

Chemical Analysis Report

CEN-DIST-2021-10-26-02

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

Event Description: **Dead River**
Request ID: **RQ-2021-09-06-54**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matt Bearden

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 19-NOV-2021 15:32

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: 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: Dead River @ 1250 m North of Lake Hatchineha Collection Date/Time: 10/25/2021 10:45

Field ID: G4CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2285930	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P405615	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P406037	
		Sulfate	1.2		mg SO ₄ /L	P406040	
	SM 2120 B-2011	Color (true)	540		PCU	P405613	
	SM 2320 B-2011	Total Alkalinity	32		mg CaCO ₃ /L	P405794	
	SM 2540 C-2011	TDS	223		mg/L	P406283	
	SM 2540 D-2011	TSS	4	I	mg/L	P406277	
	SM 4500 F-C-2011	Fluoride	0.085	I	mg F/L	P405796	
2285931	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P405858	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.3		mg N/L	P406009	
	EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	0.009	I	mg N/L	P405710	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P405630	
	SM 5310 B-2011	Organic Carbon	53		mg C/L	P405771	
2285932	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P405624	
2285935	EPA 8270E	Aldrin	0.67	UJ	ng/L	P406047	LCS, RPD
		Alpha-BHC	0.10	U	ng/L	P406047	
		Alpha-Chlordane	0.20	U	ng/L	P406047	
		Beta-BHC	0.10	U	ng/L	P406047	
		Beta-Cyfluthrin**	1.3	UJ	ng/L	P406047	LCS, MS, RPD
		Bifenthrin**	0.51	UJ	ng/L	P406047	LCS, RPD
		Chlorothalonil	0.51	U	ng/L	P406047	
		Cis-Nonachlor**	0.20	UJ	ng/L	P406047	RPD
		Cypermethrin	1.5	UJ	ng/L	P406047	LCS, MS, RPD
		Dacthal**	0.15	U	ng/L	P406047	
		DDD-p,p'	0.26	U	ng/L	P406047	
		DDE-p,p'	0.20	U	ng/L	P406047	
		DDT-p,p'	0.26	U	ng/L	P406047	
		Delta-BHC	0.41	U	ng/L	P406047	
		Deltamethrin**	1.3	UJ	ng/L	P406047	RPD
		Dichlobenil**	0.10	U	ng/L	P406047	
		Dicofol	1.3	U	ng/L	P406047	
		Diieldrin	0.41	U	ng/L	P406047	
		Endosulfan I	0.41	U	ng/L	P406047	
		Endosulfan II	0.41	U	ng/L	P406047	
		Endosulfan Sulfate	0.31	U	ng/L	P406047	
		Endrin	0.41	U	ng/L	P406047	
		Endrin Aldehyde	0.77	UJ	ng/L	P406047	RPD
		Endrin Ketone	0.41	U	ng/L	P406047	
		Esfenvalerate**	0.77	U	ng/L	P406047	
		Ethalfuralin**	0.15	UJ	ng/L	P406047	LCS
		Fenpropathrin**	0.26	UJ	ng/L	P406047	LCS, MS
		Gamma-BHC	0.13	U	ng/L	P406047	

Field ID: G4CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2285935	EPA 8270E	Gamma-Chlordane	0.20	UJ	ng/L	P406047	LCS
		Heptachlor	0.20	UJ	ng/L	P406047	LCS
		Heptachlor Epoxide	0.26	U	ng/L	P406047	
		Hexachlorobenzene	1.0	UJ	ng/L	P406047	LCS
		Kepone**	5.1	UJ	ng/L	P406047	CCV, LCS
		Lambda-Cyhalothrin**	0.77	U	ng/L	P406047	
		Methoprene**	0.77	UJ	ng/L	P406047	LCS, MS, RPD
		Methoxychlor	0.31	U	ng/L	P406047	
		MGK-264**	0.20	U	ng/L	P406047	
		Mirex	0.72	U	ng/L	P406047	
		Oxychlordane**	0.31	UJ	ng/L	P406047	LCS
		Permethrin	1.6	UJ	ng/L	P406047	LCS, MS, RPD
		Phenothrin**	0.92	UJ	ng/L	P406047	LCS, MS, RPD
		Piperonyl Butoxide**	0.15	U	ng/L	P406047	
		Prallethrin**	2.0	U	ng/L	P406047	
		Tau-Fluvalinate**	0.26	UJ	ng/L	P406047	LCS, MS, RPD
		Tetramethrin**	0.77	U	ng/L	P406047	
		Trans-Nonachlor**	0.20	U	ng/L	P406047	
		Triclosan Methyl**	0.15	U	ng/L	P406047	
		Trifluralin	0.20	UJ	ng/L	P406047	LCS
		Chlordane	2.6	U	ng/L	P406047	
		Toxaphene	15	U	ng/L	P406047	
2285936	EPA 8270E	Acetochlor	0.25	U	ng/L	P405591	
		Alachlor	0.25	U	ng/L	P405591	
		Ametryn	0.59	U	ng/L	P405591	
		Atrazine	0.41	I	ng/L	P405591	
		Atrazine Desethyl	1.5	U	ng/L	P405591	
		Azinphos Methyl	2.0	UJ	ng/L	P405591	LCS
		Azoxystrobin**	0.49	U	ng/L	P405591	
		Bromacil	0.49	U	ng/L	P405591	
		Butylate	0.39	U	ng/L	P405591	
		Caffeine**	7.4	U	ng/L	P405591	
		Carbophenothion	0.49	U	ng/L	P405591	
		Carfentrazone Ethyl**	0.098	U	ng/L	P405591	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P405591	
		Chlorpyrifos Methyl	0.049	U	ng/L	P405591	
		Cyanazine	3.2	U	ng/L	P405591	
		Demeton	1.5	U	ng/L	P405591	MS
		Diazinon	0.12	U	ng/L	P405591	
		Difenoconazole**	0.59	U	ng/L	P405591	
		Dimethenamid**	0.098	U	ng/L	P405591	
		Disulfoton	0.49	U	ng/L	P405591	
		Dithiopyr**	0.17	U	ng/L	P405591	

Field ID: G4CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2285936	EPA 8270E	EPTC	1.2	U	ng/L	P405591	
		Ethion	0.15	U	ng/L	P405591	
		Ethoprop	0.098	U	ng/L	P405591	
		Fenamiphos	0.49	U	ng/L	P405591	
		Fenbuconazole**	0.12	UJ	ng/L	P405591	LCS
		Fipronil	0.25	U	ng/L	P405591	
		Fipronil Desulfinyll**	0.12	U	ng/L	P405591	
		Fipronil Sulfide	0.15	U	ng/L	P405591	
		Fipronil Sulfone	0.15	U	ng/L	P405591	
		Fluazifop-P-butyl**	0.098	U	ng/L	P405591	
		Fludioxonil**	0.12	U	ng/L	P405591	
		Flumioxazin**	1.7	UJ	ng/L	P405591	LCS, MS
		Flutolanil**	0.12	I	ng/L	P405591	
		Fluxapyroxad**	0.098	U	ng/L	P405591	
		Fonofos	0.20	U	ng/L	P405591	
		Hexazinone	0.49	U	ng/L	P405591	
		Imazalil**	0.74	U	ng/L	P405591	MS
		Iprodione**	0.59	UJ	ng/L	P405591	LCS, MS
		Malathion	0.34	U	ng/L	P405591	
		Metalaxyl	0.74	U	ng/L	P405591	
		Metolachlor	0.34	U	ng/L	P405591	
		Metribuzin	3.2	U	ng/L	P405591	
		Mevinphos	1.0	U	ng/L	P405591	
		Molinate	0.29	U	ng/L	P405591	
		Myclobutanil**	0.25	U	ng/L	P405591	
		Naled**	1.5	U	ng/L	P405591	
		Norflurazon	0.49	U	ng/L	P405591	
		Oxadiazon	0.29	U	ng/L	P405591	
		Oxyfluorfen**	0.15	U	ng/L	P405591	
		Parathion Ethyl	0.25	U	ng/L	P405591	
		Parathion Methyl	0.54	U	ng/L	P405591	
		Pendimethalin	0.98	U	ng/L	P405591	
		Phorate	0.51	U	ng/L	P405591	
		Prodiamine**	0.17	UJ	ng/L	P405591	LCS, MS
		Prometon	0.88	U	ng/L	P405591	
		Prometryn	0.20	U	ng/L	P405591	
		Pronamide**	0.15	U	ng/L	P405591	
		Propiconazole**	0.49	U	ng/L	P405591	
		Pyriproxyfen**	0.12	UJ	ng/L	P405591	LCS
		Simazine	0.49	U	ng/L	P405591	
		Sulfentrazone**	5.9		ng/L	P405591	
		Tebuconazole**	0.49	U	ng/L	P405591	
		Terbufos	0.098	U	ng/L	P405591	
		Terbuthylazine	0.42	U	ng/L	P405591	

Matrix: W-SURF-FRH

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: P405615

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406037

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406040

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P405858

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406009

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P405710

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P405630

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P405624

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

Reference Method: EPA 8270E
Batch ID: P405591

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P405591

Component	Result	Code	Units
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
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 Desulfanyl	0.12	U	ng/L
Fipronil Desulfanyl	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P405591

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P405591

Component	Result	Code	Units
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
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270E

Batch ID: P406047

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P406047

Component	Result	Code	Units
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
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	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
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	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
Oxychlordane	0.30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P406047

Component	Result	Code	Units
Oxychlordane	0.30	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: P406047

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: SM 2120 B-2011

Batch ID: P405613

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P405794

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

Reference Method: SM 2540 C-2011

Batch ID: P406283

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P406277

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P405771

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406037

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P405858

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406009

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P405710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P405630

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P405624

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

Reference Method: EPA 8270E
Batch ID: P405591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	89.2	87.9	P/P	70 - 121
Alachlor	115	117	P/P	70 - 119
Ametryn	119	103	P/P	61 - 135
Atrazine	99.5	103	P/P	76 - 123
Atrazine Desethyl	81.9	94.6	P/P	35 - 140
Azinphos Methyl	62.8	55.2	P/F	57 - 163
Azoxystrobin	94.8	108	P/P	43 - 231
Bromacil	122	119	P/P	42 - 123
Butylate	52.4	61.7	P/P	34 - 92.0
Caffeine	73.7	72.6	P/P	70 - 130

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P405591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbophenothion	109	116	P/P	61 - 121
Carfentrazone Ethyl	136	133	P/P	62 - 139
Chlorpyrifos Ethyl	100	98.0	P/P	67 - 121
Chlorpyrifos Methyl	107	111	P/P	67 - 120
Cyanazine	174	156	P/P	20 - 226
Demeton	82.8	97.5	P/P	35 - 125
Diazinon	88.1	87.2	P/P	70 - 122
Difenoconazole	71.3	65.7	P/P	56 - 186
Dimethenamid	102	96.0	P/P	67 - 119
Disulfoton	96.8	109	P/P	47 - 120
Dithiopyr	109	102	P/P	67 - 118
EPTC	54.5	70.9	P/P	33 - 90.0
Ethion	99.9	105	P/P	40 - 133
Ethoprop	83.0	102	P/P	61 - 121
Fenamiphos	104	109	P/P	31 - 139
Fenbuconazole	141	148	F/F	66 - 141
Fipronil	79.9	82.3	P/P	62 - 129
Fipronil Desulfinyl	92.8	89.3	P/P	59 - 126
Fipronil Sulfide	94.4	108	P/P	63 - 117
Fipronil Sulfone	101	114	P/P	57 - 117
Fluazifop-P-butyl	124	114	P/P	63 - 124
Fludioxonil	81.7	83.8	P/P	63 - 123
Flumioxazin	322	355	F/F	34 - 245
Flutolanil	119	120	P/P	56 - 131
Fluxapyroxad	103	102	P/P	57 - 117
Fonofos	88.0	90.0	P/P	61 - 116
Hexazinone	101	101	P/P	55 - 138
Imazalil	114	121	P/P	33 - 143
Iprodione	146	160	F/F	59 - 118
Malathion	108	119	P/P	62 - 138
Metalaxyl	117	102	P/P	24 - 147
Metolachlor	112	113	P/P	68 - 118
Metribuzin	99.4	102	P/P	20 - 239
Mevinphos	81.0	99.3	P/P	46 - 124
Molinate	63.8	71.8	P/P	46 - 100
Myclobutanil	118	114	P/P	32 - 149
Naled	34.2	40.8	P/P	32 - 95.0
Norflurazon	118	113	P/P	57 - 127
Oxadiazon	103	103	P/P	63 - 118
Oxyfluorfen	133	124	P/P	69 - 137
Parathion Ethyl	105	107	P/P	70 - 113
Parathion Methyl	115	123	P/P	71 - 130
Pendimethalin	97.1	91.8	P/P	55 - 118
Phorate	72.8	97.3	P/P	46 - 125
Prodiamine	143	142	F/F	20 - 141
Prometon	87.4	95.7	P/P	54 - 122
Prometryn	123	116	P/P	66 - 124
Pronamide	112	108	P/P	79 - 122
Propiconazole	118	105	P/P	61 - 126
Pyriproxyfen	47.0	46.9	F/F	52 - 131
Simazine	106	99.6	P/P	75 - 128
Sulfentrazone	125	123	P/P	20 - 132

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P405591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tebuconazole	98.4	94.5	P/P	20 - 116
Terbufos	105	114	P/P	61 - 117
Terbutylazine	101	102	P/P	74 - 116

Reference Method: EPA 8270E

Batch ID: P406047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	21.7	15.6	P/F	20 - 83.0
Alpha-BHC	77.7	83.8	P/P	74 - 108
Alpha-Chlordane	53.7	55.4	P/P	53 - 109
Beta-BHC	90.8	93.6	P/P	64 - 139
Beta-Cyfluthrin	24.0	37.7	F/P	27 - 171
Bifenthrin	19.6	28.5	F/P	20 - 124
Chlorothalonil	77.1	115	P/P	20 - 182
Cis-Nonachlor	48.5	67.1	P/P	46 - 110
Cypermethrin	23.8	33.5	F/F	35 - 160
Dacthal	91.1	96.8	P/P	70 - 115
DDD-p,p'	58.0	76.3	P/P	51 - 108
DDE-p,p'	52.4	53.8	P/P	51 - 104
DDT-p,p'	52.5	62.4	P/P	52 - 107
Delta-BHC	88.4	97.4	P/P	73 - 146
Deltamethrin	22.0	34.0	P/P	20 - 190
Dichlobenil	60.6	75.3	P/P	30 - 100
Dicofol	58.5	65.9	P/P	52 - 110
Dieldrin	65.0	65.8	P/P	57 - 111
Endosulfan I	65.5	68.8	P/P	61 - 106
Endosulfan II	66.9	68.3	P/P	57 - 122
Endosulfan Sulfate	65.9	80.8	P/P	58 - 122
Endrin	61.6	59.1	P/P	34 - 125
Endrin Aldehyde	53.6	75.1	P/P	40 - 120
Endrin Ketone	75.0	91.5	P/P	51 - 138
Esfenvalerate	22.5	28.3	P/P	20 - 193
Ethalfuralin	50.7	47.4	F/F	51 - 99.0
Fenpropathrin	35.4	41.4	F/P	40 - 116
Gamma-BHC	81.1	85.7	P/P	74 - 116
Gamma-Chlordane	45.6	47.3	F/F	49 - 105
Heptachlor	38.4	38.2	F/F	45 - 98.0
Heptachlor Epoxide	62.4	65.4	P/P	61 - 106
Hexachlorobenzene	39.6	39.1	F/F	41 - 96.0
Kepone	16.0	19.0	F/F	27 - 179
Lambda-Cyhalothrin	23.1	30.8	P/P	20 - 199
Methoprene	23.4	36.3	F/F	50 - 150
Methoxychlor	68.3	74.2	P/P	61 - 111
MGK-264	57.1	52.9	P/P	20 - 124
Mirex	23.1	23.6	P/P	20 - 199
Oxychlordane	45.4	47.6	F/F	50 - 150
Permethrin	26.4	39.7	F/P	31 - 155
Phenothrin	13.9	23.0	F/P	20 - 100
Piperonyl Butoxide	77.3	83.6	P/P	20 - 144
Prallethrin	37.9	40.6	P/P	20 - 103
Tau-Fluvalinate	9.89	14.1	F/F	24 - 133

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P406047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tetramethrin	43.6	43.7	P/P	20 - 116
Trans-Nonachlor	50.2	50.2	P/P	49 - 105
Triclosan Methyl	65.8	66.4	P/P	60 - 111
Trifluralin	48.0	46.3	F/F	53 - 97.0

Reference Method: EPA 8276
Batch ID: P406047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	70.8	75.0	P/P	56 - 117
Toxaphene	77.9	82.7	P/P	45 - 116

Reference Method: SM 2120 B-2011
Batch ID: P405613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.5		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P405794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.2		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P405771

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285877	Chloride	98.9		P	90 - 110
2286184	Chloride	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285877	Sulfate	101		P	90 - 110
2286184	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P405858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285875	Ammonia-N	98.2	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P405710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285878	NO2NO3-N	97.5	94.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P405630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286038	Total-P	107	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P405624

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285973	O-Phosphate-P	97.4	98.2	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P405591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285134	Acetochlor	103	102	P/P	70 - 121
2285134	Alachlor	88.6	80.1	P/P	70 - 119
2285134	Ametryn	173	171	P/P	45 - 173
2285134	Atrazine Desethyl	87.9	86.6	P/P	35 - 140
2285134	Azinphos Methyl	135	102	P/P	57 - 163
2285134	Azoxystrobin	119	109	P/P	43 - 231
2285134	Bromacil	120	106	P/P	42 - 123
2285134	Butylate	48.8	48.7	P/P	34 - 92.0
2285134	Caffeine	79.1	74.9	P/P	70 - 130
2285134	Carbophenothion	95.0	103	P/P	61 - 121
2285134	Carfentrazone Ethyl	101	113	P/P	62 - 139
2285134	Chlorpyrifos Ethyl	82.8	93.6	P/P	67 - 121
2285134	Chlorpyrifos Methyl	99.3	115	P/P	67 - 120
2285134	Cyanazine	162	127	P/P	20 - 226

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P405591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285134	Demeton	170	185	F/F	35 - 125
2285134	Diazinon	106	107	P/P	70 - 128
2285134	Difenoconazole	71.7	73.5	P/P	33 - 222
2285134	Dimethenamid	87.8	83.6	P/P	67 - 119
2285134	Disulfoton	103	101	P/P	49 - 133
2285134	Dithiopyr	93.9	115	P/P	67 - 118
2285134	EPTC	46.0	47.6	P/P	33 - 90.0
2285134	Ethion	85.7	105	P/P	40 - 133
2285134	Ethoprop	93.0	104	P/P	61 - 121
2285134	Fenamiphos	74.8	69.0	P/P	31 - 139
2285134	Fenbuconazole	115	104	P/P	66 - 141
2285134	Fipronil Desulfinyl	95.1	97.3	P/P	49 - 127
2285134	Fluazifop-P-butyl	97.8	101	P/P	63 - 124
2285134	Fludioxonil	81.7	101	P/P	63 - 123
2285134	Flumioxazin	395	410	F/F	38 - 279
2285134	Flutolanil	97.2	93.0	P/P	56 - 131
2285134	Fluxapyroxad	81.7	74.0	P/P	33 - 140
2285134	Fonofos	104	100	P/P	61 - 116
2285134	Hexazinone	96.9	96.4	P/P	55 - 138
2285134	Imazail	188	186	F/F	33 - 143
2285134	Iprodione	135	130	F/F	59 - 118
2285134	Malathion	98.2	99.2	P/P	62 - 138
2285134	Metalaxyl	101	111	P/P	24 - 147
2285134	Metolachlor	82.5	84.4	P/P	68 - 118
2285134	Metribuzin	126	121	P/P	20 - 239
2285134	Mevinphos	96.5	98.7	P/P	46 - 124
2285134	Molinate	61.1	69.5	P/P	46 - 100
2285134	Myclobutanil	97.6	95.9	P/P	32 - 149
2285134	Naled	31.2	32.0	P/P	20 - 113
2285134	Norflurazon	100	99.2	P/P	57 - 127
2285134	Oxadiazon	68.2	66.6	P/P	44 - 125
2285134	Oxyfluorfen	107	128	P/P	69 - 137
2285134	Parathion Ethyl	103	75.8	P/P	70 - 113
2285134	Parathion Methyl	127	125	P/P	59 - 156
2285134	Pendimethalin	97.0	99.6	P/P	59 - 129
2285134	Phorate	73.3	90.3	P/P	46 - 125
2285134	Prodiamine	160	161	F/F	10 - 159
2285134	Prometon	86.6	80.0	P/P	54 - 122
2285134	Prometryn	88.9	90.7	P/P	59 - 129
2285134	Pronamide	87.0	90.9	P/P	65 - 145
2285134	Propiconazole	88.0	86.4	P/P	61 - 126
2285134	Pyriproxyfen	43.1	39.9	P/P	21 - 180
2285134	Simazine	106	89.0	P/P	75 - 128
2285134	Terbufos	129	128	P/P	61 - 131
2285134	Terbuthylazine	107	91.8	P/P	74 - 116

Reference Method: EPA 8270E
Batch ID: P406047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286439	Aldrin	19.9	18.2	P/P	10 - 94.0
2286439	Alpha-BHC	92.9	85.3	P/P	71 - 108

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P406047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286439	Alpha-Chlordane	73.8	64.5	P/P	42 - 115
2286439	Beta-BHC	97.6	101	P/P	56 - 161
2286439	Beta-Cyfluthrin	36.5	32.5	F/F	46 - 190
2286439	Bifenthrin	19.4	20.9	P/P	19 - 126
2286439	Chlorothalonil	107	110	P/P	10 - 262
2286439	Cis-Nonachlor	79.2	67.3	P/P	44 - 112
2286439	Cypermethrin	34.0	32.6	F/F	40 - 178
2286439	Dacthal	99.6	94.4	P/P	60 - 119
2286439	DDD-p,p'	87.8	77.9	P/P	40 - 114
2286439	DDE-p,p'	69.7	62.1	P/P	22 - 125
2286439	DDT-p,p'	72.1	62.2	P/P	39 - 110
2286439	Delta-BHC	99.8	99.0	P/P	64 - 174
2286439	Deltamethrin	33.7	30.0	P/P	10 - 227
2286439	Dichlobenil	77.5	79.9	P/P	20 - 99.0
2286439	Dicofol	69.3	62.1	P/P	43 - 115
2286439	Dieldrin	105	94.4	P/P	31 - 131
2286439	Endosulfan I	86.3	80.6	P/P	52 - 110
2286439	Endosulfan II	75.1	71.2	P/P	53 - 127
2286439	Endosulfan Sulfate	85.9	77.2	P/P	44 - 135
2286439	Endrin	68.3	66.4	P/P	36 - 122
2286439	Endrin Aldehyde	86.0	67.2	P/P	23 - 115
2286439	Endrin Ketone	95.2	87.4	P/P	46 - 147
2286439	Esfenvalerate	26.9	26.4	P/P	25 - 217
2286439	Ethalfuralin	60.6	58.0	P/P	46 - 99.0
2286439	Fenpropathrin	43.8	39.4	P/F	42 - 121
2286439	Gamma-BHC	92.8	88.1	P/P	63 - 131
2286439	Gamma-Chlordane	63.7	55.5	P/P	40 - 108
2286439	Heptachlor	56.4	44.6	P/P	38 - 98.0
2286439	Heptachlor Epoxide	81.1	73.9	P/P	39 - 124
2286439	Hexachlorobenzene	53.0	45.4	P/P	37 - 96.0
2286439	Kepone	22.4	16.9	P/P	10 - 216
2286439	Lambda-Cyhalothrin	23.4	25.1	P/P	21 - 220
2286439	Methoprene	30.9	28.8	F/F	50 - 170
2286439	Methoxychlor	83.6	73.1	P/P	56 - 118
2286439	MGK-264	60.0	59.3	P/P	28 - 125
2286439	Mirex	28.8	27.4	P/P	10 - 203
2286439	Oxychlordane	63.2	54.4	P/P	50 - 170
2286439	Permethrin	32.6	32.6	F/F	42 - 173
2286439	Phenothrin	9.45	6.32	F/F	10 - 140
2286439	Piperonyl Butoxide	86.1	79.5	P/P	10 - 158
2286439	Prallethrin	40.9	38.5	P/P	19 - 119
2286439	Tau-Fluvalinate	19.3	20.5	F/F	27 - 164
2286439	Tetramethrin	45.3	38.5	P/P	16 - 130
2286439	Trans-Nonachlor	63.9	54.4	P/P	43 - 105
2286439	Triclosan Methyl	84.0	80.9	P/P	50 - 113
2286439	Trifluralin	57.2	52.4	P/P	48 - 98.0

Reference Method: EPA 8276

Batch ID: P406047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286447	Chlordane	63.0	63.7	P/P	47 - 128

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P406047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286447	Toxaphene	75.5	85.6	P/P	11 - 163

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2286264	Fluoride	98.7	98.7	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P405771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2285750	Organic Carbon	102		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P405615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285877	Turbidity	6.63	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P406037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285877	Chloride	0.751	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P405858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285875	Ammonia-N	0.380	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P406009

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2287135	Kjeldahl Nitrogen	4.99	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P405710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285878	NO2NO3-N	3.12	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P405630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286038	Total-P	1.36	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P405624

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285973	O-Phosphate-P	0.442	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P405591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285134	Acetochlor	0.747	Spike	P	0 - 30
2285134	Alachlor	10.1	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P405591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285134	Ametryn	1.03	Spike	P	0 - 30
2285134	Atrazine	0.939	Spike	P	0 - 30
2285134	Atrazine Desethyl	1.23	Spike	P	0 - 30
2285134	Azinphos Methyl	27.8	Spike	P	0 - 30
2285134	Azoxystrobin	6.68	Spike	P	0 - 30
2285134	Bromacil	12.0	Spike	P	0 - 30
2285134	Butylate	0.0667	Spike	P	0 - 30
2285134	Caffeine	4.06	Spike	P	0 - 30
2285134	Carbophenothion	7.80	Spike	P	0 - 30
2285134	Carfentrazone Ethyl	10.5	Spike	P	0 - 30
2285134	Chlorpyrifos Ethyl	12.3	Spike	P	0 - 30
2285134	Chlorpyrifos Methyl	14.4	Spike	P	0 - 30
2285134	Cyanazine	24.2	Spike	P	0 - 30
2285134	Demeton	8.65	Spike	P	0 - 30
2285134	Diazinon	0.985	Spike	P	0 - 30
2285134	Difenoconazole	2.49	Spike	P	0 - 30
2285134	Dimethenamid	4.83	Spike	P	0 - 30
2285134	Disulfoton	1.42	Spike	P	0 - 30
2285134	Dithiopyr	20.3	Spike	P	0 - 30
2285134	EPTC	3.39	Spike	P	0 - 30
2285134	Ethion	20.4	Spike	P	0 - 30
2285134	Ethoprop	11.1	Spike	P	0 - 30
2285134	Fenamiphos	8.08	Spike	P	0 - 30
2285134	Fenbuconazole	10.8	Spike	P	0 - 30
2285134	Fipronil	7.24	Spike	P	0 - 30
2285134	Fipronil Desulfinyl	1.38	Spike	P	0 - 30
2285134	Fipronil Sulfide	14.5	Spike	P	0 - 30
2285134	Fipronil Sulfone	4.67	Spike	P	0 - 30
2285134	Fluazifop-P-butyl	3.38	Spike	P	0 - 30
2285134	Fludioxonil	16.4	Spike	P	0 - 30
2285134	Flumioxazin	3.59	Spike	P	0 - 30
2285134	Flutolanil	4.40	Spike	P	0 - 30
2285134	Fluxapyroxad	9.48	Spike	P	0 - 30
2285134	Fonofos	3.56	Spike	P	0 - 30
2285134	Hexazinone	0.547	Spike	P	0 - 30
2285134	Imazalil	0.969	Spike	P	0 - 30
2285134	Iprodione	3.39	Spike	P	0 - 30
2285134	Malathion	0.993	Spike	P	0 - 30
2285134	Metaxyl	10.0	Spike	P	0 - 30
2285134	Metolachlor	2.35	Spike	P	0 - 30
2285134	Metribuzin	4.40	Spike	P	0 - 30
2285134	Mevinphos	2.34	Spike	P	0 - 30
2285134	Molinate	12.7	Spike	P	0 - 30
2285134	Myclobutanil	1.69	Spike	P	0 - 30
2285134	Naled	2.46	Spike	P	0 - 30
2285134	Norflurazon	0.972	Spike	P	0 - 30
2285134	Oxadiazon	2.37	Spike	P	0 - 30
2285134	Oxyfluorfen	17.5	Spike	P	0 - 30
2285134	Parathion Ethyl	30.0	Spike	P	0 - 30
2285134	Parathion Methyl	1.15	Spike	P	0 - 30
2285134	Pendimethalin	2.69	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P405591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285134	Phorate	20.8	Spike	P	0 - 30
2285134	Prodiamine	0.591	Spike	P	0 - 30
2285134	Prometon	6.29	Spike	P	0 - 30
2285134	Prometryn	2.01	Spike	P	0 - 30
2285134	Pronamide	4.39	Spike	P	0 - 30
2285134	Propiconazole	1.19	Spike	P	0 - 30
2285134	Pyriproxyfen	7.78	Spike	P	0 - 30
2285134	Simazine	10.2	Spike	P	0 - 30
2285134	Sulfentrazone	20.8	Spike	P	0 - 30
2285134	Tebuconazole	1.87	Spike	P	0 - 30
2285134	Terbufos	0.683	Spike	P	0 - 30
2285134	Terbuthylazine	15.3	Spike	P	0 - 30
LFB	Acetochlor	1.54	LCS	P	0 - 30
LFB	Alachlor	1.87	LCS	P	0 - 30
LFB	Ametryn	14.4	LCS	P	0 - 30
LFB	Atrazine	3.49	LCS	P	0 - 30
LFB	Atrazine Desethyl	14.3	LCS	P	0 - 30
LFB	Azinphos Methyl	12.8	LCS	P	0 - 30
LFB	Azoxystrobin	13.0	LCS	P	0 - 30
LFB	Bromacil	2.16	LCS	P	0 - 30
LFB	Butylate	16.2	LCS	P	0 - 30
LFB	Caffeine	1.55	LCS	P	0 - 30
LFB	Carbophenothion	5.91	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	1.89	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.47	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.27	LCS	P	0 - 30
LFB	Cyanazine	10.9	LCS	P	0 - 30
LFB	Demeton	16.3	LCS	P	0 - 30
LFB	Diazinon	1.04	LCS	P	0 - 30
LFB	Difenoconazole	8.18	LCS	P	0 - 30
LFB	Dimethenamid	5.80	LCS	P	0 - 30
LFB	Disulfoton	11.7	LCS	P	0 - 30
LFB	Dithiopyr	6.68	LCS	P	0 - 30
LFB	EPTC	26.1	LCS	P	0 - 30
LFB	Ethion	5.01	LCS	P	0 - 30
LFB	Ethoprop	20.1	LCS	P	0 - 30
LFB	Fenamiphos	4.48	LCS	P	0 - 30
LFB	Fenbuconazole	4.61	LCS	P	0 - 30
LFB	Fipronil	3.00	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	3.87	LCS	P	0 - 30
LFB	Fipronil Sulfide	13.3	LCS	P	0 - 30
LFB	Fipronil Sulfone	11.5	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	8.16	LCS	P	0 - 30
LFB	Fludioxonil	2.52	LCS	P	0 - 30
LFB	Flumioxazin	9.75	LCS	P	0 - 30
LFB	Flutolanil	0.0466	LCS	P	0 - 30
LFB	Fluxapyroxad	0.786	LCS	P	0 - 30
LFB	Fonofos	2.24	LCS	P	0 - 30
LFB	Hexazinone	0.818	LCS	P	0 - 30
LFB	Imazalil	6.47	LCS	P	0 - 30
LFB	Iprodione	8.68	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P405591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Malathion	9.43	LCS	P	0 - 30
LFB	Metalaxyl	13.9	LCS	P	0 - 30
LFB	Metolachlor	0.894	LCS	P	0 - 30
LFB	Metribuzin	2.84	LCS	P	0 - 30
LFB	Mevinphos	20.3	LCS	P	0 - 30
LFB	Molinate	11.9	LCS	P	0 - 30
LFB	Myclobutanil	3.10	LCS	P	0 - 30
LFB	Naled	17.5	LCS	P	0 - 30
LFB	Norflurazon	4.90	LCS	P	0 - 30
LFB	Oxadiazon	0.400	LCS	P	0 - 30
LFB	Oxyfluorfen	7.22	LCS	P	0 - 30
LFB	Parathion Ethyl	1.59	LCS	P	0 - 30
LFB	Parathion Methyl	6.82	LCS	P	0 - 30
LFB	Pendimethalin	5.53	LCS	P	0 - 30
LFB	Phorate	28.9	LCS	P	0 - 30
LFB	Prodiamine	0.433	LCS	P	0 - 30
LFB	Prometon	9.07	LCS	P	0 - 30
LFB	Prometryn	6.03	LCS	P	0 - 30
LFB	Pronamide	3.93	LCS	P	0 - 30
LFB	Propiconazole	11.4	LCS	P	0 - 30
LFB	Pyriproxyfen	0.160	LCS	P	0 - 30
LFB	Simazine	6.14	LCS	P	0 - 30
LFB	Sulfentrazone	1.60	LCS	P	0 - 30
LFB	Tebuconazole	4.15	LCS	P	0 - 30
LFB	Terbufos	8.43	LCS	P	0 - 30
LFB	Terbutylazine	1.57	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P406047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286439	Aldrin	9.19	Spike	P	0 - 30
2286439	Alpha-BHC	8.53	Spike	P	0 - 30
2286439	Alpha-Chlordane	13.5	Spike	P	0 - 30
2286439	Beta-BHC	3.17	Spike	P	0 - 30
2286439	Beta-Cyfluthrin	11.5	Spike	P	0 - 30
2286439	Bifenthrin	7.56	Spike	P	0 - 30
2286439	Chlorothalonil	2.29	Spike	P	0 - 50
2286439	Cis-Nonachlor	16.2	Spike	P	0 - 30
2286439	Cypermethrin	4.26	Spike	P	0 - 30
2286439	Dacthal	5.37	Spike	P	0 - 30
2286439	DDD-p,p'	11.9	Spike	P	0 - 30
2286439	DDE-p,p'	11.6	Spike	P	0 - 30
2286439	DDT-p,p'	14.8	Spike	P	0 - 30
2286439	Delta-BHC	0.886	Spike	P	0 - 30
2286439	Deltamethrin	11.6	Spike	P	0 - 30
2286439	Dichlobenil	3.04	Spike	P	0 - 30
2286439	Dicofol	11.0	Spike	P	0 - 30
2286439	Dieldrin	11.0	Spike	P	0 - 30
2286439	Endosulfan I	6.77	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P406047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286439	Endosulfan II	5.31	Spike	P	0 - 30
2286439	Endosulfan Sulfate	10.7	Spike	P	0 - 30
2286439	Endrin	2.79	Spike	P	0 - 30
2286439	Endrin Aldehyde	24.5	Spike	P	0 - 30
2286439	Endrin Ketone	8.58	Spike	P	0 - 30
2286439	Esfenvalerate	2.16	Spike	P	0 - 30
2286439	Ethalfuralin	4.35	Spike	P	0 - 30
2286439	Fenpropathrin	10.5	Spike	P	0 - 30
2286439	Gamma-BHC	5.23	Spike	P	0 - 30
2286439	Gamma-Chlordane	13.8	Spike	P	0 - 30
2286439	Heptachlor	23.3	Spike	P	0 - 30
2286439	Heptachlor Epoxide	8.14	Spike	P	0 - 30
2286439	Hexachlorobenzene	15.5	Spike	P	0 - 30
2286439	Kepone	28.1	Spike	P	0 - 30
2286439	Lambda-Cyhalothrin	6.71	Spike	P	0 - 30
2286439	Methoprene	7.26	Spike	P	0 - 30
2286439	Methoxychlor	13.4	Spike	P	0 - 30
2286439	MGK-264	1.19	Spike	P	0 - 30
2286439	Mirex	5.11	Spike	P	0 - 30
2286439	Oxychlordane	14.9	Spike	P	0 - 30
2286439	Permethrin	0.0838	Spike	P	0 - 30
2286439	Phenothrin	39.6	Spike	F	0 - 30
2286439	Piperonyl Butoxide	7.99	Spike	P	0 - 30
2286439	Prallethrin	6.12	Spike	P	0 - 30
2286439	Tau-Fluvalinate	6.23	Spike	P	0 - 30
2286439	Tetramethrin	16.2	Spike	P	0 - 30
2286439	Trans-Nonachlor	16.1	Spike	P	0 - 30
2286439	Triclosan Methyl	3.85	Spike	P	0 - 30
2286439	Trifluralin	8.72	Spike	P	0 - 30
LFB	Aldrin	32.5	LCS	F	0 - 30
LFB	Alpha-BHC	7.49	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.18	LCS	P	0 - 30
LFB	Beta-BHC	3.01	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	44.5	LCS	F	0 - 30
LFB	Bifenthrin	36.9	LCS	F	0 - 30
LFB	Chlorothalonil	39.8	LCS	P	0 - 50
LFB	Cis-Nonachlor	32.3	LCS	F	0 - 30
LFB	Cypermethrin	33.9	LCS	F	0 - 30
LFB	Dacthal	6.03	LCS	P	0 - 30
LFB	DDD-p,p'	27.3	LCS	P	0 - 30
LFB	DDE-p,p'	2.72	LCS	P	0 - 30
LFB	DDT-p,p'	17.2	LCS	P	0 - 30
LFB	Delta-BHC	9.71	LCS	P	0 - 30
LFB	Deltamethrin	42.6	LCS	F	0 - 30
LFB	Dichlobenil	21.8	LCS	P	0 - 30
LFB	Dicofol	11.8	LCS	P	0 - 30
LFB	Dieldrin	1.22	LCS	P	0 - 30
LFB	Endosulfan I	4.90	LCS	P	0 - 30
LFB	Endosulfan II	1.97	LCS	P	0 - 30
LFB	Endosulfan Sulfate	20.4	LCS	P	0 - 30
LFB	Endrin	4.19	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P406047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endrin Aldehyde	33.5	LCS	F	0 - 30
LFB	Endrin Ketone	19.7	LCS	P	0 - 30
LFB	Esfenvalerate	22.6	LCS	P	0 - 30
LFB	Ethalfuralin	6.84	LCS	P	0 - 30
LFB	Fenpropathrin	15.6	LCS	P	0 - 30
LFB	Gamma-BHC	5.53	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.76	LCS	P	0 - 30
LFB	Heptachlor	0.506	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.75	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.33	LCS	P	0 - 30
LFB	Kepone	16.7	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	28.7	LCS	P	0 - 30
LFB	Methoprene	43.1	LCS	F	0 - 30
LFB	Methoxychlor	8.30	LCS	P	0 - 30
LFB	MGK-264	7.54	LCS	P	0 - 30
LFB	Mirex	2.28	LCS	P	0 - 30
LFB	Oxychlordane	4.57	LCS	P	0 - 30
LFB	Permethrin	40.2	LCS	F	0 - 30
LFB	Phenothrin	49.2	LCS	F	0 - 30
LFB	Piperonyl Butoxide	7.81	LCS	P	0 - 30
LFB	Prallethrin	6.70	LCS	P	0 - 30
LFB	Tau-Fluvalinate	35.4	LCS	F	0 - 30
LFB	Tetramethrin	0.265	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.0716	LCS	P	0 - 30
LFB	Triclosan Methyl	0.896	LCS	P	0 - 30
LFB	Trifluralin	3.51	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P406047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286447	Chlordane	1.11	Spike	P	0 - 30
2286447	Toxaphene	12.4	Spike	P	0 - 30
LFB	Chlordane	5.75	LCS	P	0 - 30
LFB	Toxaphene	5.98	LCS	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P405613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285913	Color (true)	1.54	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P405794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286264	Total Alkalinity	0.0802	Sample	P	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P406283

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285874	TDS	1.09	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P405796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2286264	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P405771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2285750	Organic Carbon	0.801	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2285935
Field Sample ID: G4CE0167

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	65.0	P	29 - 123
EPA 8270E	Tetrachloro-m-xylene	53.9	P	24 - 97.0
EPA 8276	Decachlorobiphenyl	63.7	P	29 - 92.0
EPA 8276	PCNB	65.9	P	43 - 134

Lab Sample ID: 2285936
Field Sample ID: G4CE0167

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	73.0	P	20 - 200
EPA 8270E	Simazine-d10	125	P	73 - 135
EPA 8270E	Terbufos-d10	113	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A108543

Included Lab Sample IDs: 2285930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	99.2	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A108544

Included Lab Sample IDs: 2285930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A108546

Included Lab Sample IDs: 2285932

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A108585

Included Lab Sample IDs: 2285931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A108587

Included Lab Sample IDs: 2285931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A108621

Included Lab Sample IDs: 2285931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.0	94.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A108642

Included Lab Sample IDs: 2285930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.8	97.4	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A108642

Included Lab Sample IDs: 2285930

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A108662

Included Lab Sample IDs: 2285931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.3	97.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A108732

Included Lab Sample IDs: 2285936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	110		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	96.6		P	80 - 120
Atrazine	104		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	112		P	80 - 120
Azoxystrobin	103		P	80 - 120
Bromacil	106		P	80 - 120
Butylate	107		P	80 - 120
Caffeine	85.5		P	80 - 120
Carbophenothion	105		P	80 - 120
Carfentrazone Ethyl	107		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	112		P	80 - 120
Cyanazine	115		P	80 - 120
Demeton	92.3		P	80 - 120
Diazinon	106		P	80 - 120
Dimethenamid	114		P	80 - 120
Disulfoton	97.7		P	80 - 120
Dithiopyr	109		P	80 - 120
EPTC	102		P	80 - 120
Ethion	109		P	80 - 120
Ethoprop	103		P	80 - 120
Fenamiphos	102		P	80 - 120
Fenbuconazole	110		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	110		P	80 - 120
Fipronil Sulfide	110		P	80 - 120
Fluazifop-P-butyl	106		P	80 - 120
Fludioxonil	114		P	80 - 120
Flutolanil	106		P	80 - 120
Fonofos	106		P	80 - 120
Hexazinone	104		P	80 - 120
Imazalil	104		P	80 - 120
Iprodione	103		P	80 - 120
Malathion	111		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	87.9		P	80 - 120
Mevinphos	109		P	80 - 120
Molinate	107		P	80 - 120
Myclobutanil	104		P	80 - 120
Naled	111		P	80 - 120
Norflurazon	109		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A108732
Included Lab Sample IDs: 2285936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxadiazon	106		P	80 - 120
Oxyfluorfen	120		P	80 - 120
Parathion Ethyl	117		P	80 - 120
Parathion Methyl	114		P	80 - 120
Pendimethalin	96.8		P	80 - 120
Phorate	108		P	80 - 120
Prometon	106		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	106		P	80 - 120
Propiconazole	111		P	80 - 120
Pyriproxyfen	105		P	80 - 120
Simazine	106		P	80 - 120
Sulfentrazone	102		P	80 - 120
Tebuconazole	109		P	80 - 120
Terbufos	104		P	80 - 120
Terbutylazine	106		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A108733
Included Lab Sample IDs: 2285930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.6	99.9	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A108736
Included Lab Sample IDs: 2285936

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Difenoconazole	107		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Flumioxazin	89.7		P	80 - 120
Fluxapyroxad	100		P	80 - 120
Prodiamine	97.6		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A108742
Included Lab Sample IDs: 2285931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A108746
Included Lab Sample IDs: 2285935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	98.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A108746
Included Lab Sample IDs: 2285935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beta-BHC	104		P	80 - 120
Beta-Cyfluthrin	97.5		P	80 - 120
Bifenthrin	103		P	80 - 120
Chlorothalonil	94.0		P	80 - 120
Cis-Nonachlor	96.2		P	80 - 120
Cypermethrin	99.0		P	80 - 120
Dacthal	98.6		P	80 - 120
DDD-p,p'	96.2		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	98.5		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	94.2		P	80 - 120
Dichlobenil	98.4		P	80 - 120
Dicofol	100		P	80 - 120
Dieldrin	103		P	80 - 120
Endosulfan I	95.2		P	80 - 120
Endosulfan II	105		P	80 - 120
Endosulfan Sulfate	92.0		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	94.5		P	80 - 120
Endrin Ketone	100		P	80 - 120
Esfenvalerate	95.1		P	80 - 120
Ethalfuralin	97.9		P	80 - 120
Fenpropathrin	95.3		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	98.3		P	80 - 120
Kepone	47.0*		F	80 - 120
Lambda-Cyhalothrin	95.4		P	80 - 120
Methoprene	99.0		P	80 - 120
Methoxychlor	103		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	102		P	80 - 120
Oxychlordane	99.0		P	80 - 120
Permethrin	99.0		P	80 - 120
Phenothrin	93.2		P	80 - 120
Piperonyl Butoxide	102		P	80 - 120
Prallethrin	95.5		P	80 - 120
Tau-Fluvalinate	93.4		P	80 - 120
Tetramethrin	101		P	80 - 120
Trans-Nonachlor	102		P	80 - 120
Triclosan Methyl	99.9		P	80 - 120
Trifluralin	96.0		P	80 - 120

Reference Method: EPA 8276
Run ID: A108796
Included Lab Sample IDs: 2285935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A108796

Included Lab Sample IDs: 2285935

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.7		P	80 - 120
Toxaphene	108		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	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						6.63	
EPA 300.0 Rev. 2.1	Chloride	99.3		98.9	97.5		0.751	
	Sulfate	99.8		101	100			
EPA 350.1 Rev. 2.0	Ammonia-N	99.0		98.2	97.8			0.380
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.7						4.99
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5		97.5	94.5			3.12
EPA 365.1 Rev. 2.0	Total-P	103		107	105			1.36
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1		97.4	98.2			0.442
EPA 8270E	Acetochlor	89.2	87.9	103	102	1.54		0.747
	Alachlor	115	117	88.6	80.1	1.87		10.1
	Aldrin	21.7	15.6	19.9	18.2	32.5		9.19
	Alpha-BHC	77.7	83.8	92.9	85.3	7.49		8.53
	Alpha-Chlordane	53.7	55.4	73.8	64.5	3.18		13.5
	Ametryn	119	103	173	171	14.4		1.03
	Atrazine	99.5	103			3.49		0.939
	Atrazine Desethyl	81.9	94.6	87.9	86.6	14.3		1.23
	Azinphos Methyl	62.8	55.2	135	102	12.8		27.8
	Azoxystrobin	94.8	108	119	109	13.0		6.68
	Beta-BHC	90.8	93.6	97.6	101	3.01		3.17
	Beta-Cyfluthrin	24.0	37.7	36.5	32.5	44.5		11.5
	Bifenthrin	19.6	28.5	19.4	20.9	36.9		7.56
	Bromacil	122	119	120	106	2.16		12.0
	Butylate	52.4	61.7	48.8	48.7	16.2		0.0667
	Caffeine	73.7	72.6	79.1	74.9	1.55		4.06
	Carbophenothion	109	116	95.0	103	5.91		7.80
	Carfentrazone Ethyl	136	133	101	113	1.89		10.5
	Chlorothalonil	77.1	115	107	110	39.8		2.29
	Chlorpyrifos Ethyl	100	98.0	82.8	93.6	2.47		12.3
	Chlorpyrifos Methyl	107	111	99.3	115	3.27		14.4
	Cis-Nonachlor	48.5	67.1	79.2	67.3	32.3		16.2
	Cyanazine	174	156	162	127	10.9		24.2
	Cypermethrin	23.8	33.5	34.0	32.6	33.9		4.26
	Dacthal	91.1	96.8	99.6	94.4	6.03		5.37
	DDD-p,p'	58.0	76.3	87.8	77.9	27.3		11.9
	DDE-p,p'	52.4	53.8	69.7	62.1	2.72		11.6
	DDT-p,p'	52.5	62.4	72.1	62.2	17.2		14.8
	Delta-BHC	88.4	97.4	99.8	99.0	9.71		0.886
	Deltamethrin	22.0	34.0	33.7	30.0	42.6		11.6
	Demeton	82.8	97.5	170	185	16.3		8.65
	Diazinon	88.1	87.2	106	107	1.04		0.985
	Dichlobenil	60.6	75.3	77.5	79.9	21.8		3.04
	Dicofol	58.5	65.9	69.3	62.1	11.8		11.0
	Dieldrin	65.0	65.8	105	94.4	1.22		11.0
	Difenoconazole	71.3	65.7	71.7	73.5	8.18		2.49
	Dimethenamid	102	96.0	87.8	83.6	5.80		4.83
	Disulfoton	96.8	109	103	101	11.7		1.42
	Dithiopyr	109	102	93.9	115	6.68		20.3
	Endosulfan I	65.5	68.8	86.3	80.6	4.90		6.77
	Endosulfan II	66.9	68.3	75.1	71.2	1.97		5.31
	Endosulfan Sulfate	65.9	80.8	85.9	77.2	20.4		10.7
	Endrin	61.6	59.1	68.3	66.4	4.19		2.79
	Endrin Aldehyde	53.6	75.1	86.0	67.2	33.5		24.5
	Endrin Ketone	75.0	91.5	95.2	87.4	19.7		8.58
	EPTC	54.5	70.9	46.0	47.6	26.1		3.39

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Esfenvalerate	22.5	28.3	26.9	26.4	22.6	2.16
	Ethalfuralin	50.7	47.4	60.6	58.0	6.84	4.35
	Ethion	99.9	105	85.7	105	5.01	20.4
	Ethoprop	83.0	102	93.0	104	20.1	11.1
	Fenamiphos	104	109	74.8	69.0	4.48	8.08
	Fenbuconazole	141	148	115	104	4.61	10.8
	Fenpropathrin	35.4	41.4	43.8	39.4	15.6	10.5
	Fipronil	79.9	82.3			3.00	7.24
	Fipronil Desulfinyl	92.8	89.3	95.1	97.3	3.87	1.38
	Fipronil Sulfide	94.4	108			13.3	14.5
	Fipronil Sulfone	101	114			11.5	4.67
	Fluazifop-P-butyl	124	114	97.8	101	8.16	3.38
	Fludioxonil	81.7	83.8	81.7	101	2.52	16.4
	Flumioxazin	322	355	395	410	9.75	3.59
	Flutolanil	119	120	97.2	93.0	0.0466	4.40
	Fluxapyroxad	103	102	81.7	74.0	0.786	9.48
	Fonofos	88.0	90.0	104	100	2.24	3.56
	Gamma-BHC	81.1	85.7	92.8	88.1	5.53	5.23
	Gamma-Chlordane	45.6	47.3	63.7	55.5	3.76	13.8
	Heptachlor	38.4	38.2	56.4	44.6	0.506	23.3
	Heptachlor Epoxide	62.4	65.4	81.1	73.9	4.75	8.14
	Hexachlorobenzene	39.6	39.1	53.0	45.4	1.33	15.5
	Hexazinone	101	101	96.9	96.4	0.818	0.547
	Imazalil	114	121	188	186	6.47	0.969
	Iprodione	146	160	135	130	8.68	3.39
	Kepone	16.0	19.0	22.4	16.9	16.7	28.1
	Lambda-Cyhalothrin	23.1	30.8	23.4	25.1	28.7	6.71
	Malathion	108	119	98.2	99.2	9.43	0.993
	Metalaxyl	117	102	101	111	13.9	10.0
	Methoprene	23.4	36.3	30.9	28.8	43.1	7.26
	Methoxychlor	68.3	74.2	83.6	73.1	8.30	13.4
	Metolachlor	112	113	82.5	84.4	0.894	2.35
	Metribuzin	99.4	102	126	121	2.84	4.40
	Mevinphos	81.0	99.3	96.5	98.7	20.3	2.34
	MGK-264	57.1	52.9	60.0	59.3	7.54	1.19
	Mirex	23.1	23.6	28.8	27.4	2.28	5.11
	Molinate	63.8	71.8	61.1	69.5	11.9	12.7
	Myclobutanil	118	114	97.6	95.9	3.10	1.69
	Naled	34.2	40.8	31.2	32.0	17.5	2.46
	Norflurazon	118	113	100	99.2	4.90	0.972
	Oxadiazon	103	103	68.2	66.6	0.400	2.37
	Oxychlordane	45.4	47.6	63.2	54.4	4.57	14.9
	Oxyfluorfen	133	124	107	128	7.22	17.5
	Parathion Ethyl	105	107	103	75.8	1.59	30.0
	Parathion Methyl	115	123	127	125	6.82	1.15
	Pendimethalin	97.1	91.8	97.0	99.6	5.53	2.69
	Permethrin	26.4	39.7	32.6	32.6	40.2	0.0838
	Phenothrin	13.9	23.0	9.45	6.32	49.2	39.6
	Phorate	72.8	97.3	73.3	90.3	28.9	20.8
	Piperonyl Butoxide	77.3	83.6	86.1	79.5	7.81	7.99
	Prallethrin	37.9	40.6	40.9	38.5	6.70	6.12
	Prodiamine	143	142	160	161	0.433	0.591
	Prometon	87.4	95.7	86.6	80.0	9.07	6.29
	Prometryn	123	116	88.9	90.7	6.03	2.01

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Pronamide	112	108	87.0	90.9	3.93		4.39
	Propiconazole	118	105	88.0	86.4	11.4		1.19
	Pyriproxyfen	47.0	46.9	43.1	39.9	0.160		7.78
	Simazine	106	99.6	106	89.0	6.14		10.2
	Sulfentrazone	125	123			1.60		20.8
	Tau-Fluvalinate	9.89	14.1	19.3	20.5	35.4		6.23
	Tebuconazole	98.4	94.5			4.15		1.87
	Terbufos	105	114	129	128	8.43		0.683
	Terbutylazine	101	102	107	91.8	1.57		15.3
	Tetramethrin	43.6	43.7	45.3	38.5	0.265		16.2
	Trans-Nonachlor	50.2	50.2	63.9	54.4	0.0716		16.1
	Triclosan Methyl	65.8	66.4	84.0	80.9	0.896		3.85
	Trifluralin	48.0	46.3	57.2	52.4	3.51		8.72
	Chlordane	70.8	75.0	63.0	63.7	5.75		1.11
EPA 8276	Toxaphene	77.9	82.7	75.5	85.6	5.98		12.4
SM 2120 B-2011	Color (true)	98.5					1.54	
SM 2320 B-2011	Total Alkalinity	99.2					0.0802	
SM 2540 C-2011	TDS						1.09	
SM 4500 F-C-2011	Fluoride	100		98.7	98.7			0.0
SM 5310 B-2011	Organic Carbon	96.0		102				0.801

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2285930
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2285930
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2285930
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2285931
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2285931
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2285931
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2285931
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2285932
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2285935
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2285936
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2285935
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2285930
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2285930
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2285930
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2285930
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2285930
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2285931

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	10/26/2021			10/26/2021 15:00	Khloe J Berg	2285930
EPA 300.0 Rev. 2.1	10/26/2021			11/03/2021 17:32	Roberta Tatti	2285930
EPA 350.1 Rev. 2.0	10/26/2021			11/02/2021 12:05	Ping Hua	2285931
EPA 351.2 Rev. 2.0	10/26/2021	11/04/2021 12:46	Benjamin T. Nordmann	11/05/2021 10:58	Alexandra J Mattheus	2285931
EPA 353.2 Rev. 2.0	10/26/2021			10/28/2021 10:53	Beverly Y. Sanders	2285931
EPA 365.1 Rev. 2.0	10/26/2021	10/27/2021 15:15	Simonne.V. Calhoun	10/28/2021 10:59	Lipi Saha	2285931
EPA 365.1 Rev. 2.0 dissolved	10/26/2021			10/26/2021 16:46	James L Waggerby	2285932
EPA 8270E	10/26/2021	10/27/2021 08:30	Rasheda Ghaffari	10/31/2021 08:21	Michael Poppell	2285936
	10/26/2021	10/27/2021 08:30	Rasheda Ghaffari	11/01/2021 00:28	Michael Poppell	2285936
	10/26/2021	10/29/2021 09:00	Julie Wi	11/05/2021 12:35	Arthur Maknenko	2285935
EPA 8276	10/26/2021	10/29/2021 09:00	Julie Wi	11/07/2021 02:30	Michael Poppell	2285935
SM 2120 B-2011	10/26/2021			10/26/2021 16:23	Sarah A Nixon	2285930
SM 2320 B-2011	10/26/2021			10/28/2021 23:11	Dale L. Simmons	2285930
SM 2540 C-2011	10/26/2021			11/01/2021 09:28	Yijie Li	2285930
SM 2540 D-2011	10/26/2021			11/01/2021 09:28	Yijie Li	2285930
SM 4500 F-C-2011	10/26/2021			10/28/2021 23:11	Dale L. Simmons	2285930
SM 5310 B-2011	10/26/2021			10/28/2021 07:27	Khloe J Berg	2285931