

Chemical Analysis Report

CEN-DIST-2020-09-25-01

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

Event Description: **Lake Leonore**
Request ID: **RQ-2020-09-14-40**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 14-OCT-2020 09:59

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: 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: Lake Leonore @ Center

Collection Date/Time: 09/24/2020 11:10

Field ID: G4CE0184

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes		
2198231	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P387873			
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P388092			
		Sulfate	54		mg SO4/L	P388096			
	SM 2120 B-2011	Color (true)	17		PCU	P387875			
	SM 2320 B-2011	Total Alkalinity	44	A	mg CaCO3/L	P388087			
	SM 2540 C-2011	TDS	191		mg/L	P388198			
	SM 2540 D-2011	TSS	11		mg/L	P388201			
	SM 4500 F-C-2011	Fluoride	0.075	I	mg F/L	P388090			
2198232	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P387893			
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P387980			
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P387913			
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P388276	MS		
	SM 5310 B-2011	Organic Carbon	5.7		mg C/L	P387983			
2198233	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P387881			
2198239	EPA 8321B	Aldicarb	0.020	U	ug/L	P387915			
		Aldicarb Sulfone	0.0023	I	ug/L	P387915			
		Aldicarb Sulfoxide	0.0020	U	ug/L	P387915			
		Carbaryl	0.0020	U	ug/L	P387915			
		Carbofuran	0.0020	U	ug/L	P387915			
		3-Hydroxycarbofuran	0.0020	U	ug/L	P387915			
		Methiocarb	0.0020	U	ug/L	P387915			
		Methomyl	0.0020	U	ug/L	P387915			
		Oxamyl	0.0020	U	ug/L	P387915			
		Propoxur	0.0020	U	ug/L	P387915			
		2198240		2,4-D	0.0020	U	ug/L	P388044	
				Acesulfame K**	0.10	U	ug/L	P387903	MS
				AMPA**	0.10	U	ug/L	P387903	
				Sucralose**	0.010	U	ug/L	P387903	
Acetaminophen**	0.0080			U	ug/L	P388044			
Acetamiprid**	0.0020			U	ug/L	P388044			
Endothall**	0.25			U	ug/L	P387903			
Glufosinate**	0.10			U	ug/L	P387903			
Glyphosate**	0.10			U	ug/L	P387903			
Afidopyropen**	0.0020			U	ug/L	P388044			
Bentazon	8.0E-04			U	ug/L	P388044			
Benzovindiflupyr**	0.0020			U	ug/L	P388044			
Carbamazepine**	8.0E-04			U	ug/L	P388044			
Clothianidin**	0.010				ug/L	P388044			
Dinotefuran**	0.0020	U	ug/L	P388044					
Diuron	0.0060	I	ug/L	P388044					
Fenuron	0.016	U	ug/L	P388044					
Fluridone**	8.0E-04	U	ug/L	P388044					
	Imazapyr**	0.0040	U	ug/L	P388044				

Field ID: G4CE0184

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2198240	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P388044	
		Ibuprofen**	0.020	U	ug/L	P388044	
		Imidacloprid	0.13		ug/L	P388044	
		Linuron	0.0040	U	ug/L	P388044	
		Mandestrobin**	0.0020	U	ug/L	P388044	
		MCP	0.0020	U	ug/L	P388044	
		Naproxen**	0.0080	U	ug/L	P388044	
		Primidone**	0.0040	U	ug/L	P388044	
		Pyraclostrobin**	0.0020	U	ug/L	P388044	
		Thiamethoxam**	0.024		ug/L	P388044	
		Tolfenpyrad**	0.0020	U	ug/L	P388044	
		Triclopyr**	0.0040	U	ug/L	P388044	
2198241	EPA 8270E	Aldrin	4.3	U	ng/L	P387866	
		Alpha-BHC	2.1	U	ng/L	P387866	
		Alpha-Chlordane	1.1	U	ng/L	P387866	
		Beta-BHC	8.6	U	ng/L	P387866	
		Beta-Cyfluthrin**	16	U	ng/L	P387866	
		Bifenthrin**	4.3	U	ng/L	P387866	
		Delta-BHC	8.6	U	ng/L	P387866	
		Gamma-BHC	8.6	U	ng/L	P387866	
		Chlorothalonil	2.1	U	ng/L	P387866	
		Cis-Nonachlor**	1.1	U	ng/L	P387866	
		Cypermethrin	21	U	ng/L	P387866	
		Dacthal**	1.1	U	ng/L	P387866	
		DDD-p,p'	5.4	U	ng/L	P387866	
		DDE-p,p'	5.4	U	ng/L	P387866	
		DDT-p,p'	6.4	U	ng/L	P387866	RPD
		Deltamethrin**	21	U	ng/L	P387866	
		Dicofol	32	U	ng/L	P387866	
		Dieldrin	4.3	U	ng/L	P387866	
		Endosulfan I	4.3	U	ng/L	P387866	
		Endosulfan II	4.3	U	ng/L	P387866	
		Endosulfan Sulfate	2.1	U	ng/L	P387866	
		Endrin	2.1	U	ng/L	P387866	
		Endrin Aldehyde	2.1	U	ng/L	P387866	RPD
		Endrin Ketone	2.1	U	ng/L	P387866	
		Ethalfuralin**	3.2	U	ng/L	P387866	
		Gamma-Chlordane	1.1	U	ng/L	P387866	
		Dichlobenil**	2.1	U	ng/L	P387866	
		Esfenvalerate**	21	U	ng/L	P387866	
		Fenpropathrin**	11	U	ng/L	P387866	
		Heptachlor	1.6	U	ng/L	P387866	
		Heptachlor Epoxide	2.1	U	ng/L	P387866	
		Hexachlorobenzene	2.1	U	ng/L	P387866	
		Lambda-Cyhalothrin**	16	U	ng/L	P387866	

Field ID: G4CE0184

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2198241	EPA 8270E	Methoxychlor	4.3	U	ng/L	P387866	
		Mirex	2.1	U	ng/L	P387866	
		MGK-264**	3.2	U	ng/L	P387866	
		Permethrin	11	U	ng/L	P387866	
		Phenothrin**	32	U	ng/L	P387866	
		Piperonyl Butoxide**	1.6	U	ng/L	P387866	
		Prallethrin**	27	U	ng/L	P387866	
		Tau-Fluvalinate**	3.7	U	ng/L	P387866	
		Tetramethrin**	8.6	U	ng/L	P387866	
		Trans-Nonachlor**	1.1	U	ng/L	P387866	
		Triclosan Methyl**	1.1	U	ng/L	P387866	
		Trifluralin	2.7	U	ng/L	P387866	
		Chlordane	5.4	U	ng/L	P387866	
		Toxaphene	32	UJ	ng/L	P387866	CCV, MS
2198242	EPA 8270E	Acetochlor	0.25	U	ng/L	P387774	
		Alachlor	0.25	U	ng/L	P387774	
		Ametryn	0.59	U	ng/L	P387774	
		Atrazine	0.65	I	ng/L	P387774	
		Atrazine Desethyl	1.5	U	ng/L	P387774	
		Azinphos Methyl	2.0	UJ	ng/L	P387774	RPD
		Bromacil	300		ng/L	P387774	
		Butylate	0.40	U	ng/L	P387774	
		Carbophenothion	0.50	U	ng/L	P387774	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P387774	
		Chlorpyrifos Methyl	0.050	U	ng/L	P387774	
		Cyanazine	3.2	U	ng/L	P387774	
		Demeton	1.5	U	ng/L	P387774	
		Diazinon	0.12	U	ng/L	P387774	
		Dimethenamid**	0.099	U	ng/L	P387774	
		Disulfoton	0.50	U	ng/L	P387774	
		Dithiopyr**	0.099	UJ	ng/L	P387774	LCS, MS
		EPTC	1.2	U	ng/L	P387774	
		Ethion	0.15	U	ng/L	P387774	
		Ethoprop	0.099	U	ng/L	P387774	
		Fenamiphos	0.50	U	ng/L	P387774	
		Fipronil	0.25	U	ng/L	P387774	
		Fipronil Desulfinyll**	0.12	U	ng/L	P387774	
		Fipronil Sulfide	0.15	U	ng/L	P387774	
		Fipronil Sulfone	0.15	U	ng/L	P387774	
		Flumioxazin**	1.7	UJ	ng/L	P387774	RPD
		Fonofos	0.20	U	ng/L	P387774	
		Hexazinone	0.50	U	ng/L	P387774	
		Imazalil**	0.74	U	ng/L	P387774	
		Malathion	0.35	U	ng/L	P387774	
		Metalaxyl	67		ng/L	P387774	

Field ID: G4CE0184

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2198242	EPA 8270E	Metolachlor	0.50	U	ng/L	P387774	
		Metribuzin	3.2	U	ng/L	P387774	
		Mevinphos	0.50	U	ng/L	P387774	
		Molinate	0.30	U	ng/L	P387774	
		Naled**	1.5	U	ng/L	P387774	
		Norflurazon	690		ng/L	P387774	
		Oxadiazon	0.099	U	ng/L	P387774	
		Parathion Ethyl	0.25	U	ng/L	P387774	
		Parathion Methyl	0.54	U	ng/L	P387774	
		Pendimethalin	0.99	U	ng/L	P387774	
		Phorate	0.25	U	ng/L	P387774	
		Prodiamine**	0.17	UJ	ng/L	P387774	RPD
		Prometon	0.89	U	ng/L	P387774	
		Prometryn	0.20	U	ng/L	P387774	
		Pronamide**	0.15	U	ng/L	P387774	
		Propiconazole**	0.50	U	ng/L	P387774	
		Simazine	5.3		ng/L	P387774	
		Sulfentrazone**	0.50	U	ng/L	P387774	
		Tebuconazole**	0.50	U	ng/L	P387774	
		Terbufos	0.099	U	ng/L	P387774	
		Terbuthylazine	0.42	U	ng/L	P387774	
2198243	EPA 200.7 Rev. 4.4	Barium	34.1		ug/L	P387933	
		Calcium	24.7		mg/L	P387933	
		Iron	32	I	ug/L	P387933	
		Magnesium	13.3		mg/L	P387933	
		Potassium	16.8		mg/L	P387933	
		Sodium	6.3		mg/L	P387933	
		Zinc	5.0	U	ug/L	P387933	
	EPA 200.8 Rev. 5.4	Aluminum	54		ug/L	P387933	
		Antimony	0.050	U	ug/L	P387933	
		Arsenic	0.18	I	ug/L	P387933	
		Boron**	54.6		ug/L	P387933	
		Cadmium	0.023	I	ug/L	P387933	
		Chromium	0.40	U	ug/L	P387933	
		Copper	0.48	I	ug/L	P387933	
		Lead	0.20	U	ug/L	P387933	
		Nickel	0.50	U	ug/L	P387933	
		Selenium	0.30	I	ug/L	P387933	
		Silver	0.010	U	ug/L	P387933	
		Thallium	0.10	U	ug/L	P387933	
		Hardness	117		mg/L	P387933	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 8276: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: 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: P387873

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387933

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387933

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	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 300.0 Rev. 2.1
Batch ID: P388092

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388096

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387893

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387980

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387913

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388276

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387881

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

Reference Method: EPA 8270E
Batch ID: P387774

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Flumioxazin	1.8	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P387774

Component	Result	Code	Units
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270E
Batch ID: P387866

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L
Beta-Cyfluthrin	15	U	ng/L
Bifenthrin	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
Dichlobenil	2.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P387866

Component	Result	Code	Units
Endrin Ketone	2.0	U	ng/L
Esfenvalerate	20	U	ng/L
Ethalfuralin	3.0	U	ng/L
Fenpropathrin	10	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
MGK-264	3.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Piperonyl Butoxide	1.5	U	ng/L
Prallethrin	25	U	ng/L
Tau-Fluvalinate	3.5	U	ng/L
Tetramethrin	8.0	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Triclosan Methyl	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P387866

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

Reference Method: EPA 8321B
Batch ID: P387903

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: EPA 8321B
Batch ID: P387915

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P387915

Component	Result	Code	Units
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P388044

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

Reference Method: SM 2120 B-2011
Batch ID: P387875

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P388087

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

Reference Method: SM 2540 C-2011
Batch ID: P388198

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P388201

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P388090

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387983

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: P387933

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	103		P	85 - 115
Iron	103		P	85 - 115
Magnesium	100		P	85 - 115
Potassium	103		P	85 - 115
Sodium	99.5		P	85 - 115
Zinc	91.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387933

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.4		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	101		P	85 - 115
Boron	95.2		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	100		P	85 - 115
Copper	100		P	85 - 115
Lead	99.7		P	85 - 115
Nickel	100		P	85 - 115
Selenium	103		P	85 - 115
Silver	103		P	85 - 115
Thallium	97.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388092

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388096

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387893

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: P387980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.8		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387913

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388276

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: P387881

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

Reference Method: EPA 8270E
Batch ID: P387774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	81.4	75.9	P/P	71 - 122
Alachlor	75.8	71.0	P/P	70 - 121
Ametryn	97.1	85.6	P/P	49 - 137
Atrazine	93.8	80.9	P/P	76 - 125
Atrazine Desethyl	76.7	74.7	P/P	31 - 144
Azinphos Methyl	70.1	143	P/P	67 - 150
Bromacil	76.4	69.2	P/P	36 - 121
Butylate	62.3	58.1	P/P	33 - 88.0
Carbophenothion	89.5	85.9	P/P	66 - 116
Chlorpyrifos Ethyl	87.3	85.2	P/P	73 - 117
Chlorpyrifos Methyl	102	92.4	P/P	68 - 121
Cyanazine	91.8	88.7	P/P	20 - 250
Demeton	86.5	82.6	P/P	30 - 123
Diazinon	89.5	79.6	P/P	70 - 128
Dimethenamid	80.2	72.5	P/P	66 - 122
Disulfoton	93.5	81.8	P/P	46 - 124
Dithiopyr	75.5	68.4	P/F	69 - 122
EPTC	53.7	55.5	P/P	31 - 90.0
Ethion	81.8	82.9	P/P	45 - 135
Ethoprop	94.8	82.0	P/P	59 - 118
Fenamiphos	78.2	73.0	P/P	30 - 136
Fipronil	82.6	74.3	P/P	57 - 127
Fipronil Desulfinyl	82.2	73.8	P/P	51 - 122
Fipronil Sulfide	80.5	74.2	P/P	57 - 119
Fipronil Sulfone	81.8	76.0	P/P	51 - 119
Flumioxazin	103	60.6	P/P	20 - 250
Fonofos	95.1	84.7	P/P	60 - 120
Hexazinone	85.7	80.5	P/P	57 - 142
Imazalil	55.1	52.7	P/P	30 - 139
Malathion	109	102	P/P	67 - 128
Metaxyl	77.2	69.4	P/P	21 - 148
Metolachlor	74.5	70.5	P/P	70 - 120
Metribuzin	101	99.1	P/P	20 - 250
Mevinphos	97.5	81.9	P/P	47 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P387774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molinate	65.2	61.6	P/P	41 - 99.0
Naled	49.7	45.2	P/P	38 - 97.0
Norflurazon	73.1	66.2	P/P	54 - 127
Oxadiazon	73.3	68.1	P/P	65 - 122
Parathion Ethyl	87.4	79.4	P/P	71 - 113
Parathion Methyl	111	98.2	P/P	73 - 129
Pendimethalin	70.8	71.2	P/P	63 - 130
Phorate	109	115	P/P	48 - 118
Prodiamine	34.8	65.9	P/P	20 - 144
Prometon	86.8	73.1	P/P	53 - 120
Prometryn	84.5	80.7	P/P	63 - 119
Pronamide	92.3	82.9	P/P	81 - 122
Propiconazole	72.9	65.5	P/P	62 - 124
Simazine	98.3	88.6	P/P	77 - 129
Sulfentrazone	56.3	51.0	P/P	20 - 137
Tebuconazole	27.9	26.6	P/P	20 - 118
Terbufos	90.0	84.9	P/P	61 - 119
Terbutylazine	87.1	79.6	P/P	75 - 119

Reference Method: EPA 8270E

Batch ID: P387866

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	42.0	40.6	P/P	20 - 87.0
Alpha-BHC	76.4	79.6	P/P	65 - 142
Alpha-Chlordane	81.3	79.7	P/P	58 - 106
Beta-BHC	84.3	85.6	P/P	65 - 179
Beta-Cyfluthrin	71.7	76.6	P/P	39 - 153
Bifenthrin	75.7	75.3	P/P	38 - 128
Chlorothalonil	52.5	53.2	P/P	20 - 214
Cis-Nonachlor	82.6	80.6	P/P	56 - 113
Cypermethrin	75.1	74.1	P/P	37 - 130
Dacthal	87.8	86.5	P/P	75 - 109
DDD-p,p'	85.7	82.6	P/P	66 - 119
DDE-p,p'	79.0	78.1	P/P	53 - 108
DDT-p,p'	85.9	85.0	P/P	57 - 133
Delta-BHC	97.1	102	P/P	68 - 187
Deltamethrin	84.0	81.5	P/P	50 - 200
Dichlobenil	72.5	74.0	P/P	25 - 140
Dicofol	99.8	80.8	P/P	66 - 123
Dieldrin	86.0	83.6	P/P	65 - 111
Endosulfan I	84.4	80.0	P/P	65 - 115
Endosulfan II	106	92.3	P/P	68 - 133
Endosulfan Sulfate	86.4	85.3	P/P	62 - 127
Endrin	99.1	79.6	P/P	64 - 122
Endrin Aldehyde	92.7	93.7	P/P	61 - 132
Endrin Ketone	80.3	80.7	P/P	66 - 120
Esfenvalerate	79.9	77.5	P/P	50 - 150
Ethalfuralin	74.2	76.5	P/P	57 - 127
Fenpropathrin	88.7	94.3	P/P	60 - 160
Gamma-BHC	91.2	96.5	P/P	71 - 158
Gamma-Chlordane	77.6	76.4	P/P	53 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P387866

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Heptachlor	66.6	67.7	P/P	45 - 96.0
Heptachlor Epoxide	82.9	81.1	P/P	64 - 109
Hexachlorobenzene	66.8	69.4	P/P	46 - 103
Lambda-Cyhalothrin	72.5	73.8	P/P	38 - 145
Methoxychlor	88.2	88.8	P/P	69 - 149
MGK-264	50.6	50.6	P/P	50 - 150
Mirex	68.7	69.1	P/P	31 - 90.0
Permethrin	73.8	73.5	P/P	41 - 108
Phenothrin	48.0	47.4	P/P	22 - 91.0
Piperonyl Butoxide	88.1	88.4	P/P	50 - 150
Prallethrin	47.8	45.1	P/P	32 - 92.0
Tau-Fluvalinate	84.8	87.3	P/P	50 - 150
Tetramethrin	61.7	60.8	P/P	60 - 160
Trans-Nonachlor	79.3	77.4	P/P	50 - 107
Triclosan Methyl	92.5	90.1	P/P	50 - 150
Trifluralin	73.9	74.0	P/P	58 - 119

Reference Method: EPA 8276

Batch ID: P387866

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	100	101	P/P	47 - 119
Toxaphene	98.0	103	P/P	41 - 112

Reference Method: EPA 8321B

Batch ID: P387903

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	114		P	40 - 150
AMPA	104		P	40 - 150
Endothall	99.7		P	40 - 150
Glufosinate	99.9		P	40 - 150
Glyphosate	99.2		P	40 - 140
Sucralose	99.7		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P387915

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	118		P	30 - 160
Aldicarb	120		P	30 - 160
Aldicarb Sulfone	126		P	30 - 160
Aldicarb Sulfoxide	123		P	30 - 160
Carbaryl	63.1		P	30 - 160
Carbofuran	57.4		P	30 - 160
Methiocarb	74.2		P	30 - 160
Methomyl	113		P	30 - 160
Oxamyl	120		P	30 - 160
Propoxur	58.2		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P388044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	87.0		P	30 - 160
Acetaminophen	66.2		P	30 - 160
Acetamiprid	82.1		P	30 - 160
Afidopyropen	40.5		P	30 - 160
Bentazon	46.0		P	30 - 160
Benzovindiflupyr	71.4		P	30 - 160
Carbamazepine	59.0		P	30 - 160
Clothianidin	80.4		P	30 - 160
Dinotefuran	88.0		P	30 - 160
Diuron	56.8		P	30 - 160
Fenuron	84.3		P	30 - 160
Fluridone	71.9		P	30 - 160
Hydrocodone	87.7		P	30 - 160
Ibuprofen	44.7		P	30 - 160
Imazapyr	84.4		P	30 - 160
Imidacloprid	116		P	30 - 160
Linuron	61.8		P	30 - 160
Mandestrobin	72.7		P	30 - 160
MCPP	74.3		P	30 - 160
Naproxen	63.3		P	30 - 160
Primidone	60.0		P	30 - 160
Pyraclostrobin	60.5		P	30 - 160
Thiamethoxam	79.2		P	30 - 160
Tolfenpyrad	51.8		P	30 - 160
Triclopyr	61.3		P	30 - 160

Reference Method: SM 2120 B-2011

Batch ID: P387875

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.9		P	90 - 110

Reference Method: SM 2320 B-2011

Batch ID: P388087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.2		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P388090

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.3		P	90 - 106

Reference Method: SM 5310 B-2011

Batch ID: P387983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387933

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197906	Barium	103		P	80 - 120
2197906	Calcium	105		P	80 - 120
2197906	Iron	111		P	80 - 120
2197906	Magnesium	107		P	80 - 120
2197906	Potassium	103		P	80 - 120
2197906	Sodium	107		P	80 - 120
2197906	Zinc	97.6		P	80 - 120
2198102	Barium	105	107	P/P	80 - 120
2198102	Calcium	107	110	P/P	80 - 120
2198102	Iron	109	111	P/P	80 - 120
2198102	Magnesium	106	108	P/P	80 - 120
2198102	Potassium	109	109	P/P	80 - 120
2198102	Sodium	113	113	P/P	80 - 120
2198102	Zinc	95.2	97.0	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387933

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197906	Aluminum	98.9		P	80 - 120
2197906	Antimony	107		P	80 - 120
2197906	Arsenic	104		P	80 - 120
2197906	Boron	98.9		P	80 - 120
2197906	Cadmium	105		P	80 - 120
2197906	Chromium	104		P	80 - 120
2197906	Copper	98.5		P	80 - 120
2197906	Lead	103		P	80 - 120
2197906	Nickel	100		P	80 - 120
2197906	Selenium	103		P	80 - 120
2197906	Silver	100		P	80 - 120
2197906	Thallium	102		P	80 - 120
2198102	Aluminum	101	102	P/P	80 - 120
2198102	Antimony	104	104	P/P	80 - 120
2198102	Arsenic	104	102	P/P	80 - 120
2198102	Boron	98.3	98.3	P/P	80 - 120
2198102	Cadmium	104	102	P/P	80 - 120
2198102	Chromium	102	102	P/P	80 - 120
2198102	Copper	104	103	P/P	80 - 120
2198102	Lead	102	102	P/P	80 - 120
2198102	Nickel	102	102	P/P	80 - 120
2198102	Selenium	105	104	P/P	80 - 120
2198102	Silver	103	102	P/P	80 - 120
2198102	Thallium	101	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197720	Chloride	103		P	90 - 110
2197931	Chloride	103		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388096

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197720	Sulfate	98.9		P	90 - 110
2197931	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198190	Ammonia-N	100	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198295	Kjeldahl Nitrogen	99.2	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198190	NO2NO3-N	99.0	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198162	Total-P	110	109	F/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198233	O-Phosphate-P	99.7	99.6	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P387774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197204	Acetochlor	77.0	77.1	P/P	68 - 126
2197204	Alachlor	71.6	69.8	P/P	66 - 125
2197204	Ametryn	110	96.1	P/P	31 - 182
2197204	Atrazine	95.9	91.6	P/P	68 - 137
2197204	Atrazine Desethyl	72.4	71.9	P/P	13 - 161
2197204	Azinphos Methyl	96.9	126	P/P	54 - 162
2197204	Bromacil	79.4	76.6	P/P	34 - 144
2197204	Butylate	51.1	52.4	P/P	16 - 92.0
2197204	Carbophenothion	80.3	83.7	P/P	30 - 131
2197204	Chlorpyrifos Ethyl	79.7	86.1	P/P	63 - 124
2197204	Chlorpyrifos Methyl	88.1	92.7	P/P	64 - 125
2197204	Cyanazine	88.8	83.7	P/P	13 - 245
2197204	Demeton	86.4	82.5	P/P	20 - 154
2197204	Diazinon	82.3	82.5	P/P	66 - 141
2197204	Dimethenamid	75.1	76.1	P/P	50 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P387774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197204	Disulfoton	85.5	86.0	P/P	55 - 130
2197204	Dithiopyr	64.9	63.4	F/F	66 - 122
2197204	EPTC	40.8	49.0	P/P	15 - 93.0
2197204	Ethion	76.2	74.5	P/P	15 - 148
2197204	Ethoprop	95.7	97.1	P/P	59 - 126
2197204	Fenamiphos	60.0	59.2	P/P	39 - 137
2197204	Fipronil	79.1	80.8	P/P	47 - 131
2197204	Fipronil Desulfinyl	77.3	78.6	P/P	43 - 121
2197204	Fipronil Sulfide	73.0	74.6	P/P	29 - 134
2197204	Fipronil Sulfone	76.7	76.1	P/P	19 - 131
2197204	Flumioxazin	122	117	P/P	10 - 300
2197204	Fonofos	87.6	94.1	P/P	62 - 128
2197204	Hexazinone	87.9	89.9	P/P	58 - 154
2197204	Imazalil	52.3	59.8	P/P	10 - 215
2197204	Malathion	98.9	104	P/P	54 - 135
2197204	Metalaxyl	74.9	75.4	P/P	46 - 136
2197204	Metolachlor	68.5	69.9	P/P	62 - 126
2197204	Metribuzin	98.4	99.0	P/P	44 - 277
2197204	Mevinphos	102	104	P/P	44 - 135
2197204	Molinate	62.9	67.2	P/P	31 - 104
2197204	Naled	49.2	49.5	P/P	33 - 113
2197204	Norflurazon	69.3	65.0	P/P	32 - 134
2197204	Oxadiazon	62.8	64.4	P/P	55 - 123
2197204	Parathion Ethyl	79.4	82.5	P/P	67 - 120
2197204	Parathion Methyl	101	106	P/P	70 - 140
2197204	Pendimethalin	71.0	73.6	P/P	59 - 145
2197204	Phorate	104	107	P/P	52 - 127
2197204	Prodiamine	40.2	42.5	P/P	11 - 157
2197204	Prometon	84.7	82.5	P/P	55 - 130
2197204	Prometryn	84.9	84.8	P/P	55 - 127
2197204	Pronamide	92.9	89.7	P/P	66 - 150
2197204	Propiconazole	71.7	72.9	P/P	14 - 178
2197204	Simazine	82.6	83.1	P/P	58 - 159
2197204	Sulfentrazone	69.0	68.9	P/P	21 - 144
2197204	Tebuconazole	28.1	25.1	P/P	10 - 122
2197204	Terbufos	84.0	86.4	P/P	65 - 131
2197204	Terbuthylazine	84.1	82.6	P/P	63 - 131

Reference Method: EPA 8270E

Batch ID: P387866

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198500	Aldrin	56.8	58.0	P/P	32 - 82.0
2198500	Alpha-BHC	75.9	77.2	P/P	68 - 157
2198500	Alpha-Chlordane	87.3	81.4	P/P	54 - 108
2198500	Beta-BHC	91.4	84.4	P/P	54 - 200
2198500	Beta-Cyfluthrin	90.7	89.5	P/P	50 - 154
2198500	Bifenthrin	85.4	79.4	P/P	49 - 124
2198500	Chlorothalonil	26.8	27.0	P/P	10 - 289
2198500	Cis-Nonachlor	88.6	84.1	P/P	53 - 112
2198500	Cypermethrin	88.7	81.4	P/P	43 - 141
2198500	Dacthal	93.4	89.0	P/P	75 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P387866

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198500	DDD-p,p'	95.2	87.4	P/P	58 - 125
2198500	DDE-p,p'	83.4	81.2	P/P	50 - 108
2198500	DDT-p,p'	119	87.3	P/P	52 - 140
2198500	Delta-BHC	128	113	P/P	61 - 228
2198500	Deltamethrin	108	101	P/P	50 - 200
2198500	Dichlobenil	66.4	68.6	P/P	25 - 140
2198500	Dicofol	78.0	88.0	P/P	59 - 130
2198500	Dieldrin	90.3	82.5	P/P	57 - 121
2198500	Endosulfan I	90.3	84.1	P/P	62 - 123
2198500	Endosulfan II	109	109	P/P	48 - 163
2198500	Endosulfan Sulfate	91.7	82.5	P/P	63 - 132
2198500	Endrin	91.0	85.3	P/P	58 - 128
2198500	Endrin Aldehyde	49.4	102	P/P	44 - 126
2198500	Endrin Ketone	90.9	81.4	P/P	68 - 127
2198500	Esfenvalerate	92.5	95.3	P/P	50 - 150
2198500	Ethalfuralin	71.3	68.3	P/P	55 - 131
2198500	Fenpropathrin	136	133	P/P	60 - 160
2198500	Gamma-BHC	131	120	P/P	54 - 206
2198500	Gamma-Chlordane	83.6	78.6	P/P	52 - 105
2198500	Heptachlor	67.8	69.6	P/P	47 - 94.0
2198500	Heptachlor Epoxide	87.0	82.3	P/P	61 - 113
2198500	Hexachlorobenzene	64.5	66.3	P/P	45 - 100
2198500	Lambda-Cyhalothrin	85.2	81.0	P/P	37 - 165
2198500	Methoxychlor	91.2	85.8	P/P	63 - 153
2198500	MGK-264	57.5	60.2	P/P	50 - 150
2198500	Mirex	73.5	70.5	P/P	38 - 90.0
2198500	Permethrin	85.9	79.9	P/P	45 - 112
2198500	Phenothrin	66.8	65.7	P/P	22 - 118
2198500	Piperonyl Butoxide	92.8	90.3	P/P	50 - 150
2198500	Prallethrin	56.0	53.1	P/P	21 - 114
2198500	Tau-Fluvalinate	103	102	P/P	50 - 150
2198500	Tetramethrin	70.4	64.4	P/P	60 - 160
2198500	Trans-Nonachlor	84.0	79.1	P/P	50 - 103
2198500	Triclosan Methyl	95.1	92.2	P/P	50 - 150
2198500	Trifluralin	73.2	71.2	P/P	57 - 122

Reference Method: EPA 8276
Batch ID: P387866

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198259	Chlordane	105	109	P/P	34 - 129
2198259	Toxaphene	145	162	P/F	16 - 148

Reference Method: EPA 8321B
Batch ID: P387903

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198127	Acesulfame K	34.3	36.0	F/F	40 - 150
2198127	AMPA	85.2	73.5	P/P	40 - 150
2198127	Endothall	105	114	P/P	40 - 150
2198127	Glufosinate	86.4	94.1	P/P	40 - 150
2198127	Glyphosate	129	94.1	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P387903

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198127	Sucralose	57.4	48.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P387915

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197878	3-Hydroxycarbofuran	115	107	P/P	30 - 160
2197878	Aldicarb	98.9	98.3	P/P	30 - 160
2197878	Aldicarb Sulfone	124	129	P/P	30 - 160
2197878	Aldicarb Sulfoxide	64.7	62.6	P/P	30 - 160
2197878	Carbaryl	54.8	51.6	P/P	30 - 160
2197878	Carbofuran	53.1	54.2	P/P	30 - 160
2197878	Methiocarb	66.5	80.5	P/P	30 - 160
2197878	Methomyl	109	113	P/P	30 - 160
2197878	Oxamyl	119	127	P/P	30 - 160
2197878	Propoxur	56.5	57.2	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P388044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198240	2,4-D	87.4	76.4	P/P	30 - 160
2198240	Acetaminophen	57.0	61.7	P/P	30 - 160
2198240	Acetamiprid	80.2	84.3	P/P	30 - 160
2198240	Afidopyropen	43.7	45.4	P/P	30 - 160
2198240	Bentazon	39.3	38.0	P/P	30 - 160
2198240	Benzovindiflupyr	73.2	71.7	P/P	30 - 160
2198240	Carbamazepine	56.4	56.0	P/P	30 - 160
2198240	Clothianidin	75.3	72.7	P/P	30 - 160
2198240	Dinotefuran	96.1	96.7	P/P	30 - 160
2198240	Diuron	52.5	53.3	P/P	30 - 160
2198240	Fenuron	77.6	80.0	P/P	30 - 160
2198240	Fluridone	74.2	74.3	P/P	30 - 160
2198240	Hydrocodone	75.5	84.6	P/P	30 - 160
2198240	Ibuprofen	45.3	47.0	P/P	30 - 160
2198240	Imazapyr	87.8	74.9	P/P	30 - 160
2198240	Linuron	69.9	67.1	P/P	30 - 160
2198240	Mandestrobin	79.1	80.5	P/P	30 - 160
2198240	MCPP	66.0	68.9	P/P	30 - 160
2198240	Naproxen	72.5	55.2	P/P	30 - 160
2198240	Primidone	84.5	73.8	P/P	30 - 160
2198240	Pyraclostrobin	63.8	64.8	P/P	30 - 160
2198240	Thiamethoxam	75.6	74.2	P/P	30 - 160
2198240	Tolfenpyrad	57.9	58.3	P/P	30 - 160
2198240	Triclopyr	52.4	53.7	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P388090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198231	Fluoride	97.6	98.2	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P387983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198168	Organic Carbon	98.4	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387873

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198231	Turbidity	0.733	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198102	Barium	2.21	Spike	P	0 - 20
2198102	Calcium	1.54	Spike	P	0 - 20
2198102	Iron	1.41	Spike	P	0 - 20
2198102	Magnesium	0.982	Spike	P	0 - 20
2198102	Potassium	0.130	Spike	P	0 - 20
2198102	Sodium	0.285	Spike	P	0 - 20
2198102	Zinc	1.87	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198102	Aluminum	1.11	Spike	P	0 - 20
2198102	Antimony	0.654	Spike	P	0 - 20
2198102	Arsenic	1.19	Spike	P	0 - 20
2198102	Boron	0.0357	Spike	P	0 - 20
2198102	Cadmium	1.54	Spike	P	0 - 20
2198102	Chromium	0.394	Spike	P	0 - 20
2198102	Copper	0.391	Spike	P	0 - 20
2198102	Lead	0.734	Spike	P	0 - 20
2198102	Nickel	0.00777	Spike	P	0 - 20
2198102	Selenium	1.32	Spike	P	0 - 20
2198102	Silver	0.968	Spike	P	0 - 20
2198102	Thallium	0.350	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197720	Chloride	0.719	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388096

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197720	Sulfate	0.320	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198190	Ammonia-N	1.89	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198295	Kjeldahl Nitrogen	3.48	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198190	NO2NO3-N	0.506	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198162	Total-P	0.649	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198233	O-Phosphate-P	0.100	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P387774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197204	Acetochlor	0.196	Spike	P	0 - 30
2197204	Alachlor	2.50	Spike	P	0 - 30
2197204	Ametryn	13.8	Spike	P	0 - 30
2197204	Atrazine	4.61	Spike	P	0 - 30
2197204	Atrazine Desethyl	0.730	Spike	P	0 - 30
2197204	Azinphos Methyl	25.9	Spike	P	0 - 30
2197204	Bromacil	3.58	Spike	P	0 - 30
2197204	Butylate	2.54	Spike	P	0 - 30
2197204	Carbophenothion	4.14	Spike	P	0 - 30
2197204	Chlorpyrifos Ethyl	7.79	Spike	P	0 - 30
2197204	Chlorpyrifos Methyl	5.15	Spike	P	0 - 30
2197204	Cyanazine	5.99	Spike	P	0 - 30
2197204	Demeton	4.61	Spike	P	0 - 30
2197204	Diazinon	0.278	Spike	P	0 - 30
2197204	Dimethenamid	1.30	Spike	P	0 - 30
2197204	Disulfoton	0.561	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P387774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197204	Dithiopyr	2.33	Spike	P	0 - 30
2197204	EPTC	18.1	Spike	P	0 - 30
2197204	Ethion	2.17	Spike	P	0 - 30
2197204	Ethoprop	1.48	Spike	P	0 - 30
2197204	Fenamiphos	1.21	Spike	P	0 - 30
2197204	Fipronil	2.07	Spike	P	0 - 30
2197204	Fipronil Desulfinyl	1.74	Spike	P	0 - 30
2197204	Fipronil Sulfide	2.21	Spike	P	0 - 30
2197204	Fipronil Sulfone	0.759	Spike	P	0 - 30
2197204	Flumioxazin	4.23	Spike	P	0 - 30
2197204	Fonofos	7.15	Spike	P	0 - 30
2197204	Hexazinone	2.23	Spike	P	0 - 30
2197204	Imazalil	13.3	Spike	P	0 - 30
2197204	Malathion	4.76	Spike	P	0 - 30
2197204	Metalaxyl	0.683	Spike	P	0 - 30
2197204	Metolachlor	2.05	Spike	P	0 - 30
2197204	Metribuzin	0.601	Spike	P	0 - 30
2197204	Mevinphos	1.99	Spike	P	0 - 30
2197204	Molinate	6.67	Spike	P	0 - 30
2197204	Naled	0.523	Spike	P	0 - 30
2197204	Norflurazon	6.29	Spike	P	0 - 30
2197204	Oxadiazon	2.41	Spike	P	0 - 30
2197204	Parathion Ethyl	3.86	Spike	P	0 - 30
2197204	Parathion Methyl	4.09	Spike	P	0 - 30
2197204	Pendimethalin	3.62	Spike	P	0 - 30
2197204	Phorate	2.45	Spike	P	0 - 30
2197204	Prodiamine	5.48	Spike	P	0 - 30
2197204	Prometon	2.57	Spike	P	0 - 30
2197204	Prometryn	0.127	Spike	P	0 - 30
2197204	Pronamide	3.53	Spike	P	0 - 30
2197204	Propiconazole	1.61	Spike	P	0 - 30
2197204	Simazine	0.536	Spike	P	0 - 30
2197204	Sulfentrazone	0.0109	Spike	P	0 - 30
2197204	Tebuconazole	11.3	Spike	P	0 - 30
2197204	Terbufos	2.78	Spike	P	0 - 30
2197204	Terbuthylazine	1.79	Spike	P	0 - 30
LFB	Acetochlor	7.01	LCS	P	0 - 30
LFB	Alachlor	6.52	LCS	P	0 - 30
LFB	Ametryn	12.5	LCS	P	0 - 30
LFB	Atrazine	14.8	LCS	P	0 - 30
LFB	Atrazine Desethyl	2.62	LCS	P	0 - 30
LFB	Azinphos Methyl	68.5	LCS	F	0 - 30
LFB	Bromacil	9.81	LCS	P	0 - 30
LFB	Butylate	6.85	LCS	P	0 - 30
LFB	Carbophenothion	4.12	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.45	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	9.34	LCS	P	0 - 30
LFB	Cyanazine	3.52	LCS	P	0 - 30
LFB	Demeton	4.58	LCS	P	0 - 30
LFB	Diazinon	11.8	LCS	P	0 - 30
LFB	Dimethenamid	10.1	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P387774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Disulfoton	13.3	LCS	P	0 - 30
LFB	Dithiopyr	9.88	LCS	P	0 - 30
LFB	EPTC	3.40	LCS	P	0 - 30
LFB	Ethion	1.38	LCS	P	0 - 30
LFB	Ethoprop	14.5	LCS	P	0 - 30
LFB	Fenamiphos	6.91	LCS	P	0 - 30
LFB	Fipronil	10.6	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	10.8	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.22	LCS	P	0 - 30
LFB	Fipronil Sulfone	7.35	LCS	P	0 - 30
LFB	Flumioxazin	51.6	LCS	F	0 - 30
LFB	Fonofos	11.5	LCS	P	0 - 30
LFB	Hexazinone	6.18	LCS	P	0 - 30
LFB	Imazalil	4.43	LCS	P	0 - 30
LFB	Malathion	6.28	LCS	P	0 - 30
LFB	Metalaxyl	10.7	LCS	P	0 - 30
LFB	Metolachlor	5.52	LCS	P	0 - 30
LFB	Metribuzin	2.33	LCS	P	0 - 30
LFB	Mevinphos	17.4	LCS	P	0 - 30
LFB	Molinate	5.70	LCS	P	0 - 30
LFB	Naled	9.44	LCS	P	0 - 30
LFB	Norflurazon	9.96	LCS	P	0 - 30
LFB	Oxadiazon	7.42	LCS	P	0 - 30
LFB	Parathion Ethyl	9.58	LCS	P	0 - 30
LFB	Parathion Methyl	12.1	LCS	P	0 - 30
LFB	Pendimethalin	0.678	LCS	P	0 - 30
LFB	Phorate	4.99	LCS	P	0 - 30
LFB	Prodiamine	61.8	LCS	F	0 - 30
LFB	Prometon	17.1	LCS	P	0 - 30
LFB	Prometryn	4.62	LCS	P	0 - 30
LFB	Pronamide	10.8	LCS	P	0 - 30
LFB	Propiconazole	10.6	LCS	P	0 - 30
LFB	Simazine	10.4	LCS	P	0 - 30
LFB	Sulfentrazone	9.92	LCS	P	0 - 30
LFB	Tebuconazole	4.70	LCS	P	0 - 30
LFB	Terbufos	5.86	LCS	P	0 - 30
LFB	Terbutylazine	8.93	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P387866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198500	Aldrin	2.09	Spike	P	0 - 30
2198500	Alpha-BHC	1.62	Spike	P	0 - 30
2198500	Alpha-Chlordane	6.89	Spike	P	0 - 30
2198500	Beta-BHC	8.00	Spike	P	0 - 30
2198500	Beta-Cyfluthrin	1.36	Spike	P	0 - 30
2198500	Bifenthrin	7.24	Spike	P	0 - 30
2198500	Chlorothalonil	0.750	Spike	P	0 - 30
2198500	Cis-Nonachlor	5.21	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P387866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198500	Cypermethrin	8.55	Spike	P	0 - 30
2198500	Dacthal	4.82	Spike	P	0 - 30
2198500	DDD-p,p'	8.56	Spike	P	0 - 30
2198500	DDE-p,p'	2.67	Spike	P	0 - 30
2198500	DDT-p,p'	31.1	Spike	F	0 - 30
2198500	Delta-BHC	11.7	Spike	P	0 - 30
2198500	Deltamethrin	7.32	Spike	P	0 - 30
2198500	Dichlobenil	3.33	Spike	P	0 - 30
2198500	Dicofol	12.0	Spike	P	0 - 30
2198500	Dieldrin	8.96	Spike	P	0 - 30
2198500	Endosulfan I	7.08	Spike	P	0 - 30
2198500	Endosulfan II	0.652	Spike	P	0 - 30
2198500	Endosulfan Sulfate	10.6	Spike	P	0 - 30
2198500	Endrin	6.40	Spike	P	0 - 30
2198500	Endrin Aldehyde	69.1	Spike	F	0 - 30
2198500	Endrin Ketone	11.1	Spike	P	0 - 30
2198500	Esfenvalerate	2.93	Spike	P	0 - 30
2198500	Ethalfuralin	4.21	Spike	P	0 - 30
2198500	Fenpropathrin	1.95	Spike	P	0 - 30
2198500	Gamma-BHC	8.90	Spike	P	0 - 30
2198500	Gamma-Chlordane	6.10	Spike	P	0 - 30
2198500	Heptachlor	2.57	Spike	P	0 - 30
2198500	Heptachlor Epoxide	5.47	Spike	P	0 - 30
2198500	Hexachlorobenzene	2.75	Spike	P	0 - 30
2198500	Lambda-Cyhalothrin	5.05	Spike	P	0 - 30
2198500	Methoxychlor	6.08	Spike	P	0 - 30
2198500	MGK-264	4.63	Spike	P	0 - 30
2198500	Mirex	4.17	Spike	P	0 - 30
2198500	Permethrin	7.23	Spike	P	0 - 30
2198500	Phenothrin	1.63	Spike	P	0 - 30
2198500	Piperonyl Butoxide	2.76	Spike	P	0 - 30
2198500	Prallethrin	5.38	Spike	P	0 - 30
2198500	Tau-Fluvalinate	1.16	Spike	P	0 - 30
2198500	Tetramethrin	8.94	Spike	P	0 - 30
2198500	Trans-Nonachlor	6.04	Spike	P	0 - 30
2198500	Triclosan Methyl	3.06	Spike	P	0 - 30
2198500	Trifluralin	2.85	Spike	P	0 - 30
LFB	Aldrin	3.39	LCS	P	0 - 30
LFB	Alpha-BHC	4.13	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.95	LCS	P	0 - 30
LFB	Beta-BHC	1.52	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	6.62	LCS	P	0 - 30
LFB	Bifenthrin	0.521	LCS	P	0 - 30
LFB	Chlorothalonil	1.31	LCS	P	0 - 30
LFB	Cis-Nonachlor	2.45	LCS	P	0 - 30
LFB	Cypermethrin	1.39	LCS	P	0 - 30
LFB	Dacthal	1.48	LCS	P	0 - 30
LFB	DDD-p,p'	3.69	LCS	P	0 - 30
LFB	DDE-p,p'	1.16	LCS	P	0 - 30
LFB	DDT-p,p'	0.987	LCS	P	0 - 30
LFB	Delta-BHC	4.73	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P387866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Deltamethrin	2.93	LCS	P	0 - 30
LFB	Dichlobenil	2.02	LCS	P	0 - 30
LFB	Dicofol	21.1	LCS	P	0 - 30
LFB	Dieldrin	2.88	LCS	P	0 - 30
LFB	Endosulfan I	5.32	LCS	P	0 - 30
LFB	Endosulfan II	13.6	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.30	LCS	P	0 - 30
LFB	Endrin	21.8	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.05	LCS	P	0 - 30
LFB	Endrin Ketone	0.584	LCS	P	0 - 30
LFB	Esfenvalerate	3.13	LCS	P	0 - 30
LFB	Ethalfuralin	3.13	LCS	P	0 - 30
LFB	Fenpropathrin	6.15	LCS	P	0 - 30
LFB	Gamma-BHC	5.58	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.54	LCS	P	0 - 30
LFB	Heptachlor	1.57	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.17	LCS	P	0 - 30
LFB	Hexachlorobenzene	3.88	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	1.85	LCS	P	0 - 30
LFB	Methoxychlor	0.694	LCS	P	0 - 30
LFB	MGK-264	0.0356	LCS	P	0 - 30
LFB	Mirex	0.523	LCS	P	0 - 30
LFB	Permethrin	0.356	LCS	P	0 - 30
LFB	Phenothrin	1.10	LCS	P	0 - 30
LFB	Piperonyl Butoxide	0.313	LCS	P	0 - 30
LFB	Prallethrin	5.84	LCS	P	0 - 30
LFB	Tau-Fluvalinate	2.97	LCS	P	0 - 30
LFB	Tetramethrin	1.43	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.48	LCS	P	0 - 30
LFB	Triclosan Methyl	2.62	LCS	P	0 - 30
LFB	Trifluralin	0.0891	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P387866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198259	Chlordane	3.93	Spike	P	0 - 30
2198259	Toxaphene	11.5	Spike	P	0 - 30
LFB	Chlordane	1.12	LCS	P	0 - 30
LFB	Toxaphene	5.24	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P387903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198127	Acesulfame K	4.72	Spike	P	0 - 30
2198127	AMPA	6.64	Spike	P	0 - 30
2198127	Endothall	7.91	Spike	P	0 - 30
2198127	Glufosinate	8.45	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P387903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198127	Glyphosate	8.12	Spike	P	0 - 30
2198127	Sucralose	10.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197878	3-Hydroxycarbofuran	7.54	Spike	P	0 - 30
2197878	Aldicarb	0.651	Spike	P	0 - 30
2197878	Aldicarb Sulfone	3.97	Spike	P	0 - 30
2197878	Aldicarb Sulfoxide	3.33	Spike	P	0 - 30
2197878	Carbaryl	5.92	Spike	P	0 - 30
2197878	Carbofuran	2.01	Spike	P	0 - 30
2197878	Methiocarb	19.1	Spike	P	0 - 30
2197878	Methomyl	3.56	Spike	P	0 - 30
2197878	Oxamyl	7.11	Spike	P	0 - 30
2197878	Propoxur	1.27	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P388044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198240	2,4-D	13.4	Spike	P	0 - 30
2198240	Acetaminophen	7.96	Spike	P	0 - 30
2198240	Acetamiprid	4.94	Spike	P	0 - 30
2198240	Afidopyropen	3.98	Spike	P	0 - 30
2198240	Bentazon	3.44	Spike	P	0 - 30
2198240	Benzovindiflupyr	2.04	Spike	P	0 - 30
2198240	Carbamazepine	0.719	Spike	P	0 - 30
2198240	Clothianidin	2.94	Spike	P	0 - 30
2198240	Dinotefuran	0.605	Spike	P	0 - 30
2198240	Diuron	1.33	Spike	P	0 - 30
2198240	Fenuron	3.08	Spike	P	0 - 30
2198240	Fluridone	0.119	Spike	P	0 - 30
2198240	Hydrocodone	11.3	Spike	P	0 - 30
2198240	Ibuprofen	3.60	Spike	P	0 - 30
2198240	Imazapyr	15.9	Spike	P	0 - 30
2198240	Imidacloprid	7.74	Spike	P	0 - 30
2198240	Linuron	4.21	Spike	P	0 - 30
2198240	Mandestrobin	1.79	Spike	P	0 - 30
2198240	MCPP	4.32	Spike	P	0 - 30
2198240	Naproxen	27.1	Spike	P	0 - 30
2198240	Primidone	13.6	Spike	P	0 - 30
2198240	Pyraclostrobin	1.57	Spike	P	0 - 30
2198240	Thiamethoxam	1.38	Spike	P	0 - 30
2198240	Tolfenpyrad	0.718	Spike	P	0 - 30
2198240	Triclopyr	2.34	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
 Batch ID: P387875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198098	Color (true)	2.53	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P388087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198231	Total Alkalinity	2.24	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P388198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198167	TDS	1.35	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P388090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198231	Fluoride	0.514	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P387983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198168	Organic Carbon	0.927	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2198239
 Field Sample ID: G4CE0184

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	41.1	P	30 - 160

Lab Sample ID: 2198240
 Field Sample ID: G4CE0184

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	52.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.3	P	30 - 160
EPA 8321B	Diuron-d6	35.7	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	50.2	P	30 - 160
EPA 8321B	Primidone-d5	66.9	P	30 - 160
EPA 8321B	Sucralose-d6	43.6	P	30 - 160
EPA 8321B	Sucralose-d6	43.6	P	30 - 160

Lab Sample ID: 2198241
 Field Sample ID: G4CE0184

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	56.9	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	50.2	P	34 - 106
EPA 8276	Decachlorobiphenyl	31.5	P	26 - 97.0
EPA 8276	PCNB	81.2	P	38 - 141

Lab Sample ID: 2198242
 Field Sample ID: G4CE0184

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	107	P	72 - 135
EPA 8270E	Terbufos-d10	98.1	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101205

Included Lab Sample IDs: 2198231

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

Reference Method: SM 2120 B-2011

Run ID: A101207

Included Lab Sample IDs: 2198231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A101209

Included Lab Sample IDs: 2198233

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.8	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101212

Included Lab Sample IDs: 2198232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101223

Included Lab Sample IDs: 2198232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101248

Included Lab Sample IDs: 2198240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	105	100	P/P	60 - 160
Glufosinate	92.3	95.8	P/P	60 - 160
Glyphosate	99.5	103	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A101258

Included Lab Sample IDs: 2198240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.4	90.3	P/P	60 - 160
Endothall	113	113	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A101262

Included Lab Sample IDs: 2198232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101267

Included Lab Sample IDs: 2198243

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	107	104	P/P	90 - 110
Calcium	104	103	P/P	90 - 110
Iron	107	105	P/P	90 - 110
Magnesium	104	102	P/P	90 - 110
Potassium	105	104	P/P	90 - 110
Sodium	109	108	P/P	90 - 110
Zinc	98.1	95.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101281

Included Lab Sample IDs: 2198231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	107	107	P/P	90 - 110
Sulfate	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101288

Included Lab Sample IDs: 2198232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.4	96.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101296

Included Lab Sample IDs: 2198243

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.2	97.0	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	101	100	P/P	90 - 110
Copper	95.1	93.8	P/P	90 - 110
Lead	101	99.7	P/P	90 - 110
Nickel	94.4	93.7	P/P	90 - 110
Selenium	102	101	P/P	90 - 110
Silver	102	102	P/P	90 - 110
Thallium	96.3	93.4	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A101307

Included Lab Sample IDs: 2198231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	105	100	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A101307

Included Lab Sample IDs: 2198231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101328

Included Lab Sample IDs: 2198243

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.0	108	P/P	90 - 110
Antimony	106	106	P/P	90 - 110
Boron	96.1	94.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101336

Included Lab Sample IDs: 2198239

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	135	148	P/P	60 - 150
Aldicarb	136	145	P/P	60 - 150
Aldicarb Sulfone	130	139	P/P	50 - 150
Aldicarb Sulfoxide	124	127	P/P	50 - 150
Carbaryl	127	134	P/P	60 - 150
Carbofuran	127	130	P/P	50 - 150
Methiocarb	130	135	P/P	50 - 150
Methomyl	143	145	P/P	50 - 150
Oxamyl	134	144	P/P	50 - 150
Propoxur	128	132	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A101350

Included Lab Sample IDs: 2198240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	102	P/P	60 - 160

Reference Method: EPA 8276

Run ID: A101357

Included Lab Sample IDs: 2198241

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	110		P	80 - 120
Toxaphene	134*		F	80 - 120

Reference Method: EPA 8270E

Run ID: A101361

Included Lab Sample IDs: 2198241

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	96.2		P	80 - 120
Alpha-Chlordane	98.4		P	80 - 120
Beta-BHC	86.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A101361
Included Lab Sample IDs: 2198241

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beta-Cyfluthrin	91.3		P	80 - 120
Bifenthrin	96.7		P	80 - 120
Chlorothalonil	93.9		P	80 - 120
Cis-Nonachlor	99.6		P	80 - 120
Cypermethrin	90.6		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	88.1		P	80 - 120
Deltamethrin	96.0		P	80 - 120
Dichlobenil	103		P	80 - 120
Dicofol	82.9		P	80 - 120
Dieldrin	106		P	80 - 120
Endosulfan I	98.8		P	80 - 120
Endosulfan II	104		P	80 - 120
Endosulfan Sulfate	96.2		P	80 - 120
Endrin	91.4		P	80 - 120
Endrin Aldehyde	94.3		P	80 - 120
Endrin Ketone	96.4		P	80 - 120
Esfenvalerate	89.9		P	80 - 120
Ethalfuralin	98.7		P	80 - 120
Fenpropathrin	90.7		P	80 - 120
Gamma-BHC	94.0		P	80 - 120
Gamma-Chlordane	99.6		P	80 - 120
Heptachlor	100		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Hexachlorobenzene	99.5		P	80 - 120
Lambda-Cyhalothrin	90.4		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	96.3		P	80 - 120
Mirex	98.4		P	80 - 120
Permethrin	92.8		P	80 - 120
Phenothrin	91.8		P	80 - 120
Piperonyl Butoxide	92.2		P	80 - 120
Prallethrin	89.7		P	80 - 120
Tau-Fluvalinate	94.8		P	80 - 120
Tetramethrin	93.7		P	80 - 120
Trans-Nonachlor	100		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	98.0		P	80 - 120

Reference Method: EPA 8270E
Run ID: A101369
Included Lab Sample IDs: 2198242

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.3		P	80 - 120
Alachlor	97.9		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine	96.3		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A101369

Included Lab Sample IDs: 2198242

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine Desethyl	108		P	80 - 120
Azinphos Methyl	104		P	80 - 120
Butylate	101		P	80 - 120
Carbophenothion	98.7		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	96.7		P	80 - 120
Cyanazine	100		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	93.6		P	80 - 120
Dimethenamid	95.4		P	80 - 120
Disulfoton	104		P	80 - 120
Dithiopyr	100		P	80 - 120
EPTC	99.0		P	80 - 120
Ethion	96.9		P	80 - 120
Ethoprop	95.0		P	80 - 120
Fenamiphos	102		P	80 - 120
Fipronil	97.4		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	106		P	80 - 120
Flumioxazin	94.5		P	80 - 120
Fonofos	94.9		P	80 - 120
Hexazinone	101		P	80 - 120
Imazalil	101		P	80 - 120
Malathion	99.2		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	97.6		P	80 - 120
Metribuzin	100		P	80 - 120
Mevinphos	98.5		P	80 - 120
Molinate	98.3		P	80 - 120
Naled	111		P	80 - 120
Oxadiazon	98.6		P	80 - 120
Parathion Ethyl	91.3		P	80 - 120
Parathion Methyl	89.4		P	80 - 120
Pendimethalin	98.1		P	80 - 120
Phorate	96.7		P	80 - 120
Prodiamine	96.8		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	103		P	80 - 120
Pronamide	99.8		P	80 - 120
Propiconazole	101		P	80 - 120
Simazine	107		P	80 - 120
Sulfentrazone	99.2		P	80 - 120
Tebuconazole	103		P	80 - 120
Terbufos	91.1		P	80 - 120
Terbutylazine	93.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A101380

Included Lab Sample IDs: 2198240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	91.9	P/P	50 - 150
Acetaminophen	90.4	97.0	P/P	60 - 160
Acetamiprid	96.8	106	P/P	50 - 150
Afidopyropen	92.3	92.4	P/P	50 - 150
Bentazon	101	92.0	P/P	50 - 160
Benzovindiflupyr	104	97.9	P/P	50 - 150
Carbamazepine	101	103	P/P	60 - 150
Clothianidin	100	99.2	P/P	60 - 150
Dinotefuran	100	99.1	P/P	50 - 150
Diuron	100	103	P/P	60 - 160
Fenuron	106	106	P/P	60 - 150
Fluridone	101	101	P/P	60 - 160
Hydrocodone	113	114	P/P	60 - 150
Ibuprofen	75.7	72.5	P/P	50 - 160
Imazapyr	88.3	93.5	P/P	50 - 160
Imidacloprid	105	111	P/P	60 - 150
Linuron	96.6	78.3	P/P	60 - 150
Mandestrobin	99.1	99.7	P/P	50 - 150
MCPP	100	91.6	P/P	50 - 150
Naproxen	102	81.1	P/P	50 - 160
Primidone	91.4	94.5	P/P	60 - 150
Pyraclostrobin	100	94.2	P/P	60 - 150
Thiamethoxam	93.0	105	P/P	50 - 150
Tolfenpyrad	102	90.6	P/P	60 - 150
Triclopyr	99.7	85.2	P/P	50 - 150

Reference Method: EPA 8270E

Run ID: A101382

Included Lab Sample IDs: 2198242

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	96.8		P	80 - 120
Norflurazon	93.9		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101428

Included Lab Sample IDs: 2198232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.5	96.8	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							0.733	
EPA 200.7 Rev. 4.4	Barium	101		103	105	107			2.21
	Calcium	103		105	107	110			1.54
	Iron	103		111	109	111			1.41
	Magnesium	100		107	106	108			0.982
	Potassium	103		103	109	109			0.130
	Sodium	99.5		107	113	113			0.285
	Zinc	91.7		97.6	95.2	97.0			1.87
EPA 200.8 Rev. 5.4	Aluminum	97.4		101	102	98.9			1.11
	Antimony	104		104	104	107			0.654
	Arsenic	101		104	102	104			1.19
	Boron	95.2		98.3	98.3	98.9			0.0357
	Cadmium	104		104	102	105			1.54
	Chromium	100		102	102	104			0.394
	Copper	100		104	103	98.5			0.391
	Lead	99.7		102	102	103			0.734
	Nickel	100		102	102	100			0.0077
	Selenium	103		105	104	103			1.32
	Silver	103		103	102	100			0.968
	Thallium	97.4		101	102	102			0.350
EPA 300.0 Rev. 2.1	Chloride	105		103	103			0.719	
	Sulfate	103		98.9	100			0.320	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8		100	98.4				1.89
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.8		99.2	105				3.48
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	98.0		99.0	98.5				0.506
EPA 365.1 Rev. 2.0	Total-P	103		110	109				0.649
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		99.7	99.6				0.100
EPA 8270E	Acetochlor	81.4	75.9	77.1	77.0		7.01		0.196
	Alachlor	75.8	71.0	69.8	71.6		6.52		2.50
	Aldrin	42.0	40.6	56.8	58.0		3.39		2.09
	Alpha-BHC	76.4	79.6	75.9	77.2		4.13		1.62
	Alpha-Chlordane	81.3	79.7	87.3	81.4		1.95		6.89
	Ametryn	97.1	85.6	96.1	110		12.5		13.8
	Atrazine	93.8	80.9	95.9	91.6		14.8		4.61
	Atrazine Desethyl	76.7	74.7	72.4	71.9		2.62		0.730
	Azinphos Methyl	70.1	143	96.9	126		68.5		25.9
	Beta-BHC	84.3	85.6	91.4	84.4		1.52		8.00
	Beta-Cyfluthrin	71.7	76.6	90.7	89.5		6.62		1.36
	Bifenthrin	75.7	75.3	85.4	79.4		0.521		7.24
	Bromacil	76.4	69.2	79.4	76.6		9.81		3.58
	Butylate	62.3	58.1	51.1	52.4		6.85		2.54
	Carbophenothion	89.5	85.9	80.3	83.7		4.12		4.14
	Chlorothalonil	52.5	53.2	26.8	27.0		1.31		0.750
	Chlorpyrifos Ethyl	87.3	85.2	86.1	79.7		2.45		7.79
	Chlorpyrifos Methyl	102	92.4	92.7	88.1		9.34		5.15
	Cis-Nonachlor	82.6	80.6	88.6	84.1		2.45		5.21
	Cyanazine	91.8	88.7	83.7	88.8		3.52		5.99
	Cypermethrin	75.1	74.1	88.7	81.4		1.39		8.55
	Dacthal	87.8	86.5	93.4	89.0		1.48		4.82
	DDD-p,p'	85.7	82.6	95.2	87.4		3.69		8.56
	DDE-p,p'	79.0	78.1	83.4	81.2		1.16		2.67
	DDT-p,p'	85.9	85.0	119	87.3		0.987		31.1
	Delta-BHC	97.1	102	128	113		4.73		11.7
	Deltamethrin	84.0	81.5	108	101		2.93		7.32

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Demeton	86.5	82.6	82.5	86.4	4.58	4.61
	Diazinon	89.5	79.6	82.5	82.3	11.8	0.278
	Dichlobenil	72.5	74.0	66.4	68.6	2.02	3.33
	Dicofol	99.8	80.8	78.0	88.0	21.1	12.0
	Dieldrin	86.0	83.6	90.3	82.5	2.88	8.96
	Dimethenamid	80.2	72.5	76.1	75.1	10.1	1.30
	Disulfoton	93.5	81.8	86.0	85.5	13.3	0.561
	Dithiopyr	75.5	68.4	63.4	64.9	9.88	2.33
	Endosulfan I	84.4	80.0	90.3	84.1	5.32	7.08
	Endosulfan II	106	92.3	109	109	13.6	0.652
	Endosulfan Sulfate	86.4	85.3	91.7	82.5	1.30	10.6
	Endrin	99.1	79.6	91.0	85.3	21.8	6.40
	Endrin Aldehyde	92.7	93.7	49.4	102	1.05	69.1
	Endrin Ketone	80.3	80.7	90.9	81.4	0.584	11.1
	EPTC	53.7	55.5	49.0	40.8	3.40	18.1
	Esfenvalerate	79.9	77.5	92.5	95.3	3.13	2.93
	Ethalfuralin	74.2	76.5	71.3	68.3	3.13	4.21
	Ethion	81.8	82.9	74.5	76.2	1.38	2.17
	Ethoprop	94.8	82.0	97.1	95.7	14.5	1.48
	Fenamiphos	78.2	73.0	59.2	60.0	6.91	1.21
	Fenpropathrin	88.7	94.3	136	133	6.15	1.95
	Fipronil	82.6	74.3	80.8	79.1	10.6	2.07
	Fipronil Desulfinyl	82.2	73.8	78.6	77.3	10.8	1.74
	Fipronil Sulfide	80.5	74.2	74.6	73.0	8.22	2.21
	Fipronil Sulfone	81.8	76.0	76.1	76.7	7.35	0.759
	Flumioxazin	103	60.6	117	122	51.6	4.23
	Fonofos	95.1	84.7	94.1	87.6	11.5	7.15
	Gamma-BHC	91.2	96.5	131	120	5.58	8.90
	Gamma-Chlordane	77.6	76.4	83.6	78.6	1.54	6.10
	Heptachlor	66.6	67.7	67.8	69.6	1.57	2.57
	Heptachlor Epoxide	82.9	81.1	87.0	82.3	2.17	5.47
	Hexachlorobenzene	66.8	69.4	64.5	66.3	3.88	2.75
	Hexazinone	85.7	80.5	89.9	87.9	6.18	2.23
	Imazalil	55.1	52.7	59.8	52.3	4.43	13.3
	Lambda-Cyhalothrin	72.5	73.8	85.2	81.0	1.85	5.05
	Malathion	109	102	104	98.9	6.28	4.76
	Metalaxyl	77.2	69.4	75.4	74.9	10.7	0.683
	Methoxychlor	88.2	88.8	91.2	85.8	0.694	6.08
	Metolachlor	74.5	70.5	68.5	69.9	5.52	2.05
	Metribuzin	101	99.1	98.4	99.0	2.33	0.601
	Mevinphos	97.5	81.9	102	104	17.4	1.99
	MGK-264	50.6	50.6	57.5	60.2	0.0356	4.63
	Mirex	68.7	69.1	73.5	70.5	0.523	4.17
	Molinate	65.2	61.6	62.9	67.2	5.70	6.67
	Naled	49.7	45.2	49.2	49.5	9.44	0.523
	Norflurazon	73.1	66.2	69.3	65.0	9.96	6.29
	Oxadiazon	73.3	68.1	62.8	64.4	7.42	2.41
	Parathion Ethyl	87.4	79.4	79.4	82.5	9.58	3.86
	Parathion Methyl	111	98.2	101	106	12.1	4.09
	Pendimethalin	70.8	71.2	71.0	73.6	0.678	3.62
	Permethrin	73.8	73.5	85.9	79.9	0.356	7.23
	Phenothrin	48.0	47.4	66.8	65.7	1.10	1.63
	Phorate	109	115	104	107	4.99	2.45
	Piperonyl Butoxide	88.1	88.4	92.8	90.3	0.313	2.76

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Prallethrin	47.8	45.1	56.0	53.1	5.84		5.38
	Prodiamine	34.8	65.9	40.2	42.5	61.8		5.48
	Prometon	86.8	73.1	84.7	82.5	17.1		2.57
	Prometryn	84.5	80.7	84.9	84.8	4.62		0.127
	Pronamide	92.3	82.9	92.9	89.7	10.8		3.53
	Propiconazole	72.9	65.5	71.7	72.9	10.6		1.61
	Simazine	98.3	88.6	82.6	83.1	10.4		0.536
	Sulfentrazone	56.3	51.0	69.0	68.9	9.92		0.0109
	Tau-Fluvalinate	84.8	87.3	103	102	2.97		1.16
	Tebuconazole	27.9	26.6	28.1	25.1	4.70		11.3
	Terbufos	90.0	84.9	84.0	86.4	5.86		2.78
	Terbutylazine	87.1	79.6	84.1	82.6	8.93		1.79
	Tetramethrin	61.7	60.8	70.4	64.4	1.43		8.94
	Trans-Nonachlor	79.3	77.4	84.0	79.1	2.48		6.04
	Triclosan Methyl	92.5	90.1	95.1	92.2	2.62		3.06
	Trifluralin	73.9	74.0	73.2	71.2	0.0891		2.85
EPA 8276	Chlordane	100	101	105	109	1.12		3.93
	Toxaphene	98.0	103	145	162	5.24		11.5
EPA 8321B	2,4-D	87.0		87.4	76.4			13.4
	3-Hydroxycarbofuran	118		107	115			7.54
	Acesulfame K	114		34.3	36.0			4.72
	Acetaminophen	66.2		57.0	61.7			7.96
	Acetamiprid	82.1		80.2	84.3			4.94
	Afidopyropen	40.5		43.7	45.4			3.98
	Aldicarb	120		98.3	98.9			0.651
	Aldicarb Sulfone	126		129	124			3.97
	Aldicarb Sulfoxide	123		64.7	62.6			3.33
	AMPA	104		85.2	73.5			6.64
	Bentazon	46.0		39.3	38.0			3.44
	Benzovindiflupyr	71.4		73.2	71.7			2.04
	Carbamazepine	59.0		56.4	56.0			0.719
	Carbaryl	63.1		51.6	54.8			5.92
	Carbofuran	57.4		54.2	53.1			2.01
	Clothianidin	80.4		75.3	72.7			2.94
	Dinotefuran	88.0		96.1	96.7			0.605
	Diuron	56.8		52.5	53.3			1.33
	Endothall	99.7		105	114			7.91
	Fenuron	84.3		77.6	80.0			3.08
	Fluridone	71.9		74.2	74.3			0.119
	Glufosinate	99.9		86.4	94.1			8.45
	Glyphosate	99.2		129	94.1			8.12
	Hydrocodone	87.7		75.5	84.6			11.3
	Ibuprofen	44.7		45.3	47.0			3.60
	Imazapyr	84.4		87.8	74.9			15.9
	Imidacloprid	116						7.74
	Linuron	61.8		69.9	67.1			4.21
	Mandestrobin	72.7		79.1	80.5			1.79
	MCPP	74.3		66.0	68.9			4.32
	Methiocarb	74.2		80.5	66.5			19.1
	Methomyl	113		113	109			3.56
	Naproxen	63.3		72.5	55.2			27.1
	Oxamyl	120		119	127			7.11
	Primidone	60.0		84.5	73.8			13.6
	Propoxur	58.2		57.2	56.5			1.27

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Pyraclostrobin	60.5	63.8	64.8		1.57
	Sucralose	99.7	57.4	48.7		10.2
	Thiamethoxam	79.2	75.6	74.2		1.38
	Tolfenpyrad	51.8	57.9	58.3		0.718
	Triclopyr	61.3	52.4	53.7		2.34
SM 2120 B-2011	Color (true)	98.9			2.53	
SM 2320 B-2011	Total Alkalinity	99.2			2.24	
SM 2540 C-2011	TDS				1.35	
SM 4500 F-C-2011	Fluoride	97.3	97.6	98.2		0.514
SM 5310 B-2011	Organic Carbon	101	98.4	100		0.927

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2198231
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2198243
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2198243
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2198231
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2198231
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2198232
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2198232
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2198232
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2198232
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2198233
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2198241
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2198242
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2198241
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2198239
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2198240
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2198240
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2198231
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2198231
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2198243
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2198231
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2198231
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2198231
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2198232

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	09/25/2020			09/25/2020 14:41	Yen Ta	2198231
EPA 200.7 Rev. 4.4	09/25/2020	09/28/2020 17:30	Elliott D. Healy	09/29/2020 21:13	Betina Topolski	2198243
EPA 200.8 Rev. 5.4	09/25/2020	09/28/2020 17:30	Elliott D. Healy	10/01/2020 00:52	Alexander Thompson	2198243
	09/25/2020	09/28/2020 17:30	Elliott D. Healy	10/01/2020 16:59	Alexander Thompson	2198243
EPA 300.0 Rev. 2.1	09/25/2020			09/30/2020 23:58	Lipi Saha	2198231
EPA 350.1 Rev. 2.0	09/25/2020			09/27/2020 11:00	Ping Hua	2198232
EPA 351.2 Rev. 2.0	09/25/2020	09/29/2020 15:45	David Boose	09/30/2020 13:11	Elliott Rodriguez	2198232
EPA 353.2 Rev. 2.0	09/25/2020			09/28/2020 10:02	Beverly Y. Sanders	2198232
EPA 365.1 Rev. 2.0	09/25/2020	10/06/2020 12:50	Yen Ta	10/08/2020 11:55	Lipi Saha	2198232
EPA 365.1 Rev. 2.0 dissolved	09/25/2020			09/25/2020 17:10	Julia Storbeck	2198233
EPA 8270E	09/25/2020	09/25/2020 14:00	Fe-Val Siddell	09/28/2020 20:43	Vandana T. Nagar	2198242
	09/25/2020	09/25/2020 14:00	Fe-Val Siddell	09/29/2020 16:40	Vandana T. Nagar	2198242
	09/25/2020	09/29/2020 08:30	Rasheda Ghaffari	09/30/2020 23:15	Michael Poppell	2198241
EPA 8276	09/25/2020	09/29/2020 08:30	Rasheda Ghaffari	10/03/2020 12:24	Arthur Maknenko	2198241
EPA 8321B	09/25/2020	09/28/2020 09:15	Rebecca Ware	09/28/2020 12:43	Rebecca Ware	2198240
	09/25/2020	09/28/2020 09:15	Rebecca Ware	09/29/2020 13:05	Rebecca Ware	2198240
	09/25/2020	09/28/2020 09:15	Rebecca Ware	09/30/2020 19:53	Rebecca Ware	2198240
	09/25/2020	09/30/2020 11:00	Hoor Shaik	10/01/2020 07:37	Juyoung Kim	2198239
	09/25/2020	10/01/2020 09:00	Hoor Shaik	10/06/2020 06:29	Juyoung Kim	2198240
SM 2120 B-2011	09/25/2020			09/25/2020 15:51	Benjamin T. Nordmann	2198231
SM 2320 B-2011	09/25/2020			09/30/2020 20:55	Dale L. Simmons	2198231
SM 2340B	09/25/2020			09/29/2020 21:13	Betina Topolski	2198243
SM 2540 C-2011	09/25/2020			09/28/2020 15:25	Yijie Li	2198231
SM 2540 D-2011	09/25/2020			09/28/2020 15:25	Yijie Li	2198231
SM 4500 F-C-2011	09/25/2020			09/30/2020 20:46	Dale L. Simmons	2198231
SM 5310 B-2011	09/25/2020			09/29/2020 10:38	David Boose	2198232