Chemical Analysis Report

NE-DIST-2021-09-03-01

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

Event Description: **Pellicer Creek Boat**
Request ID: **RQ-2021-08-30-19**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
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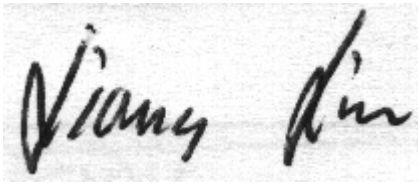
Certified by: Liang Lin, Environmental Administrator

Date Certified: 27-SEP-2021 15:27



Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Pellicer 1.3 mi downstream of I95 **Collection Date/Time: 09/02/2021 11:50**

Field ID: G5NE0593 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2273422	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P403387	
	SM 2320 B-2011	Total Alkalinity	37		mg CaCO3/L	P403580	
	SM 2540 D-2011	TSS	2	I	mg/L	P403668	
	SM 4500 F-C-2011	Fluoride	0.074	I	mg F/L	P403582	
2273423	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P403421	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P403450	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.019		mg N/L	P403443	
	EPA 365.1 Rev. 2.0	Total-P	0.083		mg P/L	P403427	
	SM 5310 B-2011	Organic Carbon	51		mg C/L	P403550	
2273424	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.054		mg P/L	P403374	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries and relative percent difference are unavailable because of analytical difficulties.

Sample Location: Pellicer Cr at Faver Dykes BT RMP **Collection Date/Time: 09/02/2021 12:15**

Field ID: 27010965 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2273420	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P403387	
	SM 2320 B-2011	Total Alkalinity	45		mg CaCO3/L	P403580	
	SM 2540 D-2011	TSS	5	I	mg/L	P403668	
	SM 4500 F-C-2011	Fluoride	0.13		mg F/L	P403582	
2273421	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P403421	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P403450	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.023		mg N/L	P403443	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P403427	
	SM 5310 B-2011	Organic Carbon	44		mg C/L	P403550	
2273433	EPA 8321B	Aldicarb	0.020	U	ug/L	P403290	
		Aldicarb Sulfone	0.0020	U	ug/L	P403290	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P403290	MS
		Carbaryl	0.0020	U	ug/L	P403290	
		Carbofuran	0.0020	U	ug/L	P403290	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P403290	
		Methiocarb	0.0020	U	ug/L	P403290	
		Methomyl	0.0020	U	ug/L	P403290	
		Oxamyl	0.0020	U	ug/L	P403290	
		Propoxur	0.0020	U	ug/L	P403290	
2273434		2,4-D	0.0020	U	ug/L	P403290	
		Acesulfame K	0.10	U	ug/L	P403327	
		2,4,5-T	0.0040	U	ug/L	P403290	
		AMPA	0.10	U	ug/L	P403327	
		Acetaminophen	0.0080	U	ug/L	P403290	
		Acetamiprid	0.0020	U	ug/L	P403290	
		Endothall	0.25	U	ug/L	P403327	
		Glufosinate	0.10	U	ug/L	P403327	
		Glyphosate	0.10	U	ug/L	P403327	
		Afidopyropen	0.0020	U	ug/L	P403290	
		Sucralose	0.35		ug/L	P403327	
		Bentazon	0.017		ug/L	P403290	MS
		Benzovindiflupyr	0.0020	U	ug/L	P403290	
		Carbamazepine	8.0E-04	U	ug/L	P403290	
		Clothianidin	0.0020	U	ug/L	P403290	
		Dinotefuran	0.0020	U	ug/L	P403290	
		Diuron	0.0034	I	ug/L	P403290	
		Fenuron	0.016	U	ug/L	P403290	
		Fluridone	8.0E-04	U	ug/L	P403290	
		Imazapyr	0.17		ug/L	P403290	
		Hydrocodone	0.0020	U	ug/L	P403290	
		Ibuprofen	0.020	U	ug/L	P403290	
		Imidacloprid	0.0020	U	ug/L	P403290	
		Linuron	0.0040	U	ug/L	P403290	
		Mandestrobin	0.0020	U	ug/L	P403290	

Field ID: 27010965 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2273434	EPA 8321B	MCPP	0.0020	U	ug/L	P403290	
		Naproxen	0.0080	U	ug/L	P403290	
		Primidone	0.0040	U	ug/L	P403290	MS
		Pyraclostrobin	0.0020	U	ug/L	P403290	
		Thiamethoxam	0.0020	U	ug/L	P403290	
		Tolfenpyrad	0.0020	U	ug/L	P403290	
		Triclopyr	0.0040	U	ug/L	P403290	
2273435	EPA 8270E	Aldrin	0.67	U	ng/L	P403341	
		Alpha-BHC	0.10	U	ng/L	P403341	
		Alpha-Chlordane	0.21	U	ng/L	P403341	
		Beta-BHC	0.10	U	ng/L	P403341	
		Beta-Cyfluthrin**	1.3	U	ng/L	P403341	
		Bifenthrin**	0.59	I	ng/L	P403341	
		Chlorothalonil	0.92	I	ng/L	P403341	
		Cis-Nonachlor**	0.21	U	ng/L	P403341	
		Cypermethrin	1.5	U	ng/L	P403341	
		Dacthal**	0.15	U	ng/L	P403341	
		DDD-p,p'	0.26	U	ng/L	P403341	
		DDE-p,p'	0.21	U	ng/L	P403341	
		DDT-p,p'	0.26	I	ng/L	P403341	
		Delta-BHC	0.41	U	ng/L	P403341	
		Deltamethrin**	1.3	U	ng/L	P403341	RPD
		Dichlobenil**	0.10	U	ng/L	P403341	
		Dicofol	1.3	U	ng/L	P403341	
		Dieldrin	0.41	U	ng/L	P403341	
		Endosulfan I	0.41	U	ng/L	P403341	
		Endosulfan II	0.41	U	ng/L	P403341	MS
		Endosulfan Sulfate	0.31	U	ng/L	P403341	
		Endrin	0.41	U	ng/L	P403341	
		Endrin Aldehyde	0.77	U	ng/L	P403341	
		Endrin Ketone	0.41	U	ng/L	P403341	
		Esfenvalerate**	0.77	U	ng/L	P403341	
		Ethalfluralin**	0.15	U	ng/L	P403341	
		Fenpropathrin**	0.26	U	ng/L	P403341	
		Gamma-BHC	0.13	U	ng/L	P403341	
		Gamma-Chlordane	0.32	I	ng/L	P403341	
		Heptachlor	0.21	U	ng/L	P403341	
		Heptachlor Epoxide	0.26	U	ng/L	P403341	
		Hexachlorobenzene	1.0	U	ng/L	P403341	
		Kepone**	5.1	UJ	ng/L	P403341	LCS, RPD
		Lambda-Cyhalothrin**	0.88	I	ng/L	P403341	
		Methoxychlor	0.31	U	ng/L	P403341	
		MGK-264**	0.21	U	ng/L	P403341	
		Mirex	0.72	U	ng/L	P403341	
		Permethrin	1.6	U	ng/L	P403341	

Field ID: 27010965 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2273435	EPA 8270E	Phenothrin**	0.92	U	ng/L	P403341	
		Piperonyl Butoxide**	0.15	U	ng/L	P403341	
		Prallethrin**	2.1	U	ng/L	P403341	
		Tau-Fluvalinate**	0.26	U	ng/L	P403341	
		Tetramethrin**	0.77	U	ng/L	P403341	
		Trans-Nonachlor**	0.21	U	ng/L	P403341	
		Triclosan Methyl**	0.15	U	ng/L	P403341	
		Trifluralin	0.21	U	ng/L	P403341	
	EPA 8276	Chlordane	5.1	U	ng/L	P403341	
		Toxaphene	31	U	ng/L	P403341	
2273436	EPA 8270E	Acetochlor	0.26	U	ng/L	P403292	
		Alachlor	0.26	U	ng/L	P403292	
		Ametryn	0.62	U	ng/L	P403292	
		Atrazine	4.2		ng/L	P403292	
		Atrazine Desethyl	1.6	U	ng/L	P403292	
		Azinphos Methyl	2.1	U	ng/L	P403292	
		Azoxystrobin**	0.52	U	ng/L	P403292	
		Bromacil	0.52	U	ng/L	P403292	
		Butylate	0.42	U	ng/L	P403292	
		Caffeine**	7.8	U	ng/L	P403292	
		Carbophenothion	0.52	U	ng/L	P403292	
		Carfentrazone Ethyl**	0.10	U	ng/L	P403292	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P403292	
		Chlorpyrifos Methyl	0.052	U	ng/L	P403292	
		Cyanazine	3.4	U	ng/L	P403292	
		Demeton	1.6	U	ng/L	P403292	
		Diazinon	0.13	U	ng/L	P403292	
		Difenoconazole**	0.62	U	ng/L	P403292	
		Dimethenamid**	0.10	U	ng/L	P403292	
		Disulfoton	0.52	UJ	ng/L	P403292	LCS, MS
		Dithiopyr**	0.18	U	ng/L	P403292	
		EPTC	1.3	U	ng/L	P403292	
		Ethion	0.16	U	ng/L	P403292	
		Ethoprop	0.10	U	ng/L	P403292	
		Fenamiphos	0.52	U	ng/L	P403292	
		Fenbuconazole**	0.13	U	ng/L	P403292	
		Fipronil	0.26	U	ng/L	P403292	
		Fipronil Desulfinyl**	0.16	I	ng/L	P403292	
		Fipronil Sulfide	0.16	U	ng/L	P403292	
		Fipronil Sulfone	0.16	I	ng/L	P403292	
		Fluazifop-P-butyl**	0.10	U	ng/L	P403292	
		Fludioxonil**	0.13	U	ng/L	P403292	
		Flumioxazin**	1.8	U	ng/L	P403292	
		Flutolanil**	0.10	U	ng/L	P403292	
		Fluxapyroxad**	0.10	U	ng/L	P403292	

Field ID: 27010965 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2273436	EPA 8270E	Fonofos	0.21	U	ng/L	P403292	
		Hexazinone	0.52	U	ng/L	P403292	
		Imazalil**	0.78	U	ng/L	P403292	
		Iprodione**	0.62	U	ng/L	P403292	
		Malathion	0.36	U	ng/L	P403292	
		Metalaxyl	0.78	U	ng/L	P403292	
		Metolachlor	0.77	I	ng/L	P403292	
		Metribuzin	3.4	U	ng/L	P403292	
		Mevinphos	1.1	U	ng/L	P403292	
		Molinate	0.31	U	ng/L	P403292	
		Myclobutanil**	0.26	U	ng/L	P403292	
		Naled**	1.6	U	ng/L	P403292	
		Norflurazon	0.52	U	ng/L	P403292	
		Oxadiazon	0.31	U	ng/L	P403292	
		Oxyfluorfen**	0.16	U	ng/L	P403292	
		Parathion Ethyl	0.26	U	ng/L	P403292	
		Parathion Methyl	0.57	U	ng/L	P403292	
		Pendimethalin	1.0	U	ng/L	P403292	
		Phorate	0.55	U	ng/L	P403292	
		Prodiamine**	0.18	U	ng/L	P403292	
		Prometon	0.94	U	ng/L	P403292	
		Prometryn	0.21	U	ng/L	P403292	
		Pronamide**	0.16	U	ng/L	P403292	
		Propiconazole**	0.52	U	ng/L	P403292	
		Pyriproxyfen**	0.13	U	ng/L	P403292	
		Simazine	0.52	U	ng/L	P403292	
		Sulfentrazone**	0.62	I	ng/L	P403292	
		Tebuconazole**	0.52	U	ng/L	P403292	
		Terbufos	0.10	U	ng/L	P403292	
		Terbuthylazine	0.44	U	ng/L	P403292	
2273437	EPA 200.7 Rev. 4.4	Calcium	41.7		mg/L	P403412	
		Iron	1.25E+03		ug/L	P403412	
		Magnesium	64.5		mg/L	P403412	
		Manganese	18.5		ug/L	P403412	
		Zinc	5.9	I	ug/L	P403412	
	EPA 200.8 Rev. 5.4	Aluminum	544		ug/L	P403412	
		Antimony	0.063	I	ug/L	P403412	
		Arsenic	0.94		ug/L	P403412	
		Beryllium	0.065		ug/L	P403412	
		Cadmium	0.020	U	ug/L	P403412	
		Chromium	0.91	I	ug/L	P403412	
		Copper	0.40	U	ug/L	P403412	
		Lead	0.62		ug/L	P403412	
		Nickel	0.66	I	ug/L	P403412	
		Selenium	0.20	U	ug/L	P403412	

Field ID: 27010965 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2273437	EPA 200.8 Rev. 5.4	Silver	0.010	U	ug/L	P403412	
		Thallium	0.10	U	ug/L	P403412	
2273483	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P403374	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries and relative percent difference are unavailable because of analytical difficulties.
EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for Glyphosate could not be assessed due to a high concentration of parameter in the spiked sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for multiple parameters not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P403387

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403412

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403412

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403421

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403450

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403443

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403427

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403374

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

Reference Method: EPA 8270E
Batch ID: P403292

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403292

Component	Result	Code	Units
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403292

Component	Result	Code	Units
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270E
Batch ID: P403341

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403341

Component	Result	Code	Units
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfluralin	0.15	U	ng/L
Ethalfluralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P403341

Component	Result	Code	Units
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P403341

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

Reference Method: EPA 8321B
Batch ID: P403290

Component	Result	Code	Units
2,4-D	0.0020	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
Acetamiprid	0.0020	U	ug/L
Afidopyropen	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
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P403290

Component	Result	Code	Units
Carbofuran	0.0020	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P403327

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

Reference Method: SM 2320 B-2011
Batch ID: P403580

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

Reference Method: SM 2540 D-2011
Batch ID: P403668

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P403582

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P403550

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	111		P	85 - 115
Iron	109		P	85 - 115
Magnesium	111		P	85 - 115
Manganese	105		P	85 - 115
Zinc	108		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.8		P	85 - 115
Antimony	97.8		P	85 - 115
Arsenic	98.2		P	85 - 115
Beryllium	96.1		P	85 - 115
Cadmium	94.9		P	85 - 115
Chromium	96.8		P	85 - 115
Copper	97.8		P	85 - 115
Lead	94.8		P	85 - 115
Nickel	99.2		P	85 - 115
Selenium	96.3		P	85 - 115
Silver	96.8		P	85 - 115
Thallium	98.3		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403450

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	103		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403443

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403427

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403374

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.4		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	98.0	101	P/P	70 - 121
Alachlor	92.0	93.5	P/P	70 - 119
Ametryn	88.0	94.5	P/P	61 - 135
Atrazine	94.4	99.0	P/P	76 - 123
Atrazine Desethyl	89.7	104	P/P	35 - 140
Azinphos Methyl	128	129	P/P	57 - 163
Azoxystrobin	104	118	P/P	43 - 231
Bromacil	83.9	86.8	P/P	42 - 123
Butylate	37.6	40.8	P/P	34 - 92.0
Caffeine	74.3	70.8	P/P	70 - 130
Carbophenothion	96.3	102	P/P	61 - 121
Carfentrazone Ethyl	106	109	P/P	62 - 139
Chlorpyrifos Ethyl	89.9	93.0	P/P	67 - 121
Chlorpyrifos Methyl	91.6	95.7	P/P	67 - 120
Cyanazine	124	139	P/P	20 - 226
Demeton	105	107	P/P	35 - 125
Diazinon	94.8	102	P/P	70 - 122
Difenoconazole	123	122	P/P	56 - 186
Dimethenamid	77.2	76.7	P/P	67 - 119
Disulfoton	191	203	F/F	47 - 120
Dithiopyr	88.9	94.5	P/P	67 - 118
EPTC	42.0	48.5	P/P	33 - 90.0
Ethion	64.9	55.9	P/P	40 - 133
Ethoprop	81.2	84.2	P/P	61 - 121
Fenamiphos	93.4	91.7	P/P	31 - 139
Fenbuconazole	99.1	99.3	P/P	66 - 141
Fipronil	105	108	P/P	62 - 129
Fipronil Desulfinyl	99.9	105	P/P	59 - 126
Fipronil Sulfide	89.0	94.2	P/P	63 - 117
Fipronil Sulfone	74.6	77.5	P/P	57 - 117
Fluazifop-P-butyl	101	105	P/P	63 - 124
Fludioxonil	119	116	P/P	63 - 123
Flumioxazin	133	123	P/P	34 - 245
Flutolanil	97.3	100	P/P	56 - 131
Fluxapyroxad	89.2	89.6	P/P	57 - 117
Fonofos	87.3	97.1	P/P	61 - 116
Hexazinone	96.0	95.7	P/P	55 - 138
Imazalil	91.4	87.5	P/P	33 - 143
Iprodione	96.3	97.3	P/P	59 - 118
Malathion	84.9	90.5	P/P	62 - 138
Metalaxyl	89.9	96.1	P/P	24 - 147
Metolachlor	90.9	88.6	P/P	68 - 118
Metribuzin	93.9	99.0	P/P	20 - 239
Mevinphos	81.6	93.4	P/P	46 - 124
Molinate	50.7	55.2	P/P	46 - 100
Myclobutanil	95.7	96.6	P/P	32 - 149
Naled	34.0	32.9	P/P	32 - 95.0
Norflurazon	88.1	92.7	P/P	57 - 127
Oxadiazon	83.9	87.9	P/P	63 - 118
Oxyfluorfen	90.5	85.6	P/P	69 - 137
Parathion Ethyl	83.6	93.1	P/P	70 - 113
Parathion Methyl	105	112	P/P	71 - 130

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pendimethalin	75.4	73.9	P/P	55 - 118
Phorate	68.1	65.6	P/P	46 - 125
Prodiamine	31.1	29.6	P/P	20 - 141
Prometon	83.4	81.8	P/P	54 - 122
Prometryn	94.5	99.4	P/P	66 - 124
Pronamide	98.1	101	P/P	79 - 122
Propiconazole	91.5	92.6	P/P	61 - 126
Pyriproxyfen	86.3	81.9	P/P	52 - 131
Simazine	91.5	97.6	P/P	75 - 128
Sulfentrazone	84.6	86.4	P/P	20 - 132
Tebuconazole	74.2	64.8	P/P	20 - 116
Terbufos	99.0	107	P/P	61 - 117
Terbuthylazine	84.7	87.8	P/P	74 - 116

Reference Method: EPA 8270E
Batch ID: P403341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	55.2	55.1	P/P	20 - 83.0
Alpha-BHC	82.9	87.3	P/P	74 - 108
Alpha-Chlordane	72.9	75.6	P/P	53 - 109
Beta-BHC	101	114	P/P	64 - 139
Beta-Cyfluthrin	98.2	106	P/P	27 - 171
Bifenthrin	69.3	66.8	P/P	20 - 124
Chlorothalonil	118	135	P/P	20 - 182
Cis-Nonachlor	65.3	66.1	P/P	46 - 110
Cypermethrin	83.3	87.4	P/P	35 - 160
Dacthal	82.2	87.1	P/P	70 - 115
DDD-p,p'	65.0	65.5	P/P	51 - 108
DDE-p,p'	71.9	77.3	P/P	51 - 104
DDT-p,p'	73.8	82.2	P/P	52 - 107
Delta-BHC	107	127	P/P	73 - 146
Deltamethrin	80.9	99.3	P/P	20 - 190
Dichlobenil	61.6	70.8	P/P	30 - 100
Dicofol	72.2	74.4	P/P	52 - 110
Dieldrin	75.3	80.0	P/P	57 - 111
Endosulfan I	75.6	79.7	P/P	61 - 106
Endosulfan II	62.3	65.5	P/P	57 - 122
Endosulfan Sulfate	68.3	74.9	P/P	58 - 122
Endrin	62.1	64.1	P/P	34 - 125
Endrin Aldehyde	61.4	74.4	P/P	40 - 120
Endrin Ketone	75.0	78.9	P/P	51 - 138
Esfenvalerate	83.2	90.1	P/P	20 - 193
Ethalfluralin	69.8	70.3	P/P	51 - 99.0
Fenpropathrin	81.4	78.7	P/P	40 - 116
Gamma-BHC	88.8	96.2	P/P	74 - 116
Gamma-Chlordane	71.2	74.9	P/P	49 - 105
Heptachlor	61.9	63.4	P/P	45 - 98.0
Heptachlor Epoxide	72.8	76.2	P/P	61 - 106
Hexachlorobenzene	70.2	72.0	P/P	41 - 96.0
Kepone	26.7	33.7	F/P	27 - 179
Lambda-Cyhalothrin	85.7	93.5	P/P	20 - 199

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P403341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Methoxychlor	80.5	82.7	P/P	61 - 111
MGK-264	78.1	86.9	P/P	20 - 124
Mirex	57.7	58.0	P/P	20 - 199
Permethrin	82.5	93.7	P/P	31 - 155
Phenothrin	71.9	70.7	P/P	20 - 100
Piperonyl Butoxide	82.4	87.8	P/P	20 - 144
Prallethrin	63.5	73.9	P/P	20 - 103
Tau-Fluvalinate	76.7	78.5	P/P	24 - 133
Tetramethrin	75.4	81.5	P/P	20 - 116
Trans-Nonachlor	73.0	72.0	P/P	49 - 105
Triclosan Methyl	74.5	80.9	P/P	60 - 111
Trifluralin	71.8	73.7	P/P	53 - 97.0

Reference Method: EPA 8276
Batch ID: P403341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	84.5	81.4	P/P	56 - 117
Toxaphene	95.8	92.3	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P403290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.6		P	40 - 150
2,4,5-T	86.4		P	40 - 150
3-Hydroxycarbofuran	84.0		P	40 - 150
Acetaminophen	78.0		P	30 - 150
Acetamiprid	80.5		P	40 - 150
Afidopyropen	74.5		P	40 - 150
Aldicarb	62.1		P	30 - 150
Aldicarb Sulfone	93.8		P	40 - 150
Aldicarb Sulfoxide	103		P	40 - 150
Bentazon	98.4		P	30 - 150
Benzovindiflupyr	86.4		P	40 - 150
Carbamazepine	80.4		P	40 - 150
Carbaryl	89.2		P	40 - 150
Carbofuran	90.0		P	40 - 150
Clothianidin	86.3		P	40 - 150
Dinotefuran	80.5		P	40 - 150
Diuron	81.8		P	40 - 150
Fenuron	89.0		P	40 - 150
Fluridone	92.3		P	40 - 150
Hydrocodone	85.3		P	40 - 150
Ibuprofen	54.2		P	40 - 150
Imazapyr	86.5		P	40 - 150
Imidacloprid	97.7		P	40 - 150
Linuron	86.3		P	40 - 150
Mandestrobin	86.4		P	40 - 150
MCPP	82.6		P	40 - 150
Methiocarb	77.9		P	40 - 150
Methomyl	91.9		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P403290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Naproxen	76.6		P	40 - 150
Oxamyl	87.1		P	40 - 150
Primidone	99.3		P	40 - 150
Propoxur	92.4		P	40 - 150
Pyraclostrobin	72.0		P	40 - 150
Thiamethoxam	90.9		P	40 - 150
Tolfenpyrad	50.7		P	30 - 150
Triclopyr	91.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P403327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	105		P	40 - 150
AMPA	71.1		P	40 - 150
Endothall	125		P	40 - 150
Glufosinate	97.7		P	40 - 150
Glyphosate	101		P	40 - 150
Sucralose	89.1		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P403580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P403582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P403550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273371	Calcium	111	108	P/P	80 - 120
2273371	Iron	111	110	P/P	80 - 120
2273371	Magnesium	113	112	P/P	80 - 120
2273371	Manganese	105	104	P/P	80 - 120
2273371	Zinc	113	113	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273371	Aluminum	101	97.3	P/P	80 - 120
2273371	Antimony	99.2	99.0	P/P	80 - 120
2273371	Arsenic	97.7	94.7	P/P	80 - 120
2273371	Beryllium	95.9	99.3	P/P	80 - 120
2273371	Cadmium	97.0	97.0	P/P	80 - 120
2273371	Chromium	99.0	97.1	P/P	80 - 120
2273371	Copper	107	95.7	P/P	80 - 120
2273371	Lead	97.1	95.0	P/P	80 - 120
2273371	Nickel	98.4	95.4	P/P	80 - 120
2273371	Selenium	96.2	94.7	P/P	80 - 120
2273371	Silver	96.9	96.9	P/P	80 - 120
2273371	Thallium	103	100	P/P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273358	Ammonia-N	98.2	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273469	Kjeldahl Nitrogen	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273456	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403374

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273457	O-Phosphate-P	98.5	98.1	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P403292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272767	Acetochlor	112	102	P/P	66 - 122

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272767	Alachlor	102	86.4	P/P	65 - 122
2272767	Atrazine Desethyl	101	71.3	P/P	25 - 150
2272767	Azinphos Methyl	115	115	P/P	44 - 174
2272767	Bromacil	100	89.7	P/P	31 - 145
2272767	Butylate	46.6	37.1	P/P	15 - 97.0
2272767	Caffeine	72.8	73.9	P/P	70 - 130
2272767	Carbophenothion	97.5	91.0	P/P	42 - 129
2272767	Carfentrazone Ethyl	110	90.2	P/P	62 - 145
2272767	Chlorpyrifos Ethyl	91.3	81.9	P/P	60 - 124
2272767	Chlorpyrifos Methyl	102	94.5	P/P	66 - 119
2272767	Cyanazine	152	117	P/P	17 - 225
2272767	Demeton	126	122	P/P	36 - 142
2272767	Diazinon	116	111	P/P	70 - 128
2272767	Difenoconazole	136	130	P/P	33 - 222
2272767	Dimethenamid	83.2	79.1	P/P	54 - 125
2272767	Disulfoton	242	228	F/F	49 - 133
2272767	Dithiopyr	98.2	92.1	P/P	55 - 123
2272767	EPTC	47.6	40.4	P/P	19 - 91.0
2272767	Ethion	69.4	63.5	P/P	13 - 143
2272767	Ethoprop	108	102	P/P	49 - 144
2272767	Fenamiphos	95.3	102	P/P	32 - 136
2272767	Fenbuconazole	107	90.4	P/P	73 - 148
2272767	Fipronil	110	103	P/P	57 - 129
2272767	Fipronil Desulfinyl	125	101	P/P	49 - 127
2272767	Fipronil Sulfide	96.8	94.9	P/P	44 - 127
2272767	Fipronil Sulfone	77.7	76.9	P/P	35 - 126
2272767	Fluazifop-P-butyl	115	101	P/P	67 - 129
2272767	Fludioxonil	119	118	P/P	61 - 126
2272767	Flumioxazin	160	161	P/P	38 - 279
2272767	Flutolanil	90.2	90.6	P/P	55 - 136
2272767	Fonofos	99.8	96.1	P/P	58 - 125
2272767	Imazalil	194	175	P/P	10 - 221
2272767	Iprodione	98.5	90.3	P/P	32 - 140
2272767	Malathion	86.7	86.1	P/P	52 - 138
2272767	Metribuzin	103	95.0	P/P	16 - 272
2272767	Mevinphos	116	112	P/P	45 - 140
2272767	Molinate	61.4	57.7	P/P	41 - 103
2272767	Myclobutanil	102	97.2	P/P	60 - 134
2272767	Naled	35.5	30.4	P/P	20 - 113
2272767	Norflurazon	86.9	81.7	P/P	51 - 123
2272767	Oxadiazon	84.3	77.9	P/P	44 - 125
2272767	Oxyfluorfen	123	108	P/P	66 - 176
2272767	Parathion Ethyl	93.4	88.1	P/P	57 - 132
2272767	Parathion Methyl	126	115	P/P	59 - 156
2272767	Pendimethalin	87.6	87.8	P/P	59 - 129
2272767	Phorate	88.5	83.5	P/P	47 - 136
2272767	Prodiamine	51.0	53.5	P/P	10 - 159
2272767	Prometon	99.1	90.2	P/P	59 - 127
2272767	Prometryn	101	83.3	P/P	59 - 129
2272767	Pronamide	93.3	87.1	P/P	65 - 145
2272767	Pyriproxyfen	79.1	69.8	P/P	21 - 180
2272767	Simazine	106	105	P/P	63 - 147

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P403292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272767	Sulfentrazone	90.7	88.4	P/P	32 - 136
2272767	Tebuconazole	71.0	69.6	P/P	10 - 117
2272767	Terbufos	127	119	P/P	61 - 131
2272767	Terbuthylazine	96.6	90.8	P/P	62 - 126

Reference Method: EPA 8270E
Batch ID: P403341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273461	Aldrin	44.5	41.1	P/P	10 - 94.0
2273461	Alpha-BHC	82.2	75.8	P/P	71 - 108
2273461	Alpha-Chlordane	61.7	59.5	P/P	42 - 115
2273461	Beta-BHC	103	118	P/P	56 - 161
2273461	Beta-Cyfluthrin	116	104	P/P	46 - 190
2273461	Bifenthrin	62.8	63.5	P/P	19 - 126
2273461	Chlorothalonil	110	111	P/P	10 - 262
2273461	Cis-Nonachlor	48.5	44.9	P/P	44 - 112
2273461	Cypermethrin	85.8	73.3	P/P	40 - 178
2273461	Dacthal	74.2	73.7	P/P	60 - 119
2273461	DDD-p,p'	46.0	44.2	P/P	40 - 114
2273461	DDE-p,p'	59.7	57.1	P/P	22 - 125
2273461	DDT-p,p'	64.9	63.7	P/P	39 - 110
2273461	Delta-BHC	107	127	P/P	64 - 174
2273461	Deltamethrin	101	43.4	P/P	10 - 227
2273461	Dichlobenil	68.2	53.6	P/P	20 - 99.0
2273461	Dicofol	72.7	67.9	P/P	43 - 115
2273461	Dieldrin	62.8	62.5	P/P	31 - 131
2273461	Endosulfan I	65.4	64.4	P/P	52 - 110
2273461	Endosulfan II	47.7	46.6	F/F	53 - 127
2273461	Endosulfan Sulfate	55.3	56.6	P/P	44 - 135
2273461	Endrin	47.3	44.7	P/P	36 - 122
2273461	Endrin Aldehyde	50.3	44.2	P/P	23 - 115
2273461	Endrin Ketone	67.8	67.7	P/P	46 - 147
2273461	Esfenvalerate	99.8	87.1	P/P	25 - 217
2273461	Ethalfluralin	67.9	57.0	P/P	46 - 99.0
2273461	Fenpropathrin	89.8	71.9	P/P	42 - 121
2273461	Gamma-BHC	89.2	90.9	P/P	63 - 131
2273461	Gamma-Chlordane	61.9	57.2	P/P	40 - 108
2273461	Heptachlor	53.5	48.8	P/P	38 - 98.0
2273461	Heptachlor Epoxide	64.4	62.3	P/P	39 - 124
2273461	Hexachlorobenzene	62.2	55.4	P/P	37 - 96.0
2273461	Kepone	17.5	26.3	P/P	10 - 216
2273461	Lambda-Cyhalothrin	85.3	74.3	P/P	21 - 220
2273461	Methoxychlor	87.7	77.5	P/P	56 - 118
2273461	MGK-264	68.9	75.0	P/P	28 - 125
2273461	Mirex	49.2	48.4	P/P	10 - 203
2273461	Permethrin	138	102	P/P	42 - 173
2273461	Phenothrin	71.0	71.8	P/P	10 - 140
2273461	Piperonyl Butoxide	79.3	77.3	P/P	10 - 158
2273461	Prallethrin	58.0	64.4	P/P	19 - 119
2273461	Tau-Fluvalinate	87.6	87.6	P/P	27 - 164
2273461	Tetramethrin	64.5	78.6	P/P	16 - 130

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P403341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273461	Trans-Nonachlor	60.6	57.0	P/P	43 - 105
2273461	Triclosan Methyl	60.1	60.0	P/P	50 - 113
2273461	Trifluralin	66.3	60.0	P/P	48 - 98.0

Reference Method: EPA 8276
Batch ID: P403341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273545	Chlordane	76.2	81.5	P/P	47 - 128
2273545	Toxaphene	91.8	93.6	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P403290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272764	3-Hydroxycarbofuran	59.9	47.8	P/P	40 - 150
2272764	Aldicarb	60.5	56.7	P/P	30 - 150
2272764	Aldicarb Sulfone	59.4	61.5	P/P	40 - 150
2272764	Aldicarb Sulfoxide	34.5	31.3	F/F	40 - 150
2272764	Carbaryl	69.1	67.1	P/P	40 - 150
2272764	Carbofuran	68.6	68.0	P/P	40 - 150
2272764	Methiocarb	72.7	78.6	P/P	40 - 150
2272764	Methomyl	74.9	75.8	P/P	40 - 150
2272764	Oxamyl	67.6	66.0	P/P	40 - 150
2272764	Propoxur	69.2	69.6	P/P	40 - 150
2273120	2,4,5-T	119	118	P/P	40 - 150
2273120	Acetaminophen	70.0	64.7	P/P	30 - 150
2273120	Acetamiprid	74.3	69.4	P/P	40 - 150
2273120	Afidopyropen	92.4	79.4	P/P	40 - 150
2273120	Bentazon	227	206	F/F	30 - 150
2273120	Benzovindiflupyr	87.3	92.3	P/P	40 - 150
2273120	Carbamazepine	75.6	71.7	P/P	40 - 150
2273120	Clothianidin	46.4	43.7	P/P	40 - 150
2273120	Dinotefuran	74.6	75.9	P/P	40 - 150
2273120	Diuron	83.2	74.1	P/P	40 - 150
2273120	Fenuron	94.6	89.3	P/P	40 - 150
2273120	Fluridone	91.1	89.2	P/P	40 - 150
2273120	Hydrocodone	106	112	P/P	40 - 150
2273120	Ibuprofen	75.3	64.4	P/P	40 - 150
2273120	Imazapyr	106	111	P/P	40 - 150
2273120	Imidacloprid	88.2	82.7	P/P	40 - 150
2273120	Linuron	85.1	91.6	P/P	40 - 150
2273120	Mandestrobin	98.4	98.5	P/P	40 - 150
2273120	MCPP	123	114	P/P	40 - 150
2273120	Naproxen	93.1	71.6	P/P	40 - 150
2273120	Primidone	25.0	23.9	F/F	40 - 150
2273120	Pyraclostrobin	90.2	91.2	P/P	40 - 150
2273120	Thiamethoxam	75.0	79.4	P/P	40 - 150
2273120	Tolfenpyrad	48.7	52.4	P/P	30 - 150
2273120	Triclopyr	110	113	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P403327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273120	Acesulfame K	148	148	P/P	40 - 150
2273120	AMPA	101	99.9	P/P	40 - 150
2273120	Endothall	113	109	P/P	40 - 150
2273120	Glufosinate	108	109	P/P	40 - 150
2273120	Sucralose	90.1	92.2	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P403582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273455	Fluoride	99.0	101	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P403550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2273534	Organic Carbon	95.8	97.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P403387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273357	Turbidity	2.26	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273371	Calcium	1.26	Spike	P	0 - 20
2273371	Iron	0.951	Spike	P	0 - 20
2273371	Magnesium	0.991	Spike	P	0 - 20
2273371	Manganese	1.51	Spike	P	0 - 20
2273371	Zinc	0.367	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273371	Aluminum	3.28	Spike	P	0 - 20
2273371	Antimony	0.230	Spike	P	0 - 20
2273371	Arsenic	3.05	Spike	P	0 - 20
2273371	Beryllium	3.45	Spike	P	0 - 20
2273371	Cadmium	0.0135	Spike	P	0 - 20
2273371	Chromium	1.95	Spike	P	0 - 20
2273371	Copper	11.3	Spike	P	0 - 20
2273371	Lead	2.17	Spike	P	0 - 20
2273371	Nickel	3.13	Spike	P	0 - 20
2273371	Selenium	1.61	Spike	P	0 - 20
2273371	Silver	0.0246	Spike	P	0 - 20
2273371	Thallium	2.59	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273358	Ammonia-N	1.02	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273469	Kjeldahl Nitrogen	0.393	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273456	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403374

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273457	O-Phosphate-P	0.407	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P403292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272767	Acetochlor	8.61	Spike	P	0 - 30
2272767	Alachlor	16.1	Spike	P	0 - 30
2272767	Ametryn	0.271	Spike	P	0 - 30
2272767	Atrazine	8.90	Spike	P	0 - 30
2272767	Atrazine Desethyl	19.4	Spike	P	0 - 30
2272767	Azinphos Methyl	0.161	Spike	P	0 - 30
2272767	Azoxystrobin	6.81	Spike	P	0 - 30
2272767	Bromacil	11.3	Spike	P	0 - 30
2272767	Butylate	22.9	Spike	P	0 - 30
2272767	Caffeine	1.54	Spike	P	0 - 30
2272767	Carbophenothion	6.92	Spike	P	0 - 30
2272767	Carfentrazone Ethyl	19.4	Spike	P	0 - 30
2272767	Chlorpyrifos Ethyl	9.99	Spike	P	0 - 30
2272767	Chlorpyrifos Methyl	7.47	Spike	P	0 - 30
2272767	Cyanazine	26.2	Spike	P	0 - 30
2272767	Demeton	3.49	Spike	P	0 - 30
2272767	Diazinon	4.43	Spike	P	0 - 30
2272767	Difenoconazole	4.27	Spike	P	0 - 30
2272767	Dimethenamid	5.05	Spike	P	0 - 30
2272767	Disulfoton	6.07	Spike	P	0 - 30
2272767	Dithiopyr	6.33	Spike	P	0 - 30
2272767	EPTC	16.5	Spike	P	0 - 30
2272767	Ethion	8.86	Spike	P	0 - 30
2272767	Ethoprop	5.71	Spike	P	0 - 30
2272767	Fenamiphos	6.57	Spike	P	0 - 30
2272767	Fenbuconazole	16.9	Spike	P	0 - 30
2272767	Fipronil	6.26	Spike	P	0 - 30
2272767	Fipronil Desulfinyl	22.0	Spike	P	0 - 30
2272767	Fipronil Sulfide	1.94	Spike	P	0 - 30
2272767	Fipronil Sulfone	0.970	Spike	P	0 - 30
2272767	Fluazifop-P-butyl	13.3	Spike	P	0 - 30
2272767	Fludioxonil	0.635	Spike	P	0 - 30
2272767	Flumioxazin	0.713	Spike	P	0 - 30
2272767	Flutolanil	0.423	Spike	P	0 - 30
2272767	Fluxapyroxad	5.84	Spike	P	0 - 30
2272767	Fonofos	3.78	Spike	P	0 - 30
2272767	Hexazinone	4.83	Spike	P	0 - 30
2272767	Imazalil	10.7	Spike	P	0 - 30
2272767	Iprodione	8.69	Spike	P	0 - 30
2272767	Malathion	0.691	Spike	P	0 - 30
2272767	Metalaxyl	2.43	Spike	P	0 - 30
2272767	Metolachlor	6.42	Spike	P	0 - 30
2272767	Metribuzin	4.77	Spike	P	0 - 30
2272767	Mevinphos	3.62	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272767	Molinate	6.26	Spike	P	0 - 30
2272767	Myclobutanil	5.16	Spike	P	0 - 30
2272767	Naled	15.6	Spike	P	0 - 30
2272767	Norflurazon	6.16	Spike	P	0 - 30
2272767	Oxadiazon	6.88	Spike	P	0 - 30
2272767	Oxyfluorfen	13.1	Spike	P	0 - 30
2272767	Parathion Ethyl	5.81	Spike	P	0 - 30
2272767	Parathion Methyl	9.06	Spike	P	0 - 30
2272767	Pendimethalin	0.216	Spike	P	0 - 30
2272767	Phorate	5.87	Spike	P	0 - 30
2272767	Prodiamine	4.84	Spike	P	0 - 30
2272767	Prometon	9.43	Spike	P	0 - 30
2272767	Prometryn	14.5	Spike	P	0 - 30
2272767	Pronamide	6.91	Spike	P	0 - 30
2272767	Propiconazole	3.05	Spike	P	0 - 30
2272767	Pyriproxyfen	12.5	Spike	P	0 - 30
2272767	Simazine	1.43	Spike	P	0 - 30
2272767	Sulfentrazone	2.33	Spike	P	0 - 30
2272767	Tebuconazole	1.86	Spike	P	0 - 30
2272767	Terbufos	6.95	Spike	P	0 - 30
2272767	Terbuthylazine	6.17	Spike	P	0 - 30
LFB	Acetochlor	3.05	LCS	P	0 - 30
LFB	Alachlor	1.71	LCS	P	0 - 30
LFB	Ametryn	7.15	LCS	P	0 - 30
LFB	Atrazine	4.78	LCS	P	0 - 30
LFB	Atrazine Desethyl	14.5	LCS	P	0 - 30
LFB	Azinphos Methyl	0.455	LCS	P	0 - 30
LFB	Azoxystrobin	12.2	LCS	P	0 - 30
LFB	Bromacil	3.39	LCS	P	0 - 30
LFB	Butylate	8.12	LCS	P	0 - 30
LFB	Caffeine	4.81	LCS	P	0 - 30
LFB	Carbophenothion	5.82	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	3.08	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.34	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.44	LCS	P	0 - 30
LFB	Cyanazine	11.5	LCS	P	0 - 30
LFB	Demeton	2.43	LCS	P	0 - 30
LFB	Diazinon	6.86	LCS	P	0 - 30
LFB	Difenoconazole	0.292	LCS	P	0 - 30
LFB	Dimethenamid	0.614	LCS	P	0 - 30
LFB	Disulfoton	6.30	LCS	P	0 - 30
LFB	Dithiopyr	6.02	LCS	P	0 - 30
LFB	EPTC	14.3	LCS	P	0 - 30
LFB	Ethion	14.9	LCS	P	0 - 30
LFB	Ethoprop	3.62	LCS	P	0 - 30
LFB	Fenamiphos	1.83	LCS	P	0 - 30
LFB	Fenbuconazole	0.260	LCS	P	0 - 30
LFB	Fipronil	2.48	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	5.05	LCS	P	0 - 30
LFB	Fipronil Sulfide	5.63	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.82	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fluazifop-P-butyl	3.76	LCS	P	0 - 30
LFB	Fludioxonil	2.35	LCS	P	0 - 30
LFB	Flumioxazin	8.19	LCS	P	0 - 30
LFB	Flutolanil	3.19	LCS	P	0 - 30
LFB	Fluxapyroxad	0.418	LCS	P	0 - 30
LFB	Fonofos	10.7	LCS	P	0 - 30
LFB	Hexazinone	0.315	LCS	P	0 - 30
LFB	Imazalil	4.37	LCS	P	0 - 30
LFB	Iprodione	1.06	LCS	P	0 - 30
LFB	Malathion	6.37	LCS	P	0 - 30
LFB	Metalaxyl	6.63	LCS	P	0 - 30
LFB	Metolachlor	2.49	LCS	P	0 - 30
LFB	Metribuzin	5.26	LCS	P	0 - 30
LFB	Mevinphos	13.5	LCS	P	0 - 30
LFB	Molinate	8.58	LCS	P	0 - 30
LFB	Myclobutanil	0.921	LCS	P	0 - 30
LFB	Naled	3.06	LCS	P	0 - 30
LFB	Norflurazon	5.10	LCS	P	0 - 30
LFB	Oxadiazon	4.64	LCS	P	0 - 30
LFB	Oxyfluorfen	5.58	LCS	P	0 - 30
LFB	Parathion Ethyl	10.8	LCS	P	0 - 30
LFB	Parathion Methyl	6.92	LCS	P	0 - 30
LFB	Pendimethalin	1.96	LCS	P	0 - 30
LFB	Phorate	3.80	LCS	P	0 - 30
LFB	Prodiamine	5.12	LCS	P	0 - 30
LFB	Prometon	1.89	LCS	P	0 - 30
LFB	Prometryn	5.09	LCS	P	0 - 30
LFB	Pronamide	3.11	LCS	P	0 - 30
LFB	Propiconazole	1.15	LCS	P	0 - 30
LFB	Pyriproxyfen	5.18	LCS	P	0 - 30
LFB	Simazine	6.41	LCS	P	0 - 30
LFB	Sulfentrazone	2.07	LCS	P	0 - 30
LFB	Tebuconazole	13.6	LCS	P	0 - 30
LFB	Terbufos	7.39	LCS	P	0 - 30
LFB	Terbuthylazine	3.60	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P403341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273461	Aldrin	7.81	Spike	P	0 - 30
2273461	Alpha-BHC	8.15	Spike	P	0 - 30
2273461	Alpha-Chlordane	3.63	Spike	P	0 - 30
2273461	Beta-BHC	13.6	Spike	P	0 - 30
2273461	Beta-Cyfluthrin	10.7	Spike	P	0 - 30
2273461	Bifenthrin	1.11	Spike	P	0 - 30
2273461	Chlorothalonil	0.749	Spike	P	0 - 50
2273461	Cis-Nonachlor	7.61	Spike	P	0 - 30
2273461	Cypermethrin	15.6	Spike	P	0 - 30
2273461	Dacthal	0.585	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273461	DDD-p,p'	3.97	Spike	P	0 - 30
2273461	DDE-p,p'	4.54	Spike	P	0 - 30
2273461	DDT-p,p'	1.78	Spike	P	0 - 30
2273461	Delta-BHC	16.3	Spike	P	0 - 30
2273461	Deltamethrin	79.7	Spike	F	0 - 30
2273461	Dichlobenil	24.0	Spike	P	0 - 30
2273461	Dicofol	6.82	Spike	P	0 - 30
2273461	Dieldrin	0.525	Spike	P	0 - 30
2273461	Endosulfan I	1.42	Spike	P	0 - 30
2273461	Endosulfan II	2.42	Spike	P	0 - 30
2273461	Endosulfan Sulfate	2.29	Spike	P	0 - 30
2273461	Endrin	5.79	Spike	P	0 - 30
2273461	Endrin Aldehyde	13.0	Spike	P	0 - 30
2273461	Endrin Ketone	0.213	Spike	P	0 - 30
2273461	Esfenvalerate	13.6	Spike	P	0 - 30
2273461	Ethalfluralin	17.3	Spike	P	0 - 30
2273461	Fenpropathrin	22.2	Spike	P	0 - 30
2273461	Gamma-BHC	1.92	Spike	P	0 - 30
2273461	Gamma-Chlordane	7.93	Spike	P	0 - 30
2273461	Heptachlor	9.19	Spike	P	0 - 30
2273461	Heptachlor Epoxide	3.36	Spike	P	0 - 30
2273461	Hexachlorobenzene	11.6	Spike	P	0 - 30
2273461	Kepone	40.2	Spike	F	0 - 30
2273461	Lambda-Cyhalothrin	13.7	Spike	P	0 - 30
2273461	Methoxychlor	12.3	Spike	P	0 - 30
2273461	MGK-264	8.36	Spike	P	0 - 30
2273461	Mirex	1.62	Spike	P	0 - 30
2273461	Permethrin	29.7	Spike	P	0 - 30
2273461	Phenothrin	1.12	Spike	P	0 - 30
2273461	Piperonyl Butoxide	2.64	Spike	P	0 - 30
2273461	Prallethrin	10.4	Spike	P	0 - 30
2273461	Tau-Fluvalinate	0.0535	Spike	P	0 - 30
2273461	Tetramethrin	19.7	Spike	P	0 - 30
2273461	Trans-Nonachlor	6.19	Spike	P	0 - 30
2273461	Triclosan Methyl	0.278	Spike	P	0 - 30
2273461	Trifluralin	10.0	Spike	P	0 - 30
LFB	Aldrin	0.293	LCS	P	0 - 30
LFB	Alpha-BHC	5.14	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.63	LCS	P	0 - 30
LFB	Beta-BHC	11.4	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	7.67	LCS	P	0 - 30
LFB	Bifenthrin	3.68	LCS	P	0 - 30
LFB	Chlorothalonil	13.7	LCS	P	0 - 50
LFB	Cis-Nonachlor	1.27	LCS	P	0 - 30
LFB	Cypermethrin	4.73	LCS	P	0 - 30
LFB	Dacthal	5.72	LCS	P	0 - 30
LFB	DDD-p,p'	0.718	LCS	P	0 - 30
LFB	DDE-p,p'	7.17	LCS	P	0 - 30
LFB	DDT-p,p'	10.8	LCS	P	0 - 30
LFB	Delta-BHC	17.7	LCS	P	0 - 30
LFB	Deltamethrin	20.4	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P403341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Dichlobenil	13.9	LCS	P	0 - 30
LFB	Dicofol	3.12	LCS	P	0 - 30
LFB	Dieldrin	6.04	LCS	P	0 - 30
LFB	Endosulfan I	5.22	LCS	P	0 - 30
LFB	Endosulfan II	5.02	LCS	P	0 - 30
LFB	Endosulfan Sulfate	9.23	LCS	P	0 - 30
LFB	Endrin	3.23	LCS	P	0 - 30
LFB	Endrin Aldehyde	19.2	LCS	P	0 - 30
LFB	Endrin Ketone	5.08	LCS	P	0 - 30
LFB	Esfenvalerate	8.03	LCS	P	0 - 30
LFB	Ethalfluralin	0.772	LCS	P	0 - 30
LFB	Fenpropathrin	3.43	LCS	P	0 - 30
LFB	Gamma-BHC	8.06	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.05	LCS	P	0 - 30
LFB	Heptachlor	2.48	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.44	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.52	LCS	P	0 - 30
LFB	Kepone	22.9	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	8.69	LCS	P	0 - 30
LFB	Methoxychlor	2.80	LCS	P	0 - 30
LFB	MGK-264	10.6	LCS	P	0 - 30
LFB	Mirex	0.532	LCS	P	0 - 30
LFB	Permethrin	12.7	LCS	P	0 - 30
LFB	Phenothrin	1.75	LCS	P	0 - 30
LFB	Piperonyl Butoxide	6.38	LCS	P	0 - 30
LFB	Prallethrin	15.2	LCS	P	0 - 30
LFB	Tau-Fluvalinate	2.38	LCS	P	0 - 30
LFB	Tetramethrin	7.82	LCS	P	0 - 30
LFB	Trans-Nonachlor	1.37	LCS	P	0 - 30
LFB	Triclosan Methyl	8.22	LCS	P	0 - 30
LFB	Trifluralin	2.60	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P403341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273545	Chlordane	6.76	Spike	P	0 - 30
2273545	Toxaphene	1.94	Spike	P	0 - 30
LFB	Chlordane	3.75	LCS	P	0 - 30
LFB	Toxaphene	3.78	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P403290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272764	3-Hydroxycarbofuran	22.6	Spike	P	0 - 30
2272764	Aldicarb	6.46	Spike	P	0 - 30
2272764	Aldicarb Sulfone	3.47	Spike	P	0 - 30
2272764	Aldicarb Sulfoxide	9.72	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P403290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272764	Carbaryl	2.88	Spike	P	0 - 30
2272764	Carbofuran	0.907	Spike	P	0 - 30
2272764	Methiocarb	7.91	Spike	P	0 - 30
2272764	Methomyl	1.10	Spike	P	0 - 30
2272764	Oxamyl	2.44	Spike	P	0 - 30
2272764	Propoxur	0.525	Spike	P	0 - 30
2273120	2,4-D	5.50	Spike	P	0 - 30
2273120	2,4,5-T	1.19	Spike	P	0 - 30
2273120	Acetaminophen	7.77	Spike	P	0 - 30
2273120	Acetamiprid	6.83	Spike	P	0 - 30
2273120	Afidopyropen	15.1	Spike	P	0 - 30
2273120	Bentazon	8.88	Spike	P	0 - 30
2273120	Benzovindiflupyr	5.58	Spike	P	0 - 30
2273120	Carbamazepine	4.86	Spike	P	0 - 30
2273120	Clothianidin	5.99	Spike	P	0 - 30
2273120	Dinotefuran	0.784	Spike	P	0 - 30
2273120	Diuron	10.7	Spike	P	0 - 30
2273120	Fenuron	5.78	Spike	P	0 - 30
2273120	Fluridone	2.01	Spike	P	0 - 30
2273120	Hydrocodone	5.12	Spike	P	0 - 30
2273120	Ibuprofen	15.5	Spike	P	0 - 30
2273120	Imazapyr	3.01	Spike	P	0 - 30
2273120	Imidacloprid	6.44	Spike	P	0 - 30
2273120	Linuron	7.29	Spike	P	0 - 30
2273120	Mandestrobin	0.0138	Spike	P	0 - 30
2273120	MCPP	8.03	Spike	P	0 - 30
2273120	Naproxen	26.1	Spike	P	0 - 30
2273120	Primidone	4.72	Spike	P	0 - 30
2273120	Pyraclostrobin	1.04	Spike	P	0 - 30
2273120	Thiamethoxam	4.80	Spike	P	0 - 30
2273120	Tolfenpyrad	7.34	Spike	P	0 - 30
2273120	Triclopyr	2.54	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P403327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273120	Acesulfame K	0.279	Spike	P	0 - 30
2273120	AMPA	0.431	Spike	P	0 - 30
2273120	Endothall	3.43	Spike	P	0 - 30
2273120	Glufosinate	1.17	Spike	P	0 - 30
2273120	Glyphosate	6.53	Spike	P	0 - 30
2273120	Sucralose	2.26	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P403580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273455	Total Alkalinity	1.27	Sample	P	0 - 5.2

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P403582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273455	Fluoride	1.42	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P403550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2273534	Organic Carbon	1.02	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2273433
Field Sample ID: 27010965

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	79.3	P	30 - 160

Lab Sample ID: 2273434
Field Sample ID: 27010965

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	130	P	30 - 160
EPA 8321B	Acetaminophen-d4	50.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.9	P	30 - 160
EPA 8321B	Diuron-d6	80.1	P	30 - 160
EPA 8321B	Endothall-d6	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.4	P	30 - 160
EPA 8321B	Primidone-d5	30.2	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Lab Sample ID: 2273435
Field Sample ID: 27010965

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	97.6	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	63.1	P	30 - 110
EPA 8276	Decachlorobiphenyl	83.2	P	29 - 92.0
EPA 8276	PCNB	98.2	P	43 - 134

Lab Sample ID: 2273436
Field Sample ID: 27010965

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	89.6	P	20 - 200
EPA 8270E	Simazine-d10	124	P	73 - 135
EPA 8270E	Terbufos-d10	112	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A107645
Included Lab Sample IDs: 2273424, 2273483

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.1	P/P	90 - 110
O-Phosphate-P	99.1	100	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A107646
Included Lab Sample IDs: 2273434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	111	103	P/P	60 - 160
Glufosinate	115	99.3	P/P	60 - 160
Glyphosate	108	101	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A107647
Included Lab Sample IDs: 2273434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	101	102	P/P	60 - 160
Endothall	117	103	P/P	60 - 160
Sucralose	89.2	87.8	P/P	60 - 160

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A107651
Included Lab Sample IDs: 2273420, 2273422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.5	P/P	95 - 105

Reference Method: EPA 8270E
Run ID: A107661
Included Lab Sample IDs: 2273436

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	86.0		P	80 - 120
Atrazine	98.5		P	80 - 120
Atrazine Desethyl	104		P	80 - 120
Azinphos Methyl	100		P	80 - 120
Azoxystrobin	100		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	98.0		P	80 - 120
Caffeine	93.5		P	80 - 120
Carbophenothion	97.1		P	80 - 120
Carfentrazone Ethyl	99.7		P	80 - 120
Chlorpyrifos Ethyl	103		P	80 - 120
Chlorpyrifos Methyl	104		P	80 - 120
Cyanazine	110		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	101		P	80 - 120
Difenoconazole	97.3		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A107661
Included Lab Sample IDs: 2273436

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dimethenamid	104		P	80 - 120
Disulfoton	99.8		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	104		P	80 - 120
Ethion	94.8		P	80 - 120
Ethoprop	97.6		P	80 - 120
Fenamiphos	99.9		P	80 - 120
Fenbuconazole	98.5		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	107		P	80 - 120
Fipronil Sulfide	96.2		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	96.6		P	80 - 120
Fludioxonil	95.7		P	80 - 120
Flumioxazin	97.6		P	80 - 120
Flutolanil	105		P	80 - 120
Fluxapyroxad	106		P	80 - 120
Fonofos	99.8		P	80 - 120
Hexazinone	102		P	80 - 120
Imazalil	101		P	80 - 120
Iprodione	97.2		P	80 - 120
Malathion	95.4		P	80 - 120
Metalaxyl	106		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	107		P	80 - 120
Mevinphos	108		P	80 - 120
Molinate	106		P	80 - 120
Myclobutanil	104		P	80 - 120
Naled	104		P	80 - 120
Norflurazon	98.8		P	80 - 120
Oxadiazon	105		P	80 - 120
Oxyfluorfen	96.2		P	80 - 120
Parathion Ethyl	99.4		P	80 - 120
Parathion Methyl	104		P	80 - 120
Pendimethalin	96.6		P	80 - 120
Phorate	102		P	80 - 120
Prodiamine	99.5		P	80 - 120
Prometon	98.4		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	100		P	80 - 120
Propiconazole	99.2		P	80 - 120
Pyriproxyfen	98.8		P	80 - 120
Simazine	107		P	80 - 120
Sulfentrazone	98.6		P	80 - 120
Tebuconazole	104		P	80 - 120
Terbufos	101		P	80 - 120
Terbuthylazine	103		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A107663
Included Lab Sample IDs: 2273421, 2273423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.6	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A107667
Included Lab Sample IDs: 2273434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	115	122	P/P	50 - 150
2,4,5-T	90.7	96.7	P/P	50 - 150
3-Hydroxycarbofuran	115	110	P/P	60 - 150
Acetaminophen	106	103	P/P	60 - 160
Acetamiprid	112	102	P/P	50 - 150
Afidopyropen	118	90.6	P/P	50 - 150
Aldicarb	101	86.3	P/P	60 - 150
Aldicarb Sulfone	112	108	P/P	50 - 150
Aldicarb Sulfoxide	97.5	104	P/P	50 - 150
Bentazon	85.2	106	P/P	50 - 160
Benzovindiflupyr	108	96.8	P/P	50 - 150
Carbamazepine	105	95.6	P/P	60 - 150
Carbaryl	115	110	P/P	60 - 150
Carbofuran	105	111	P/P	50 - 150
Clothianidin	108	106	P/P	60 - 150
Dinotefuran	101	106	P/P	50 - 150
Diuron	98.7	98.5	P/P	60 - 160
Fenuron	102	104	P/P	60 - 150
Fluridone	108	96.4	P/P	60 - 160
Hydrocodone	105	89.8	P/P	60 - 150
Ibuprofen	129	84.2	P/P	50 - 160
Imazapyr	104	101	P/P	50 - 150
Imidacloprid	109	118	P/P	60 - 150
Linuron	109	98.1	P/P	60 - 150
Mandestrobin	111	101	P/P	50 - 150
MCPP	107	91.7	P/P	50 - 150
Methiocarb	107	99.0	P/P	50 - 150
Methomyl	98.3	100	P/P	50 - 150
Naproxen	119	108	P/P	50 - 160
Oxamyl	102	103	P/P	50 - 150
Primidone	115	123	P/P	60 - 150
Propoxur	117	110	P/P	50 - 150
Pyraclostrobin	119	110	P/P	60 - 150
Thiamethoxam	101	97.9	P/P	50 - 150
Tolfenpyrad	117	109	P/P	60 - 150
Triclopyr	102	89.6	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A107671
Included Lab Sample IDs: 2273421, 2273423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

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Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A107673
Included Lab Sample IDs: 2273421, 2273423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.0	P/P	90 - 110
Total-P	100	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A107687
Included Lab Sample IDs: 2273437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	103	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Manganese	105	106	P/P	90 - 110
Zinc	107	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A107697
Included Lab Sample IDs: 2273421, 2273423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	102	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A107704
Included Lab Sample IDs: 2273421, 2273423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A107711
Included Lab Sample IDs: 2273437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.8	98.8	P/P	90 - 110
Antimony	97.4	98.3	P/P	90 - 110
Arsenic	98.7	97.0	P/P	90 - 110
Beryllium	94.9	96.3	P/P	90 - 110
Cadmium	96.1	97.1	P/P	90 - 110
Chromium	95.4	96.7	P/P	90 - 110
Copper	97.2	96.3	P/P	90 - 110
Lead	94.2	93.8	P/P	90 - 110
Nickel	97.5	96.3	P/P	90 - 110
Selenium	98.1	96.7	P/P	90 - 110
Silver	93.2	93.1	P/P	90 - 110
Thallium	97.2	98.2	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A107716
Included Lab Sample IDs: 2273435

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

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Calibration Verification

Reference Method: EPA 8270E
Run ID: A107716
Included Lab Sample IDs: 2273435

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	99.1		P	80 - 120
Alpha-Chlordane	100		P	80 - 120
Beta-BHC	117		P	80 - 120
Beta-Cyfluthrin	95.3		P	80 - 120
Bifenthrin	99.9		P	80 - 120
Chlorothalonil	101		P	80 - 120
Cis-Nonachlor	97.2		P	80 - 120
Cypermethrin	93.6		P	80 - 120
Dacthal	99.5		P	80 - 120
DDD-p,p'	104		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	98.1		P	80 - 120
Delta-BHC	120		P	80 - 120
Deltamethrin	90.7		P	80 - 120
Dichlobenil	96.1		P	80 - 120
Dicofol	99.3		P	80 - 120
Dieldrin	103		P	80 - 120
Endosulfan I	95.7		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	86.3		P	80 - 120
Endrin	100		P	80 - 120
Endrin Aldehyde	99.4		P	80 - 120
Endrin Ketone	97.7		P	80 - 120
Esfenvalerate	95.0		P	80 - 120
Ethalfluralin	99.0		P	80 - 120
Fenpropathrin	88.9		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	99.7		P	80 - 120
Heptachlor	102		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Hexachlorobenzene	98.0		P	80 - 120
Kepone	86.8		P	80 - 120
Lambda-Cyhalothrin	96.5		P	80 - 120
Methoxychlor	98.0		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	99.6		P	80 - 120
Permethrin	96.5		P	80 - 120
Phenothrin	98.9		P	80 - 120
Piperonyl Butoxide	98.4		P	80 - 120
Prallethrin	94.6		P	80 - 120
Tau-Fluvalinate	93.8		P	80 - 120
Tetramethrin	97.3		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	102		P	80 - 120
Trifluralin	95.0		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-2011
Run ID: A107726
Included Lab Sample IDs: 2273420, 2273422

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	101	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A107726
Included Lab Sample IDs: 2273420, 2273422

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

Reference Method: EPA 8276
Run ID: A107753
Included Lab Sample IDs: 2273435

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	92.3		P	80 - 120
Toxaphene	99.5		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.26	
EPA 200.7 Rev. 4.4	Calcium	111		111	108			1.26
	Iron	109		111	110			0.951
	Magnesium	111		113	112			0.991
	Manganese	105		105	104			1.51
	Zinc	108		113	113			0.367
EPA 200.8 Rev. 5.4	Aluminum	97.8		101	97.3			3.28
	Antimony	97.8		99.2	99.0			0.230
	Arsenic	98.2		97.7	94.7			3.05
	Beryllium	96.1		95.9	99.3			3.45
	Cadmium	94.9		97.0	97.0			0.0135
	Chromium	96.8		99.0	97.1			1.95
	Copper	97.8		107	95.7			11.3
	Lead	94.8		95.0	97.1			2.17
	Nickel	99.2		98.4	95.4			3.13
	Selenium	96.3		96.2	94.7			1.61
	Silver	96.8		96.9	96.9			0.0246
	Thallium	98.3		103	100			2.59
EPA 350.1 Rev. 2.0	Ammonia-N	98.8		98.2	96.8			1.02
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		102	101			0.393
EPA 353.2 Rev. 2.0	NO2NO3-N	102		102	102			0.0
EPA 365.1 Rev. 2.0	Total-P	105						
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		98.5	98.1			0.407
EPA 8270E	Acetochlor	101	98.0	112	102	3.05		8.61
	Alachlor	93.5	92.0	102	86.4	1.71		16.1
	Aldrin	55.2	55.1	41.1	44.5	0.293		7.81
	Alpha-BHC	82.9	87.3	75.8	82.2	5.14		8.15
	Alpha-Chlordane	72.9	75.6	59.5	61.7	3.63		3.63
	Ametryn	94.5	88.0			7.15		0.271
	Atrazine	99.0	94.4			4.78		8.90
	Atrazine Desethyl	104	89.7	101	71.3	14.5		19.4
	Azinphos Methyl	129	128	115	115	0.455		0.161
	Azoxystrobin	118	104			12.2		6.81
	Beta-BHC	101	114	118	103	11.4		13.6
	Beta-Cyfluthrin	98.2	106	104	116	7.67		10.7
	Bifenthrin	69.3	66.8	63.5	62.8	3.68		1.11
	Bromacil	86.8	83.9	100	89.7	3.39		11.3
	Butylate	40.8	37.6	46.6	37.1	8.12		22.9
	Caffeine	70.8	74.3	72.8	73.9	4.81		1.54
	Carbophenothion	96.3	102	97.5	91.0	5.82		6.92
	Carfentrazone Ethyl	106	109	110	90.2	3.08		19.4
	Chlorothalonil	118	135	110	111	13.7		0.749
	Chlorpyrifos Ethyl	89.9	93.0	91.3	81.9	3.34		9.99
	Chlorpyrifos Methyl	91.6	95.7	102	94.5	4.44		7.47
	Cis-Nonachlor	65.3	66.1	48.5	44.9	1.27		7.61
	Cyanazine	124	139	152	117	11.5		26.2
	Cypermethrin	83.3	87.4	85.8	73.3	4.73		15.6
	Dacthal	82.2	87.1	74.2	73.7	5.72		0.585
	DDD-p,p'	65.0	65.5	46.0	44.2	0.718		3.97
	DDE-p,p'	71.9	77.3	59.7	57.1	7.17		4.54
	DDT-p,p'	73.8	82.2	64.9	63.7	10.8		1.78
	Delta-BHC	107	127	107	127	17.7		16.3
	Deltamethrin	80.9	99.3	101	43.4	20.4		79.7
	Demeton	105	107	126	122	2.43		3.49

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Diazinon	94.8	102	116	111	6.86		4.43
	Dichlobenil	61.6	70.8	68.2	53.6	13.9		24.0
	Dicofol	72.2	74.4	72.7	67.9	3.12		6.82
	Dieldrin	75.3	80.0	62.8	62.5	6.04		0.525
	Difenoconazole	123	122	136	130	0.292		4.27
	Dimethenamid	77.2	76.7	83.2	79.1	0.614		5.05
	Disulfoton	191	203	242	228	6.30		6.07
	Dithiopyr	88.9	94.5	98.2	92.1	6.02		6.33
	Endosulfan I	75.6	79.7	65.4	64.4	5.22		1.42
	Endosulfan II	62.3	65.5	47.7	46.6	5.02		2.42
	Endosulfan Sulfate	68.3	74.9	55.3	56.6	9.23		2.29
	Endrin	62.1	64.1	47.3	44.7	3.23		5.79
	Endrin Aldehyde	61.4	74.4	50.3	44.2	19.2		13.0
	Endrin Ketone	75.0	78.9	67.8	67.7	5.08		0.213
	EPTC	42.0	48.5	47.6	40.4	14.3		16.5
	Esfenvalerate	83.2	90.1	99.8	87.1	8.03		13.6
	Ethalfluralin	69.8	70.3	67.9	57.0	0.772		17.3
	Ethion	64.9	55.9	69.4	63.5	14.9		8.86
	Ethoprop	81.2	84.2	108	102	3.62		5.71
	Fenamiphos	93.4	91.7	95.3	102	1.83		6.57
	Fenbuconazole	99.1	99.3	107	90.4	0.260		16.9
	Fenpropathrin	81.4	78.7	89.8	71.9	3.43		22.2
	Fipronil	105	108	110	103	2.48		6.26
	Fipronil Desulfinyl	99.9	105	125	101	5.05		22.0
	Fipronil Sulfide	89.0	94.2	96.8	94.9	5.63		1.94
	Fipronil Sulfone	74.6	77.5	77.7	76.9	3.82		0.970
	Fluazifop-P-butyl	101	105	115	101	3.76		13.3
	Fludioxonil	119	116	119	118	2.35		0.635
	Flumioxazin	133	123	160	161	8.19		0.713
	Flutolanil	97.3	100	90.2	90.6	3.19		0.423
	Fluxapyroxad	89.2	89.6			0.418		5.84
	Fonofos	87.3	97.1	99.8	96.1	10.7		3.78
	Gamma-BHC	88.8	96.2	89.2	90.9	8.06		1.92
	Gamma-Chlordane	71.2	74.9	61.9	57.2	5.05		7.93
	Heptachlor	61.9	63.4	53.5	48.8	2.48		9.19
	Heptachlor Epoxide	72.8	76.2	64.4	62.3	4.44		3.36
	Hexachlorobenzene	70.2	72.0	62.2	55.4	2.52		11.6
	Hexazinone	96.0	95.7			0.315		4.83
	Imazalil	91.4	87.5	194	175	4.37		10.7
	Iprodione	96.3	97.3	98.5	90.3	1.06		8.69
	Kepone	26.7	33.7	17.5	26.3	22.9		40.2
	Lambda-Cyhalothrin	85.7	93.5	85.3	74.3	8.69		13.7
	Malathion	84.9	90.5	86.7	86.1	6.37		0.691
	Metalaxyl	89.9	96.1			6.63		2.43
	Methoxychlor	80.5	82.7	87.7	77.5	2.80		12.3
	Metolachlor	90.9	88.6			2.49		6.42
	Metribuzin	93.9	99.0	103	95.0	5.26		4.77
	Mevinphos	81.6	93.4	116	112	13.5		3.62
	MGK-264	78.1	86.9	68.9	75.0	10.6		8.36
	Mirex	57.7	58.0	49.2	48.4	0.532		1.62
	Molinate	50.7	55.2	61.4	57.7	8.58		6.26
	Myclobutanil	95.7	96.6	102	97.2	0.921		5.16
	Naled	34.0	32.9	35.5	30.4	3.06		15.6
	Norflurazon	88.1	92.7	86.9	81.7	5.10		6.16

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Oxadiazon	83.9	87.9	84.3	77.9	4.64		6.88
	Oxyfluorfen	90.5	85.6	123	108	5.58		13.1
	Parathion Ethyl	83.6	93.1	93.4	88.1	10.8		5.81
	Parathion Methyl	105	112	126	115	6.92		9.06
	Pendimethalin	75.4	73.9	87.6	87.8	1.96		0.216
	Permethrin	82.5	93.7	138	102	12.7		29.7
	Phenothrin	71.9	70.7	71.0	71.8	1.75		1.12
	Phorate	68.1	65.6	88.5	83.5	3.80		5.87
	Piperonyl Butoxide	82.4	87.8	79.3	77.3	6.38		2.64
	Prallethrin	63.5	73.9	58.0	64.4	15.2		10.4
	Prodiamine	31.1	29.6	51.0	53.5	5.12		4.84
	Prometon	83.4	81.8	99.1	90.2	1.89		9.43
	Prometryn	94.5	99.4	101	83.3	5.09		14.5
	Pronamide	98.1	101	93.3	87.1	3.11		6.91
	Propiconazole	91.5	92.6			1.15		3.05
	Pyriproxyfen	86.3	81.9	79.1	69.8	5.18		12.5
	Simazine	91.5	97.6	106	105	6.41		1.43
	Sulfentrazone	84.6	86.4	90.7	88.4	2.07		2.33
	Tau-Fluvalinate	76.7	78.5	87.6	87.6	2.38		0.0535
	Tebuconazole	74.2	64.8	71.0	69.6	13.6		1.86
	Terbufos	99.0	107	127	119	7.39		6.95
	Terbuthylazine	84.7	87.8	96.6	90.8	3.60		6.17
	Tetramethrin	75.4	81.5	64.5	78.6	7.82		19.7
	Trans-Nonachlor	73.0	72.0	60.6	57.0	1.37		6.19
	Triclosan Methyl	74.5	80.9	60.1	60.0	8.22		0.278
	Trifluralin	71.8	73.7	66.3	60.0	2.60		10.0
EPA 8276	Chlordane	84.5	81.4	76.2	81.5	3.75		6.76
	Toxaphene	95.8	92.3	91.8	93.6	3.78		1.94
EPA 8321B	2,4-D	90.6						5.50
	2,4,5-T	86.4		119	118			1.19
	3-Hydroxycarbofuran	84.0		59.9	47.8			22.6
	Acesulfame K	105		148	148			0.279
	Acetaminophen	78.0		70.0	64.7			7.77
	Acetamiprid	80.5		74.3	69.4			6.83
	Afidopyropen	74.5		92.4	79.4			15.1
	Aldicarb	62.1		60.5	56.7			6.46
	Aldicarb Sulfone	93.8		59.4	61.5			3.47
	Aldicarb Sulfoxide	103		34.5	31.3			9.72
	AMPA	71.1		101	99.9			0.431
	Bentazon	98.4		227	206			8.88
	Benzovindiflupyr	86.4		87.3	92.3			5.58
	Carbamazepine	80.4		75.6	71.7			4.86
	Carbaryl	89.2		69.1	67.1			2.88
	Carbofuran	90.0		68.6	68.0			0.907
	Clothianidin	86.3		46.4	43.7			5.99
	Dinotefuran	80.5		74.6	75.9			0.784
	Diuron	81.8		83.2	74.1			10.7
	Endothall	125		113	109			3.43
	Fenuron	89.0		94.6	89.3			5.78
	Fluridone	92.3		91.1	89.2			2.01
	Glufosinate	97.7		108	109			1.17
	Glyphosate	101						6.53
	Hydrocodone	85.3		106	112			5.12
	Ibuprofen	54.2		75.3	64.4			15.5

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Imazapyr	86.5	106	111			3.01
	Imidacloprid	97.7	88.2	82.7			6.44
	Linuron	86.3	85.1	91.6			7.29
	Mandestrobin	86.4	98.4	98.5			0.0138
	MCPP	82.6	123	114			8.03
	Methiocarb	77.9	72.7	78.6			7.91
	Methomyl	91.9	74.9	75.8			1.10
	Naproxen	76.6	93.1	71.6			26.1
	Oxamyl	87.1	67.6	66.0			2.44
	Primidone	99.3	25.0	23.9			4.72
	Propoxur	92.4	69.2	69.6			0.525
	Pyraclostrobin	72.0	90.2	91.2			1.04
	Sucralose	89.1	90.1	92.2			2.26
	Thiamethoxam	90.9	75.0	79.4			4.80
	Tolfenpyrad	50.7	48.7	52.4			7.34
	Triclopyr	91.8	110	113			2.54
SM 2320 B-2011	Total Alkalinity	102				1.27	
SM 4500 F-C-2011	Fluoride	97.4	99.0	101			1.42
SM 5310 B-2011	Organic Carbon	95.4	95.8	97.4			1.02

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2273420, 2273422
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2273437
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2273437
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2273421, 2273423
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2273421, 2273423
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2273421, 2273423
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2273421, 2273423
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2273424, 2273483
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2273435
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2273436
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2273435
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2273433
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2273434
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2273420, 2273422
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2273420, 2273422
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2273420, 2273422
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2273421, 2273423

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/03/2021			09/03/2021 17:37	Blanca Fach	2273420, 2273422
EPA 200.7 Rev. 4.4	09/03/2021	09/07/2021 12:00	Elliott D. Healy	09/08/2021 19:20	Josef B Mick	2273437
EPA 200.8 Rev. 5.4	09/03/2021	09/07/2021 12:00	Elliott D. Healy	09/09/2021 12:55	Alexander Thompson	2273437
EPA 350.1 Rev. 2.0	09/03/2021			09/07/2021 13:10	Ping Hua	2273421
	09/03/2021			09/07/2021 13:12	Ping Hua	2273423
EPA 351.2 Rev. 2.0	09/03/2021	09/08/2021 16:15	Benjamin T. Nordmann	09/09/2021 12:38	Alexandra J Mattheus	2273421
	09/03/2021	09/08/2021 16:15	Benjamin T. Nordmann	09/09/2021 12:40	Alexandra J Mattheus	2273423
EPA 353.2 Rev. 2.0	09/03/2021			09/08/2021 09:18	Beverly Y. Sanders	2273421
	09/03/2021			09/08/2021 09:19	Beverly Y. Sanders	2273423
EPA 365.1 Rev. 2.0	09/03/2021	09/07/2021 15:50	Simonne.V. Calhoun	09/08/2021 11:00	Shengyu Ding	2273421
	09/03/2021	09/07/2021 15:50	Simonne.V. Calhoun	09/08/2021 11:04	Shengyu Ding	2273423
EPA 365.1 Rev. 2.0 dissolved	09/03/2021			09/03/2021 15:37	James L Waggerby	2273424
	09/03/2021			09/03/2021 15:43	James L Waggerby	2273483
EPA 8270E	09/03/2021	09/03/2021 11:00	Fe-Val Siddell	09/04/2021 19:36	Michael Poppell	2273436
	09/03/2021	09/07/2021 08:00	Fe-Val Siddell	09/10/2021 02:39	Arthur Maknenko	2273435
EPA 8276	09/03/2021	09/07/2021 08:00	Fe-Val Siddell	09/13/2021 08:55	Julie Wi	2273435
EPA 8321B	09/03/2021	09/03/2021 11:15	Mohammad Ghaffari	09/03/2021 13:36	Mohammad Ghaffari	2273434
	09/03/2021	09/03/2021 11:15	Mohammad Ghaffari	09/03/2021 14:28	Mohammad Ghaffari	2273434
	09/03/2021	09/03/2021 14:00	Hoor Shaik	09/08/2021 08:03	Juyoung Kim	2273433
	09/03/2021	09/03/2021 14:00	Hoor Shaik	09/08/2021 16:58	Juyoung Kim	2273434
SM 2320 B-2011	09/03/2021			09/09/2021 17:59	Dale L. Simmons	2273422
	09/03/2021			09/09/2021 20:33	Dale L. Simmons	2273420
SM 2540 D-2011	09/03/2021			09/08/2021 13:06	Yijie Li	2273420, 2273422
SM 4500 F-C-2011	09/03/2021			09/09/2021 17:59	Dale L. Simmons	2273422
	09/03/2021			09/09/2021 20:33	Dale L. Simmons	2273420
SM 5310 B-2011	09/03/2021			09/09/2021 06:54	Madeline Gruver	2273421
	09/03/2021			09/09/2021 07:10	Madeline Gruver	2273423