.8		0.0	0.0		
	Hydrocodone	93.1		96.8	102		4.90
	Ibuprofen	105		81.4	69.5		15.7
	Imazapyr	91.4					2.48
	Imidacloprid	90.9		154	144		5.71
	Linuron	70.7		61.9	62.6		1.09
	MCPA	102		126	126		0.357
	MCPP	103		144	134		7.39
	Methiocarb	67.9		55.7	58.6		5.04
	Methomyl	106		81.2	79.9		1.67
	Naproxen	122		87.4	90.5		3.49
	Oxamyl	98.3		84.8	70.7		18.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Picloram	71.7	42.7	37.1		14.1
	Primidone	87.7	88.8	77.7		12.6
	Propoxur	76.4	53.9	53.0		1.60
	Pyraclostrobin	68.1	70.3	73.5		4.41
	Silvex	105	126	122		2.93
	Sucralose	98.5	113	114		0.468
	Triclopyr	105	139	143		2.80

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2040341, 2040342
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2040343, 2040344
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2040341, 2040342
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2040336, 2040337
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2040333, 2040334, 2040335, 2040338, 2040339, 2040340

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270D	11/08/2018	11/09/2018 08:00	Rasheda Ghaffari	11/16/2018 14:24	Vandana T. Nagar	2040343
	11/08/2018	11/09/2018 08:00	Rasheda Ghaffari	11/16/2018 14:48	Vandana T. Nagar	2040344
	11/08/2018	11/09/2018 09:00	Fe-Val Siddell	11/16/2018 01:21	Arthur Maknenko	2040341
	11/08/2018	11/09/2018 09:00	Fe-Val Siddell	11/16/2018 01:51	Arthur Maknenko	2040342
EPA 8276	11/08/2018	11/09/2018 09:00	Fe-Val Siddell	11/17/2018 00:34	Dinesh Mishra	2040341
	11/08/2018	11/09/2018 09:00	Fe-Val Siddell	11/17/2018 01:29	Dinesh Mishra	2040342
EPA 8321B	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/09/2018 08:36	Mohammad Ghaffari	2040338
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/09/2018 09:04	Mohammad Ghaffari	2040333
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/09/2018 09:31	Mohammad Ghaffari	2040334
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/09/2018 09:45	Mohammad Ghaffari	2040335
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/09/2018 09:59	Mohammad Ghaffari	2040339
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/09/2018 10:13	Mohammad Ghaffari	2040340
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 10:38	Rebecca Ware	2040338
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 10:49	Rebecca Ware	2040339
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 13:09	Rebecca Ware	2040338
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 13:22	Rebecca Ware	2040333
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 13:50	Rebecca Ware	2040334
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 14:04	Rebecca Ware	2040335
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 14:18	Rebecca Ware	2040339
	11/08/2018	11/09/2018 07:45	Mohammad Ghaffari	11/13/2018 14:31	Rebecca Ware	2040340
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 04:53	Juyoung Kim	2040338
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 07:46	Juyoung Kim	2040333
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 08:21	Juyoung Kim	2040334
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 08:55	Juyoung Kim	2040335
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 09:30	Juyoung Kim	2040339
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 10:04	Juyoung Kim	2040340
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 15:16	Juyoung Kim	2040336
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 15:50	Juyoung Kim	2040337
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 18:09	Juyoung Kim	2040338
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 20:27	Juyoung Kim	2040333
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 21:36	Juyoung Kim	2040334
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 22:11	Juyoung Kim	2040335
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 22:45	Juyoung Kim	2040339
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/14/2018 23:20	Juyoung Kim	2040340
	11/08/2018	11/13/2018 10:00	Hoor Shaik	11/15/2018 12:36	Juyoung Kim	2040334