

Chemical Analysis Report

TLH-ROC-2020-09-30-01

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

Event Description: **Run 4b**
Request ID: **RQ-2020-09-28-50**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 20-OCT-2020 09:41

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Mosquito Creek @ Sr269

Collection Date/Time: 09/30/2020 10:45

Field ID: G2TLHR0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2199126	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P388060	
	EPA 300.0 Rev. 2.1	Chloride	3.5		mg Cl/L	P388513	
		Sulfate	0.99		mg SO4/L	P388515	
	SM 2120 B-2011	Color (true)	180		PCU	P388068	
	SM 2320 B-2011	Total Alkalinity	23		mg CaCO3/L	P388140	
	SM 2540 C-2011	TDS	59		mg/L	P388481	
	SM 2540 D-2011	TSS	8	IA	mg/L	P388470	
	SM 4500 F-C-2011	Fluoride	0.057	I	mg F/L	P388143	
2199127	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P388176	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P388384	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P388145	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P388157	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P388191	
2199128	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P388071	
2199136	EPA 8321B	Aldicarb	0.020	U	ug/L	P387915	
		Aldicarb Sulfone	0.0020	U	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	0.0090		ug/L	P387915	
		Oxamyl	0.0020	U	ug/L	P387915	
		Propoxur	0.0020	U	ug/L	P387915	
		2,4-D	0.0020	U	ug/L	P388044	
		Acesulfame K**	0.10	U	ug/L	P388001	
		AMPA**	0.10	U	ug/L	P388001	
2199137		Sucralose**	0.030	I	ug/L	P388001	
		Acetaminophen**	0.019	I	ug/L	P388044	
		Acetamiprid**	0.0020	U	ug/L	P388044	
		Endothall**	0.25	U	ug/L	P388001	
		Glufosinate**	0.10	U	ug/L	P388001	
		Glyphosate**	0.10	U	ug/L	P388001	
		Afidopyropen**	0.0020	U	ug/L	P388044	
		Bentazon	0.0023	I	ug/L	P388044	
		Benzovindiflupyr**	0.011		ug/L	P388044	
		Carbamazepine**	8.0E-04	U	ug/L	P388044	
		Clothianidin**	0.0020	U	ug/L	P388044	
		Dinotefuran**	0.056		ug/L	P388044	
		Diuron	0.0020	U	ug/L	P388044	
		Fenuron	0.016	U	ug/L	P388044	
		Fluridone**	8.0E-04	U	ug/L	P388044	
		Imazapyr**	0.080		ug/L	P388044	

Field ID: G2TLHR0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2199137	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P388044	
		Ibuprofen**	0.020	U	ug/L	P388044	
		Imidacloprid	0.0096		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**	0.0020	U	ug/L	P388044	
		Tolfenpyrad**	0.0020	U	ug/L	P388044	
		Triclopyr**	0.0040	U	ug/L	P388044	
2199138	EPA 8270E	Aldrin	4.3	UJ	ng/L	P388002	LCS, RPD
		Alpha-BHC	2.1	U	ng/L	P388002	
		Alpha-Chlordane	1.1	U	ng/L	P388002	
		Beta-BHC	8.6	U	ng/L	P388002	
		Beta-Cyfluthrin**	16	U	ng/L	P388002	
		Bifenthrin**	4.3	U	ng/L	P388002	
		Delta-BHC	8.6	U	ng/L	P388002	
		Gamma-BHC	8.6	U	ng/L	P388002	
		Chlorothalonil	2.1	U	ng/L	P388002	
		Cis-Nonachlor**	1.1	U	ng/L	P388002	
		Cypermethrin	21	U	ng/L	P388002	
		Dacthal**	1.1	U	ng/L	P388002	
		DDD-p,p'	5.4	U	ng/L	P388002	
		DDE-p,p'	5.4	U	ng/L	P388002	
		DDT-p,p'	6.4	U	ng/L	P388002	
		Deltamethrin**	21	U	ng/L	P388002	
		Dicofol	32	U	ng/L	P388002	
		Dieldrin	4.3	U	ng/L	P388002	
		Endosulfan I	4.3	U	ng/L	P388002	
		Endosulfan II	4.3	U	ng/L	P388002	
		Endosulfan Sulfate	2.1	U	ng/L	P388002	
		Endrin	2.1	U	ng/L	P388002	
		Endrin Aldehyde	2.1	U	ng/L	P388002	RPD
		Endrin Ketone	2.1	U	ng/L	P388002	
		Ethalfuralin**	3.2	U	ng/L	P388002	
		Gamma-Chlordane	1.1	U	ng/L	P388002	
		Dichlobenil**	2.1	U	ng/L	P388002	
		Esfenvalerate**	21	U	ng/L	P388002	
		Fenpropathrin**	11	U	ng/L	P388002	
		Heptachlor	1.6	U	ng/L	P388002	
		Heptachlor Epoxide	2.1	U	ng/L	P388002	
		Hexachlorobenzene	2.1	U	ng/L	P388002	
		Lambda-Cyhalothrin**	16	U	ng/L	P388002	

Field ID: G2TLHR0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2199138	EPA 8270E	Methoxychlor	4.3	U	ng/L	P388002	LCS, RPD
		Mirex	2.1	U	ng/L	P388002	
		MGK-264**	3.2	UJ	ng/L	P388002	
		Permethrin	11	I	ng/L	P388002	
		Phenothrin**	32	UJ	ng/L	P388002	
		Piperonyl Butoxide**	1.6	U	ng/L	P388002	RPD
		Prallethrin**	27	U	ng/L	P388002	
		Tau-Fluvalinate**	3.7	U	ng/L	P388002	
		Tetramethrin**	8.6	U	ng/L	P388002	
		Trans-Nonachlor**	1.1	U	ng/L	P388002	
		Triclosan Methyl**	1.1	U	ng/L	P388002	
		Trifluralin	2.7	U	ng/L	P388002	MS
		Chlordane	5.4	U	ng/L	P388002	
		Toxaphene	32	U	ng/L	P388002	
2199139	EPA 8270E						LCS, MS
		Acetochlor	0.24	U	ng/L	P388150	
		Alachlor	0.24	U	ng/L	P388150	
		Ametryn	0.57	U	ng/L	P388150	
		Atrazine	1.6		ng/L	P388150	
		Atrazine Desethyl	1.4	U	ng/L	P388150	
		Azinphos Methyl	1.9	U	ng/L	P388150	
		Bromacil	0.48	U	ng/L	P388150	
		Butylate	0.38	U	ng/L	P388150	
		Carbophenothion	0.48	U	ng/L	P388150	
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P388150	
		Chlorpyrifos Methyl	0.048	U	ng/L	P388150	
		Cyanazine	3.1	U	ng/L	P388150	
		Demeton	1.4	U	ng/L	P388150	
		Diazinon	0.12	U	ng/L	P388150	
		Dimethenamid**	0.095	U	ng/L	P388150	
		Disulfoton	0.48	U	ng/L	P388150	
		Dithiopyr**	0.095	U	ng/L	P388150	
		EPTC	1.2	U	ng/L	P388150	
		Ethion	0.14	U	ng/L	P388150	
		Ethoprop	0.095	U	ng/L	P388150	
		Fenamiphos	0.48	U	ng/L	P388150	
		Fipronil	0.24	U	ng/L	P388150	
		Fipronil Desulfinyl**	0.12	U	ng/L	P388150	
		Fipronil Sulfide	0.14	U	ng/L	P388150	
		Fipronil Sulfone	0.14	U	ng/L	P388150	
		Flumioxazin**	1.7	U	ng/L	P388150	
		Fonofos	0.19	U	ng/L	P388150	
		Hexazinone	0.48	U	ng/L	P388150	
		Imazalil**	0.71	U	ng/L	P388150	
		Malathion	0.33	U	ng/L	P388150	
		Metalaxyl	0.71	U	ng/L	P388150	

Field ID: G2TLHR0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2199139	EPA 8270E	Metolachlor	18		ng/L	P388150	
		Metribuzin	3.6	I	ng/L	P388150	
		Mevinphos	0.48	U	ng/L	P388150	
		Molinate	0.29	U	ng/L	P388150	
		Naled**	1.4	U	ng/L	P388150	
		Norflurazon	0.48	U	ng/L	P388150	
		Oxadiazon	0.095	U	ng/L	P388150	
		Parathion Ethyl	0.24	U	ng/L	P388150	
		Parathion Methyl	0.52	U	ng/L	P388150	
		Pendimethalin	0.95	U	ng/L	P388150	
		Phorate	0.24	U	ng/L	P388150	
		Prodiamine**	0.17	U	ng/L	P388150	
		Prometon	0.86	U	ng/L	P388150	
		Prometryn	0.19	U	ng/L	P388150	
		Pronamide**	0.14	U	ng/L	P388150	
		Propiconazole**	0.48	U	ng/L	P388150	
		Simazine	0.48	U	ng/L	P388150	
		Sulfentrazone**	0.62	I	ng/L	P388150	
		Tebuconazole**	1.5	I	ng/L	P388150	
		Terbufos	0.095	U	ng/L	P388150	
		Terbutylazine	0.40	U	ng/L	P388150	
2199140	EPA 200.7 Rev. 4.4	Barium	26.0		ug/L	P388115	
		Calcium	6.91		mg/L	P388115	
		Iron	1.25E+03		ug/L	P388115	
		Magnesium	2.73		mg/L	P388115	
		Potassium	1.3		mg/L	P388115	
		Sodium	1.8	I	mg/L	P388115	
		Zinc	5.0	U	ug/L	P388115	
	EPA 200.8 Rev. 5.4	Aluminum	775		ug/L	P388115	
		Antimony	0.050	U	ug/L	P388115	
		Arsenic	0.76		ug/L	P388115	
		Beryllium	0.046		ug/L	P388115	
		Boron**	15.3		ug/L	P388115	
		Cadmium	0.020	U	ug/L	P388115	
		Chromium	1.1	I	ug/L	P388115	
		Copper	2.21		ug/L	P388115	
		Lead	0.57		ug/L	P388115	
		Nickel	0.56	I	ug/L	P388115	
	SM 2340B	Selenium	0.20	U	ug/L	P388115	
		Silver	0.010	U	ug/L	P388115	
		Thallium	0.10	U	ug/L	P388115	
		Hardness	28.5		mg/L	P388115	

Field ID: G2TLHR0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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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 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: MS accuracy for some 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.

Sample Location: Mosquito Creek @ Jinks Crossing Rd

Collection Date/Time: 09/30/2020 11:25

Field ID: G2TLHR0092

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2199129	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P388060	
	EPA 300.0 Rev. 2.1	Chloride	3.5		mg Cl/L	P388513	
		Sulfate	0.80		mg SO4/L	P388515	
		Color (true)	190		PCU	P388068	
	SM 2320 B-2011	Total Alkalinity	12		mg CaCO3/L	P388140	
	SM 2540 C-2011	TDS	54		mg/L	P388480	
	SM 2540 D-2011	TSS	2	I	mg/L	P388469	
2199130	SM 4500 F-C-2011	Fluoride	0.052	I	mg F/L	P388143	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P388176	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P388384	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P388145	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P388157	
2199131	SM 5310 B-2011	Organic Carbon	15		mg C/L	P388191	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P388071	
2199141	EPA 200.7 Rev. 4.4	Barium	26.2		ug/L	P388115	
		Calcium	4.68		mg/L	P388115	
		Iron	1.22E+03		ug/L	P388115	
		Magnesium	2.09		mg/L	P388115	
		Potassium	1.5		mg/L	P388115	
		Sodium	1.7	I	mg/L	P388115	
		Zinc	5.7	I	ug/L	P388115	
	EPA 200.8 Rev. 5.4	Aluminum	768		ug/L	P388115	
		Antimony	0.050	U	ug/L	P388115	
		Arsenic	0.77		ug/L	P388115	
		Beryllium	0.040	I	ug/L	P388115	
		Boron**	14.8		ug/L	P388115	
		Cadmium	0.020	U	ug/L	P388115	
		Chromium	1.0	I	ug/L	P388115	
		Copper	3.87		ug/L	P388115	
		Lead	0.51		ug/L	P388115	
		Nickel	0.58	I	ug/L	P388115	
		Selenium	0.20	U	ug/L	P388115	
		Silver	0.010	U	ug/L	P388115	
		Thallium	0.10	U	ug/L	P388115	
	SM 2340B	Hardness	20.3		mg/L	P388115	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 10/08/2020. The copper result was confirmed on 10/14/2020.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P388060

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P388115

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: P388115

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
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: P388513

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388515

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P388176

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: P388384

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388145

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388157

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P388071

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

Reference Method: EPA 8270E
Batch ID: P388002

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P388002

Component	Result	Code	Units
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 8270E
Batch ID: P388150

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
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P388150

Component	Result	Code	Units
Metalaxyl	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 8276
Batch ID: P388002

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/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
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P388001

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P388001

Component	Result	Code	Units
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	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: P388068

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P388140

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

Reference Method: SM 2540 C-2011
Batch ID: P388480

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P388481

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P388469

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P388470

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P388143

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P388191

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: P388115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	102		P	85 - 115
Iron	105		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	98.4		P	85 - 115
Sodium	97.5		P	85 - 115
Zinc	99.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P388115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	97.0		P	85 - 115
Boron	99.8		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	102		P	85 - 115
Copper	101		P	85 - 115
Lead	98.8		P	85 - 115
Nickel	102		P	85 - 115
Selenium	101		P	85 - 115
Silver	98.9		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388513

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388515

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P388176

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P388384

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388145

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	100		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388157

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P388071

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

Reference Method: EPA 8270E
Batch ID: P388002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	19.1	45.5	F/P	20 - 87.0
Alpha-BHC	80.2	87.4	P/P	65 - 142
Alpha-Chlordane	86.0	87.9	P/P	58 - 106
Beta-BHC	95.4	88.3	P/P	65 - 179
Beta-Cyfluthrin	69.1	77.8	P/P	39 - 153
Bifenthrin	68.5	72.7	P/P	38 - 128
Chlorothalonil	87.7	71.1	P/P	20 - 214
Cis-Nonachlor	89.4	89.6	P/P	56 - 113
Cypermethrin	76.6	78.7	P/P	37 - 130
Dacthal	99.3	96.1	P/P	75 - 109
DDD-p,p'	94.3	94.7	P/P	66 - 119
DDE-p,p'	81.0	83.2	P/P	53 - 108
DDT-p,p'	76.0	81.2	P/P	57 - 133
Delta-BHC	109	103	P/P	68 - 187
Deltamethrin	81.0	88.6	P/P	50 - 200
Dichlobenil	39.0	34.6	P/P	25 - 140
Dicofol	81.0	87.4	P/P	66 - 123
Dieldrin	89.6	90.7	P/P	65 - 111
Endosulfan I	98.2	95.2	P/P	65 - 115
Endosulfan II	105	101	P/P	68 - 133
Endosulfan Sulfate	88.7	86.5	P/P	62 - 127
Endrin	98.3	99.1	P/P	64 - 122
Endrin Aldehyde	74.3	87.8	P/P	61 - 132
Endrin Ketone	89.5	85.0	P/P	66 - 120
Esfenvalerate	73.4	77.4	P/P	50 - 150
Ethalfuralin	69.2	73.7	P/P	57 - 127
Fenpropathrin	92.2	102	P/P	60 - 160
Gamma-BHC	93.9	91.4	P/P	71 - 158
Gamma-Chlordane	80.2	83.9	P/P	53 - 106
Heptachlor	66.0	70.4	P/P	45 - 96.0
Heptachlor Epoxide	92.7	91.9	P/P	64 - 109
Hexachlorobenzene	57.4	59.3	P/P	46 - 103
Lambda-Cyhalothrin	67.9	70.5	P/P	38 - 145
Methoxychlor	81.8	81.1	P/P	69 - 149

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P388002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
MGK-264	37.8	55.6	F/P	50 - 150
Mirex	57.4	63.0	P/P	31 - 90.0
Permethrin	71.1	74.7	P/P	41 - 108
Phenothrin	28.9	50.7	P/P	22 - 91.0
Piperonyl Butoxide	97.3	99.2	P/P	50 - 150
Prallethrin	43.0	57.8	P/P	32 - 92.0
Tau-Fluvalinate	79.6	87.3	P/P	50 - 150
Tetramethrin	63.6	68.2	P/P	60 - 160
Trans-Nonachlor	73.0	75.7	P/P	50 - 107
Triclosan Methyl	101	99.3	P/P	50 - 150
Trifluralin	67.7	69.8	P/P	58 - 119

Reference Method: EPA 8270E

Batch ID: P388150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	98.3	80.7	P/P	71 - 122
Alachlor	96.1	83.3	P/P	70 - 121
Ametryn	104	86.6	P/P	49 - 137
Atrazine	93.2	83.1	P/P	76 - 125
Atrazine Desethyl	91.4	85.4	P/P	31 - 144
Azinphos Methyl	136	115	P/P	67 - 150
Bromacil	92.8	84.4	P/P	36 - 121
Butylate	64.0	61.8	P/P	33 - 88.0
Carbophenothion	87.0	72.7	P/P	66 - 116
Chlorpyrifos Ethyl	84.8	71.9	P/F	73 - 117
Chlorpyrifos Methyl	94.6	76.5	P/P	68 - 121
Cyanazine	128	106	P/P	20 - 250
Demeton	73.8	66.5	P/P	30 - 123
Diazinon	95.7	84.8	P/P	70 - 128
Dimethenamid	99.1	82.9	P/P	66 - 122
Disulfoton	72.7	59.4	P/P	46 - 124
Dithiopyr	92.0	79.5	P/P	69 - 122
EPTC	62.6	61.7	P/P	31 - 90.0
Ethion	81.6	70.1	P/P	45 - 135
Ethoprop	88.7	77.5	P/P	59 - 118
Fenamiphos	98.9	83.8	P/P	30 - 136
Fipronil	108	91.6	P/P	57 - 127
Fipronil Desulfinyl	94.1	80.0	P/P	51 - 122
Fipronil Sulfide	85.7	76.8	P/P	57 - 119
Fipronil Sulfone	82.4	70.0	P/P	51 - 119
Flumioxazin	182	156	P/P	20 - 250
Fonofos	81.1	69.1	P/P	60 - 120
Hexazinone	89.0	80.3	P/P	57 - 142
Imazalil	87.7	79.5	P/P	30 - 139
Malathion	101	85.1	P/P	67 - 128
Metalaxyl	90.5	77.2	P/P	21 - 148
Metolachlor	96.5	82.0	P/P	70 - 120
Metribuzin	94.7	83.9	P/P	20 - 250
Mevinphos	81.4	76.1	P/P	47 - 116
Molinate	72.2	69.2	P/P	41 - 99.0
Naled	61.2	58.2	P/P	38 - 97.0

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P388150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Norflurazon	97.8	83.4	P/P	54 - 127
Oxadiazon	85.5	72.3	P/P	65 - 122
Parathion Ethyl	93.4	80.1	P/P	71 - 113
Parathion Methyl	99.3	84.8	P/P	73 - 129
Pendimethalin	91.7	71.7	P/P	63 - 130
Phorate	80.1	68.3	P/P	48 - 118
Prodiamine	81.4	78.2	P/P	20 - 144
Prometon	96.9	84.4	P/P	53 - 120
Prometryn	103	86.4	P/P	63 - 119
Pronamide	101	84.4	P/P	81 - 122
Propiconazole	109	89.7	P/P	62 - 124
Simazine	95.2	86.3	P/P	77 - 129
Sulfentrazone	97.6	82.1	P/P	20 - 137
Tebuconazole	73.9	68.4	P/P	20 - 118
Terbufos	81.1	69.2	P/P	61 - 119
Terbutylazine	89.5	77.9	P/P	75 - 119

Reference Method: EPA 8276

Batch ID: P388002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	109	110	P/P	47 - 119
Toxaphene	96.0	106	P/P	41 - 112

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

Reference Method: EPA 8321B

Batch ID: P388001

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	133		P	40 - 150
AMPA	47.8		P	40 - 150
Endothall	95.3		P	40 - 150
Glufosinate	85.4		P	40 - 150
Glyphosate	96.9		P	40 - 140
Sucralose	103		P	40 - 150

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: P388068

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.6		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P388140

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

Reference Method: SM 4500 F-C-2011
Batch ID: P388143

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P388191

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P388115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199105	Barium	98.4		P	80 - 120
2199105	Calcium	102		P	80 - 120
2199105	Iron	105		P	80 - 120
2199105	Magnesium	105		P	80 - 120
2199105	Potassium	101		P	80 - 120
2199105	Sodium	98.7		P	80 - 120
2199105	Zinc	101		P	80 - 120
2199170	Barium	102	98.9	P/P	80 - 120
2199170	Calcium	90.0		P	80 - 120
2199170	Iron	110	104	P/P	80 - 120
2199170	Magnesium	109	103	P/P	80 - 120
2199170	Potassium	102	96.2	P/P	80 - 120
2199170	Sodium	87.6		P	80 - 120
2199170	Zinc	100	96.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P388115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199105	Aluminum	99.4		P	80 - 120
2199105	Antimony	104		P	80 - 120
2199105	Arsenic	100		P	80 - 120
2199105	Beryllium	98.0		P	80 - 120
2199105	Boron	98.1		P	80 - 120
2199105	Cadmium	100		P	80 - 120
2199105	Chromium	104		P	80 - 120
2199105	Copper	99.4		P	80 - 120
2199105	Lead	97.3		P	80 - 120
2199105	Nickel	101		P	80 - 120
2199105	Selenium	98.9		P	80 - 120
2199105	Silver	96.8		P	80 - 120
2199105	Thallium	104		P	80 - 120
2199170	Aluminum	102	101	P/P	80 - 120
2199170	Antimony	105	104	P/P	80 - 120
2199170	Arsenic	104	104	P/P	80 - 120
2199170	Beryllium	102	102	P/P	80 - 120
2199170	Boron	98.9	98.6	P/P	80 - 120
2199170	Cadmium	102	103	P/P	80 - 120
2199170	Chromium	103	103	P/P	80 - 120
2199170	Copper	107	107	P/P	80 - 120
2199170	Lead	98.6	100	P/P	80 - 120
2199170	Nickel	106	106	P/P	80 - 120
2199170	Selenium	103	104	P/P	80 - 120
2199170	Silver	98.6	98.4	P/P	80 - 120
2199170	Thallium	99.3	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388513

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199113	Chloride	102		P	90 - 110
2199571	Chloride	102		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199113	Sulfate	100		P	90 - 110
2199571	Sulfate	96.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P388176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199114	Ammonia-N	99.3	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P388384

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199078	Kjeldahl Nitrogen	96.4	97.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199114	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388157

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199024	Total-P	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P388071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199128	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P388002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198914	Aldrin	46.8	44.9	P/P	32 - 82.0
2198914	Alpha-BHC	83.7	76.6	P/P	68 - 157
2198914	Alpha-Chlordane	86.0	79.9	P/P	54 - 108
2198914	Beta-BHC	99.3	96.6	P/P	54 - 200
2198914	Beta-Cyfluthrin	85.7	71.6	P/P	50 - 154
2198914	Bifenthrin	76.5	66.4	P/P	49 - 124
2198914	Chlorothalonil	101	92.5	P/P	10 - 289
2198914	Cis-Nonachlor	83.5	82.2	P/P	53 - 112
2198914	Cypermethrin	86.0	70.8	P/P	43 - 141
2198914	Dacthal	93.6	95.4	P/P	75 - 112
2198914	DDD-p,p'	89.7	86.6	P/P	58 - 125
2198914	DDE-p,p'	78.7	76.1	P/P	50 - 108
2198914	DDT-p,p'	83.0	72.2	P/P	52 - 140
2198914	Delta-BHC	126	130	P/P	61 - 228
2198914	Deltamethrin	92.7	82.0	P/P	50 - 200

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P388002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198914	Dichlobenil	56.7	59.8	P/P	25 - 140
2198914	Dicofol	83.0	67.8	P/P	59 - 130
2198914	Dieldrin	89.0	86.6	P/P	57 - 121
2198914	Endosulfan I	92.3	95.3	P/P	62 - 123
2198914	Endosulfan II	100	103	P/P	48 - 163
2198914	Endosulfan Sulfate	89.9	84.5	P/P	63 - 132
2198914	Endrin	93.1	85.4	P/P	58 - 128
2198914	Endrin Aldehyde	65.2	115	P/P	44 - 126
2198914	Endrin Ketone	89.8	80.3	P/P	68 - 127
2198914	Esfenvalerate	89.3	79.3	P/P	50 - 150
2198914	Ethalfuralin	70.6	63.2	P/P	55 - 131
2198914	Fenpropathrin	131	139	P/P	60 - 160
2198914	Gamma-BHC	102	95.5	P/P	54 - 206
2198914	Gamma-Chlordane	80.1	75.6	P/P	52 - 105
2198914	Heptachlor	66.0	63.4	P/P	47 - 94.0
2198914	Heptachlor Epoxide	87.9	86.5	P/P	61 - 113
2198914	Hexachlorobenzene	60.6	51.9	P/P	45 - 100
2198914	Lambda-Cyhalothrin	75.1	66.8	P/P	37 - 165
2198914	Methoxychlor	77.9	68.6	P/P	63 - 153
2198914	MGK-264	69.1	69.4	P/P	50 - 150
2198914	Mirex	61.7	55.1	P/P	38 - 90.0
2198914	Permethrin	76.7	65.6	P/P	45 - 112
2198914	Phenothrin	55.8	46.2	P/P	22 - 118
2198914	Piperonyl Butoxide	103	81.7	P/P	50 - 150
2198914	Prallethrin	57.6	54.2	P/P	21 - 114
2198914	Tau-Fluvalinate	95.7	84.3	P/P	50 - 150
2198914	Tetramethrin	95.1	77.8	P/P	60 - 160
2198914	Trans-Nonachlor	71.4	67.9	P/P	50 - 103
2198914	Triclosan Methyl	94.1	92.1	P/P	50 - 150
2198914	Trifluralin	70.6	64.4	P/P	57 - 122

Reference Method: EPA 8270E
Batch ID: P388150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199063	Acetochlor	88.7	90.9	P/P	68 - 126
2199063	Alachlor	84.1	90.9	P/P	66 - 125
2199063	Ametryn	120	125	P/P	31 - 182
2199063	Atrazine Desethyl	99.7	111	P/P	13 - 161
2199063	Azinphos Methyl	114	119	P/P	54 - 162
2199063	Butylate	63.1	64.5	P/P	16 - 92.0
2199063	Carbophenothion	76.0	76.4	P/P	30 - 131
2199063	Chlorpyrifos Ethyl	68.5	62.9	P/F	63 - 124
2199063	Chlorpyrifos Methyl	84.3	84.8	P/P	64 - 125
2199063	Cyanazine	99.8	134	P/P	13 - 245
2199063	Demeton	74.5	79.1	P/P	20 - 154
2199063	Diazinon	94.6	99.3	P/P	66 - 141
2199063	Dimethenamid	84.7	88.7	P/P	50 - 130
2199063	Disulfoton	84.0	87.3	P/P	55 - 130
2199063	Dithiopyr	81.1	84.9	P/P	66 - 122
2199063	EPTC	70.5	71.5	P/P	15 - 93.0
2199063	Ethion	52.3	61.6	P/P	15 - 148

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P388150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199063	Ethoprop	89.1	87.8	P/P	59 - 126
2199063	Fenamiphos	57.9	77.2	P/P	39 - 137
2199063	Fipronil	93.9	106	P/P	47 - 131
2199063	Fipronil Desulfinyl	84.8	92.0	P/P	43 - 121
2199063	Fipronil Sulfide	75.2	70.6	P/P	29 - 134
2199063	Fipronil Sulfone	81.3	88.6	P/P	19 - 131
2199063	Flumioxazin	156	172	P/P	10 - 300
2199063	Fonofos	84.8	86.3	P/P	62 - 128
2199063	Hexazinone	87.3	91.1	P/P	58 - 154
2199063	Imazalil	58.5	65.4	P/P	10 - 215
2199063	Malathion	85.5	89.7	P/P	54 - 135
2199063	Metalaxyl	80.9	89.3	P/P	46 - 136
2199063	Metribuzin	96.5	106	P/P	44 - 277
2199063	Mevinphos	96.6	94.9	P/P	44 - 135
2199063	Molinate	73.8	74.3	P/P	31 - 104
2199063	Naled	64.4	66.5	P/P	33 - 113
2199063	Oxadiazon	72.7	81.2	P/P	55 - 123
2199063	Parathion Ethyl	90.9	88.7	P/P	67 - 120
2199063	Parathion Methyl	99.8	101	P/P	70 - 140
2199063	Pendimethalin	87.8	93.6	P/P	59 - 145
2199063	Phorate	84.9	87.0	P/P	52 - 127
2199063	Prodiamine	106	114	P/P	11 - 157
2199063	Prometon	99.9	101	P/P	55 - 130
2199063	Prometryn	98.3	106	P/P	55 - 127
2199063	Pronamide	75.1	94.8	P/P	66 - 150
2199063	Propiconazole	119	131	P/P	14 - 178
2199063	Simazine	104	109	P/P	58 - 159
2199063	Tebuconazole	48.0	59.8	P/P	10 - 122
2199063	Terbufos	89.2	90.0	P/P	65 - 131
2199063	Terbutylazine	85.4	90.5	P/P	63 - 131

Reference Method: EPA 8276
Batch ID: P388002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198923	Chlordane	112	111	P/P	34 - 129
2198923	Toxaphene	141	154	P/F	16 - 148

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P388001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198705	Acesulfame K	137	133	P/P	40 - 150
2198705	AMPA	112	119	P/P	40 - 150
2198705	Endothall	88.3	85.8	P/P	40 - 150
2198705	Glufosinate	93.9	95.7	P/P	40 - 150
2198705	Glyphosate	79.7	79.7	P/P	40 - 140
2198705	Sucralose	103	103	P/P	40 - 150

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	MCCP	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: P388143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2198888	Fluoride	99.8	99.8	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P388191

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2199040	Organic Carbon	106		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P388060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199144	Turbidity	6.06	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P388115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199170	Barium	3.08	Spike	P	0 - 20
2199170	Calcium	4.39	Spike	P	0 - 20
2199170	Iron	4.93	Spike	P	0 - 20
2199170	Magnesium	4.76	Spike	P	0 - 20
2199170	Potassium	4.35	Spike	P	0 - 20
2199170	Sodium	4.74	Spike	P	0 - 20
2199170	Zinc	3.24	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P388115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199170	Aluminum	0.484	Spike	P	0 - 20
2199170	Antimony	0.664	Spike	P	0 - 20
2199170	Arsenic	0.604	Spike	P	0 - 20
2199170	Beryllium	0.0606	Spike	P	0 - 20
2199170	Boron	0.267	Spike	P	0 - 20
2199170	Cadmium	1.48	Spike	P	0 - 20
2199170	Chromium	0.136	Spike	P	0 - 20
2199170	Copper	0.0196	Spike	P	0 - 20
2199170	Lead	1.61	Spike	P	0 - 20
2199170	Nickel	0.0553	Spike	P	0 - 20
2199170	Selenium	0.751	Spike	P	0 - 20
2199170	Silver	0.228	Spike	P	0 - 20
2199170	Thallium	2.36	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199571	Chloride	1.02	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P388515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199571	Sulfate	1.37	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P388176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199114	Ammonia-N	1.48	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P388384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199078	Kjeldahl Nitrogen	0.557	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P388145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199114	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P388157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199024	Total-P	1.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P388071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199128	O-Phosphate-P	0.321	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P388002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198914	Aldrin	4.34	Spike	P	0 - 30
2198914	Alpha-BHC	8.85	Spike	P	0 - 30
2198914	Alpha-Chlordane	7.46	Spike	P	0 - 30
2198914	Beta-BHC	2.75	Spike	P	0 - 30
2198914	Beta-Cyfluthrin	18.0	Spike	P	0 - 30
2198914	Bifenthrin	14.2	Spike	P	0 - 30
2198914	Chlorothalonil	8.51	Spike	P	0 - 30
2198914	Cis-Nonachlor	1.56	Spike	P	0 - 30
2198914	Cypermethrin	19.5	Spike	P	0 - 30
2198914	Dacthal	1.88	Spike	P	0 - 30
2198914	DDD-p,p'	3.52	Spike	P	0 - 30
2198914	DDE-p,p'	3.36	Spike	P	0 - 30
2198914	DDT-p,p'	13.9	Spike	P	0 - 30
2198914	Delta-BHC	2.82	Spike	P	0 - 30
2198914	Deltamethrin	12.2	Spike	P	0 - 30
2198914	Dichlobenil	5.42	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P388002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198914	Dicofol	20.2	Spike	P	0 - 30
2198914	Dieldrin	2.73	Spike	P	0 - 30
2198914	Endosulfan I	3.18	Spike	P	0 - 30
2198914	Endosulfan II	2.12	Spike	P	0 - 30
2198914	Endosulfan Sulfate	6.20	Spike	P	0 - 30
2198914	Endrin	8.59	Spike	P	0 - 30
2198914	Endrin Aldehyde	55.3	Spike	F	0 - 30
2198914	Endrin Ketone	11.2	Spike	P	0 - 30
2198914	Esfenvalerate	11.9	Spike	P	0 - 30
2198914	Ethalfuralin	11.1	Spike	P	0 - 30
2198914	Fenpropathrin	5.85	Spike	P	0 - 30
2198914	Gamma-BHC	6.97	Spike	P	0 - 30
2198914	Gamma-Chlordane	5.83	Spike	P	0 - 30
2198914	Heptachlor	4.03	Spike	P	0 - 30
2198914	Heptachlor Epoxide	1.69	Spike	P	0 - 30
2198914	Hexachlorobenzene	15.5	Spike	P	0 - 30
2198914	Lambda-Cyhalothrin	11.7	Spike	P	0 - 30
2198914	Methoxychlor	12.7	Spike	P	0 - 30
2198914	MGK-264	0.312	Spike	P	0 - 30
2198914	Mirex	11.3	Spike	P	0 - 30
2198914	Permethrin	15.7	Spike	P	0 - 30
2198914	Phenothrin	18.9	Spike	P	0 - 30
2198914	Piperonyl Butoxide	23.4	Spike	P	0 - 30
2198914	Prallethrin	6.02	Spike	P	0 - 30
2198914	Tau-Fluvalinate	12.7	Spike	P	0 - 30
2198914	Tetramethrin	20.0	Spike	P	0 - 30
2198914	Trans-Nonachlor	5.09	Spike	P	0 - 30
2198914	Triclosan Methyl	2.11	Spike	P	0 - 30
2198914	Trifluralin	9.14	Spike	P	0 - 30
LFB	Aldrin	81.8	LCS	F	0 - 30
LFB	Alpha-BHC	8.55	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.15	LCS	P	0 - 30
LFB	Beta-BHC	7.66	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	11.9	LCS	P	0 - 30
LFB	Bifenthrin	5.98	LCS	P	0 - 30
LFB	Chlorothalonil	20.9	LCS	P	0 - 30
LFB	Cis-Nonachlor	0.299	LCS	P	0 - 30
LFB	Cypermethrin	2.76	LCS	P	0 - 30
LFB	Dacthal	3.29	LCS	P	0 - 30
LFB	DDD-p,p'	0.454	LCS	P	0 - 30
LFB	DDE-p,p'	2.65	LCS	P	0 - 30
LFB	DDT-p,p'	6.50	LCS	P	0 - 30
LFB	Delta-BHC	5.60	LCS	P	0 - 30
LFB	Deltamethrin	8.97	LCS	P	0 - 30
LFB	Dichlobenil	12.0	LCS	P	0 - 30
LFB	Dicofol	7.61	LCS	P	0 - 30
LFB	Dieldrin	1.20	LCS	P	0 - 30
LFB	Endosulfan I	3.13	LCS	P	0 - 30
LFB	Endosulfan II	3.55	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.53	LCS	P	0 - 30
LFB	Endrin	0.752	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P388002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endrin Aldehyde	16.8	LCS	P	0 - 30
LFB	Endrin Ketone	5.13	LCS	P	0 - 30
LFB	Esfenvalerate	5.37	LCS	P	0 - 30
LFB	Ethalfuralin	6.26	LCS	P	0 - 30
LFB	Fenpropathrin	10.0	LCS	P	0 - 30
LFB	Gamma-BHC	2.67	LCS	P	0 - 30
LFB	Gamma-Chlordane	4.53	LCS	P	0 - 30
LFB	Heptachlor	6.48	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.858	LCS	P	0 - 30
LFB	Hexachlorobenzene	3.23	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	3.77	LCS	P	0 - 30
LFB	Methoxychlor	0.863	LCS	P	0 - 30
LFB	MGK-264	38.1	LCS	F	0 - 30
LFB	Mirex	9.38	LCS	P	0 - 30
LFB	Permethrin	5.00	LCS	P	0 - 30
LFB	Phenothrin	55.0	LCS	F	0 - 30
LFB	Piperonyl Butoxide	1.94	LCS	P	0 - 30
LFB	Prallethrin	29.4	LCS	P	0 - 30
LFB	Tau-Fluvalinate	9.25	LCS	P	0 - 30
LFB	Tetramethrin	7.00	LCS	P	0 - 30
LFB	Trans-Nonachlor	3.64	LCS	P	0 - 30
LFB	Triclosan Methyl	1.36	LCS	P	0 - 30
LFB	Trifluralin	3.07	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P388150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199063	Acetochlor	2.41	Spike	P	0 - 30
2199063	Alachlor	7.74	Spike	P	0 - 30
2199063	Ametryn	3.96	Spike	P	0 - 30
2199063	Atrazine	6.17	Spike	P	0 - 30
2199063	Atrazine Desethyl	8.39	Spike	P	0 - 30
2199063	Azinphos Methyl	4.26	Spike	P	0 - 30
2199063	Bromacil	4.52	Spike	P	0 - 30
2199063	Butylate	2.11	Spike	P	0 - 30
2199063	Carbophenothion	0.516	Spike	P	0 - 30
2199063	Chlorpyrifos Ethyl	8.46	Spike	P	0 - 30
2199063	Chlorpyrifos Methyl	0.662	Spike	P	0 - 30
2199063	Cyanazine	29.3	Spike	P	0 - 30
2199063	Demeton	6.02	Spike	P	0 - 30
2199063	Diazinon	4.84	Spike	P	0 - 30
2199063	Dimethenamid	4.58	Spike	P	0 - 30
2199063	Disulfoton	3.84	Spike	P	0 - 30
2199063	Dithiopyr	4.46	Spike	P	0 - 30
2199063	EPTC	1.39	Spike	P	0 - 30
2199063	Ethion	16.3	Spike	P	0 - 30
2199063	Ethoprop	1.38	Spike	P	0 - 30
2199063	Fenamiphos	28.6	Spike	P	0 - 30
2199063	Fipronil	8.07	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P388150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199063	Fipronil Desulfinyl	6.87	Spike	P	0 - 30
2199063	Fipronil Sulfide	6.36	Spike	P	0 - 30
2199063	Fipronil Sulfone	6.07	Spike	P	0 - 30
2199063	Flumioxazin	10.2	Spike	P	0 - 30
2199063	Fonofos	1.85	Spike	P	0 - 30
2199063	Hexazinone	4.28	Spike	P	0 - 30
2199063	Imazalil	11.0	Spike	P	0 - 30
2199063	Malathion	4.84	Spike	P	0 - 30
2199063	Metalaxyl	8.76	Spike	P	0 - 30
2199063	Metolachlor	7.32	Spike	P	0 - 30
2199063	Metribuzin	9.25	Spike	P	0 - 30
2199063	Mevinphos	1.72	Spike	P	0 - 30
2199063	Molinate	0.716	Spike	P	0 - 30
2199063	Naled	3.22	Spike	P	0 - 30
2199063	Norflurazon	9.26	Spike	P	0 - 30
2199063	Oxadiazon	8.16	Spike	P	0 - 30
2199063	Parathion Ethyl	2.43	Spike	P	0 - 30
2199063	Parathion Methyl	1.39	Spike	P	0 - 30
2199063	Pendimethalin	6.46	Spike	P	0 - 30
2199063	Phorate	2.42	Spike	P	0 - 30
2199063	Prodiamine	8.04	Spike	P	0 - 30
2199063	Prometon	1.37	Spike	P	0 - 30
2199063	Prometryn	7.50	Spike	P	0 - 30
2199063	Pronamide	23.2	Spike	P	0 - 30
2199063	Propiconazole	9.36	Spike	P	0 - 30
2199063	Simazine	4.80	Spike	P	0 - 30
2199063	Sulfentrazone	9.95	Spike	P	0 - 30
2199063	Tebuconazole	19.9	Spike	P	0 - 30
2199063	Terbufos	0.882	Spike	P	0 - 30
2199063	Terbutylazine	5.74	Spike	P	0 - 30
LFB	Acetochlor	19.6	LCS	P	0 - 30
LFB	Alachlor	14.3	LCS	P	0 - 30
LFB	Ametryn	17.9	LCS	P	0 - 30
LFB	Atrazine	11.5	LCS	P	0 - 30
LFB	Atrazine Desethyl	6.75	LCS	P	0 - 30
LFB	Azinphos Methyl	16.5	LCS	P	0 - 30
LFB	Bromacil	9.37	LCS	P	0 - 30
LFB	Butylate	3.49	LCS	P	0 - 30
LFB	Carbophenothion	17.9	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	16.5	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	21.2	LCS	P	0 - 30
LFB	Cyanazine	19.0	LCS	P	0 - 30
LFB	Demeton	10.5	LCS	P	0 - 30
LFB	Diazinon	12.0	LCS	P	0 - 30
LFB	Dimethenamid	17.8	LCS	P	0 - 30
LFB	Disulfoton	20.2	LCS	P	0 - 30
LFB	Dithiopyr	14.6	LCS	P	0 - 30
LFB	EPTC	1.49	LCS	P	0 - 30
LFB	Ethion	15.3	LCS	P	0 - 30
LFB	Ethoprop	13.4	LCS	P	0 - 30
LFB	Fenamiphos	16.5	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P388150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil	16.2	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	16.2	LCS	P	0 - 30
LFB	Fipronil Sulfide	10.9	LCS	P	0 - 30
LFB	Fipronil Sulfone	16.3	LCS	P	0 - 30
LFB	Flumioxazin	15.9	LCS	P	0 - 30
LFB	Fonofos	16.0	LCS	P	0 - 30
LFB	Hexazinone	10.3	LCS	P	0 - 30
LFB	Imazalil	9.77	LCS	P	0 - 30
LFB	Malathion	16.7	LCS	P	0 - 30
LFB	Metalaxyl	15.9	LCS	P	0 - 30
LFB	Metolachlor	16.3	LCS	P	0 - 30
LFB	Metribuzin	12.0	LCS	P	0 - 30
LFB	Mevinphos	6.76	LCS	P	0 - 30
LFB	Molinate	4.18	LCS	P	0 - 30
LFB	Naled	4.99	LCS	P	0 - 30
LFB	Norflurazon	15.9	LCS	P	0 - 30
LFB	Oxadiazon	16.7	LCS	P	0 - 30
LFB	Parathion Ethyl	15.3	LCS	P	0 - 30
LFB	Parathion Methyl	15.7	LCS	P	0 - 30
LFB	Pendimethalin	24.6	LCS	P	0 - 30
LFB	Phorate	15.9	LCS	P	0 - 30
LFB	Prodiamine	3.96	LCS	P	0 - 30
LFB	Prometon	13.7	LCS	P	0 - 30
LFB	Prometryn	17.7	LCS	P	0 - 30
LFB	Pronamide	17.6	LCS	P	0 - 30
LFB	Propiconazole	19.6	LCS	P	0 - 30
LFB	Simazine	9.83	LCS	P	0 - 30
LFB	Sulfentrazone	17.3	LCS	P	0 - 30
LFB	Tebuconazole	7.83	LCS	P	0 - 30
LFB	Terbufos	15.9	LCS	P	0 - 30
LFB	Terbutylazine	13.8	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P388002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198923	Chlordane	1.69	Spike	P	0 - 30
2198923	Toxaphene	8.36	Spike	P	0 - 30
LFB	Chlordane	1.43	LCS	P	0 - 30
LFB	Toxaphene	9.82	LCS	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

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P387915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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: P388001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198705	Acesulfame K	3.12	Spike	P	0 - 30
2198705	AMPA	5.79	Spike	P	0 - 30
2198705	Endothall	2.86	Spike	P	0 - 30
2198705	Glufosinate	1.87	Spike	P	0 - 30
2198705	Glyphosate	0.0514	Spike	P	0 - 30
2198705	Sucralose	0.469	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: P388068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199081	Color (true)	2.01	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P388140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198888	Total Alkalinity	0.265	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P388480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199116	TDS	4.17	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
 Batch ID: P388481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198744	TDS	1.74	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P388143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2198888	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P388191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2199040	Organic Carbon	0.349	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2199136
Field Sample ID: G2TLHR0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	48.5	P	30 - 160

Lab Sample ID: 2199137
Field Sample ID: G2TLHR0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	55.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	54.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	47.5	P	30 - 160
EPA 8321B	Diuron-d6	44.4	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Endothall-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.4	P	30 - 160
EPA 8321B	Primidone-d5	39.6	P	30 - 160
EPA 8321B	Sucralose-d6	95.9	P	30 - 160
EPA 8321B	Sucralose-d6	95.9	P	30 - 160

Lab Sample ID: 2199138
Field Sample ID: G2TLHR0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	70.4	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	53.8	P	34 - 106
EPA 8276	Decachlorobiphenyl	52.0	P	26 - 97.0
EPA 8276	PCNB	78.7	P	38 - 141

Lab Sample ID: 2199139
Field Sample ID: G2TLHR0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	86.3	P	72 - 135
EPA 8270E	Terbufos-d10	83.8	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101292

Included Lab Sample IDs: 2199126, 2199129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A101294

Included Lab Sample IDs: 2199126, 2199129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.4	99.1	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A101295

Included Lab Sample IDs: 2199128, 2199131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.3	97.3	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A101330

Included Lab Sample IDs: 2199126, 2199129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.8	104	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A101330

Included Lab Sample IDs: 2199126, 2199129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.1	98.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101332

Included Lab Sample IDs: 2199127, 2199130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101336

Included Lab Sample IDs: 2199136

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A101336
Included Lab Sample IDs: 2199136

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxamyl	134	144	P/P	50 - 150
Propoxur	128	132	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A101337
Included Lab Sample IDs: 2199137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	82.0	96.5	P/P	60 - 160
Endothall	104	107	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A101343
Included Lab Sample IDs: 2199127, 2199130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	92.2	99.3	P/P	90 - 110
Ammonia-N	94.7	92.2	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A101348
Included Lab Sample IDs: 2199127, 2199130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	104	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A101349
Included Lab Sample IDs: 2199137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.1	102	P/P	60 - 160
Glufosinate	102	107	P/P	60 - 160
Glyphosate	101	105	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A101350
Included Lab Sample IDs: 2199137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.8	100	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A101359
Included Lab Sample IDs: 2199127, 2199130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101398

Included Lab Sample IDs: 2199126, 2199129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.8	98.4	P/P	90 - 110
Sulfate	97.9	96.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101400

Included Lab Sample IDs: 2199137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	127	P/P	50 - 150
Acetaminophen	112	118	P/P	60 - 160
Acetamiprid	105	105	P/P	50 - 150
Afidopyropen	88.2	92.0	P/P	50 - 150
Bentazon	116	115	P/P	50 - 160
Benzovindiflupyr	101	98.1	P/P	50 - 150
Carbamazepine	107	107	P/P	60 - 150
Clothianidin	95.0	91.7	P/P	60 - 150
Dinotefuran	72.5	105	P/P	50 - 150
Diuron	113	110	P/P	60 - 160
Fenuron	108	105	P/P	60 - 150
Fluridone	108	107	P/P	60 - 160
Hydrocodone	111	107	P/P	60 - 150
Ibuprofen	121	60.4	P/P	50 - 160
Imazapyr	89.5	106	P/P	50 - 160
Imidacloprid	107	110	P/P	60 - 150
Linuron	101	89.3	P/P	60 - 150
Mandestrobin	103	96.8	P/P	50 - 150
MCPP	101	98.5	P/P	50 - 150
Naproxen	76.9	153	P/P	50 - 160
Primidone	97.5	94.0	P/P	60 - 150
Pyraclostrobin	101	97.4	P/P	60 - 150
Thiamethoxam	103	104	P/P	50 - 150
Tolfenpyrad	100	101	P/P	60 - 150
Triclopyr	120	139	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101418

Included Lab Sample IDs: 2199140, 2199141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.0	97.2	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	97.4	96.3	P/P	90 - 110
Beryllium	95.4	94.7	P/P	90 - 110
Boron	99.3	101	P/P	90 - 110
Cadmium	97.9	98.4	P/P	90 - 110
Chromium	97.7	98.8	P/P	90 - 110
Copper	96.5	96.7	P/P	90 - 110
Lead	95.3	96.1	P/P	90 - 110
Nickel	96.1	96.6	P/P	90 - 110
Selenium	95.8	96.8	P/P	90 - 110
Silver	99.0	99.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101418

Included Lab Sample IDs: 2199140, 2199141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thallium	90.9	91.1	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A101421

Included Lab Sample IDs: 2199138

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	107		P	80 - 120
Beta-BHC	100		P	80 - 120
Beta-Cyfluthrin	101		P	80 - 120
Bifenthrin	99.2		P	80 - 120
Chlorothalonil	93.5		P	80 - 120
Cis-Nonachlor	103		P	80 - 120
Cypermethrin	95.7		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	107		P	80 - 120
DDE-p,p'	107		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	104		P	80 - 120
Deltamethrin	98.3		P	80 - 120
Dichlobenil	96.2		P	80 - 120
Dicofol	99.6		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	99.5		P	80 - 120
Endrin	107		P	80 - 120
Endrin Aldehyde	99.0		P	80 - 120
Endrin Ketone	95.7		P	80 - 120
Esfenvalerate	96.1		P	80 - 120
Ethalfuralin	96.5		P	80 - 120
Fenpropathrin	95.4		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	104		P	80 - 120
Heptachlor	102		P	80 - 120
Heptachlor Epoxide	105		P	80 - 120
Hexachlorobenzene	103		P	80 - 120
Lambda-Cyhalothrin	93.7		P	80 - 120
Methoxychlor	98.2		P	80 - 120
MGK-264	103		P	80 - 120
Mirex	98.5		P	80 - 120
Permethrin	95.0		P	80 - 120
Phenothrin	92.5		P	80 - 120
Piperonyl Butoxide	92.6		P	80 - 120
Prallethrin	91.0		P	80 - 120
Tau-Fluvalinate	100		P	80 - 120
Tetramethrin	99.1		P	80 - 120
Trans-Nonachlor	104		P	80 - 120
Triclosan Methyl	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A101421

Included Lab Sample IDs: 2199138

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Trifluralin	94.9		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101438

Included Lab Sample IDs: 2199140, 2199141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	103	103	P/P	90 - 110
Calcium	102	103	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	98.6	98.7	P/P	90 - 110
Sodium	99.9	99.5	P/P	90 - 110
Zinc	103	103	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A101449

Included Lab Sample IDs: 2199138

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.9		P	80 - 120
Toxaphene	87.5		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101452

Included Lab Sample IDs: 2199127, 2199130

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

Reference Method: EPA 8270E

Run ID: A101553

Included Lab Sample IDs: 2199139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.1		P	80 - 120
Alachlor	98.6		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	89.8		P	80 - 120
Atrazine Desethyl	115		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Bromacil	96.6		P	80 - 120
Butylate	99.3		P	80 - 120
Carbophenothion	98.1		P	80 - 120
Chlorpyrifos Ethyl	101		P	80 - 120
Chlorpyrifos Methyl	105		P	80 - 120
Cyanazine	101		P	80 - 120
Demeton	100		P	80 - 120
Diazinon	97.0		P	80 - 120
Dimethenamid	97.9		P	80 - 120
Disulfoton	95.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A101553
 Included Lab Sample IDs: 2199139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dithiopyr	98.1		P	80 - 120
EPTC	99.3		P	80 - 120
Ethion	99.6		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	96.0		P	80 - 120
Fipronil	95.3		P	80 - 120
Fipronil Desulfinyl	98.3		P	80 - 120
Fipronil Sulfide	96.9		P	80 - 120
Fipronil Sulfone	100		P	80 - 120
Flumioxazin	97.4		P	80 - 120
Fonofos	98.5		P	80 - 120
Hexazinone	92.6		P	80 - 120
Imazalil	114		P	80 - 120
Malathion	99.8		P	80 - 120
Metaxyl	96.7		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	95.4		P	80 - 120
Mevinphos	105		P	80 - 120
Molinate	98.5		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	97.5		P	80 - 120
Oxadiazon	96.5		P	80 - 120
Parathion Ethyl	99.2		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	107		P	80 - 120
Phorate	98.4		P	80 - 120
Prodiamine	98.7		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	93.9		P	80 - 120
Pronamide	93.1		P	80 - 120
Propiconazole	97.9		P	80 - 120
Simazine	104		P	80 - 120
Sulfentrazone	95.0		P	80 - 120
Tebuconazole	97.0		P	80 - 120
Terbufos	101		P	80 - 120
Terbutylazine	99.9		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						6.06	
EPA 200.7 Rev. 4.4	Barium	102		98.4	102	98.9		3.08
	Calcium	102		102	90.0			4.39
	Iron	105		105	110	104		4.93
	Magnesium	104		105	109	103		4.76
	Potassium	98.4		101	102	96.2		4.35
	Sodium	97.5		98.7	87.6			4.74
	Zinc	99.3		101	100	96.8		3.24
EPA 200.8 Rev. 5.4	Aluminum	101		102	101	99.4		0.484
	Antimony	104		105	104	104		0.664
	Arsenic	101		104	104	100		0.604
	Beryllium	97.0		102	102	98.0		0.0606
	Boron	99.8		98.9	98.6	98.1		0.267
	Cadmium	102		102	103	100		1.48
	Chromium	102		103	103	104		0.136
	Copper	101		107	107	99.4		0.0196
	Lead	98.8		98.6	100	97.3		1.61
	Nickel	102		106	106	101		0.0553
	Selenium	101		103	104	98.9		0.751
	Silver	98.9		98.6	98.4	96.8		0.228
	Thallium	101		99.3	102	104		2.36
EPA 300.0 Rev. 2.1	Chloride	102		102	102		1.02	
	Sulfate	97.9		96.5	100		1.37	
EPA 350.1 Rev. 2.0	Ammonia-N	97.5		99.3	97.7			1.48
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		96.4	97.1			0.557
EPA 353.2 Rev. 2.0	NO2NO3-N	100		100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	105		106	108			1.21
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		100	100			0.321
EPA 8270E	Acetochlor	98.3	80.7	90.9	88.7	19.6		2.41
	Alachlor	96.1	83.3	90.9	84.1	14.3		7.74
	Aldrin	19.1	45.5	46.8	44.9	81.8		4.34
	Alpha-BHC	80.2	87.4	83.7	76.6	8.55		8.85
	Alpha-Chlordane	86.0	87.9	86.0	79.9	2.15		7.46
	Ametryn	104	86.6	125	120	17.9		3.96
	Atrazine	93.2	83.1			11.5		6.17
	Atrazine Desethyl	91.4	85.4	111	99.7	6.75		8.39
	Azinphos Methyl	136	115	119	114	16.5		4.26
	Beta-BHC	95.4	88.3	99.3	96.6	7.66		2.75
	Beta-Cyfluthrin	69.1	77.8	85.7	71.6	11.9		18.0
	Bifenthrin	68.5	72.7	76.5	66.4	5.98		14.2
	Bromacil	92.8	84.4			9.37		4.52
	Butylate	64.0	61.8	63.1	64.5	3.49		2.11
	Carbophenothion	87.0	72.7	76.4	76.0	17.9		0.516
	Chlorothalonil	87.7	71.1	101	92.5	20.9		8.51
	Chlorpyrifos Ethyl	84.8	71.9	62.9	68.5	16.5		8.46
	Chlorpyrifos Methyl	94.6	76.5	84.8	84.3	21.2		0.662
	Cis-Nonachlor	89.4	89.6	83.5	82.2	0.299		1.56
	Cyanazine	128	106	134	99.8	19.0		29.3
	Cypermethrin	76.6	78.7	86.0	70.8	2.76		19.5
	Dacthal	99.3	96.1	93.6	95.4	3.29		1.88
	DDD-p,p'	94.3	94.7	89.7	86.6	0.454		3.52
	DDE-p,p'	81.0	83.2	78.7	76.1	2.65		3.36
	DDT-p,p'	76.0	81.2	83.0	72.2	6.50		13.9
	Delta-BHC	109	103	126	130	5.60		2.82

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Deltamethrin	81.0	88.6	92.7	82.0	8.97	12.2
	Demeton	73.8	66.5	79.1	74.5	10.5	6.02
	Diazinon	95.7	84.8	99.3	94.6	12.0	4.84
	Dichlobenil	39.0	34.6	56.7	59.8	12.0	5.42
	Dicofol	81.0	87.4	83.0	67.8	7.61	20.2
	Dieldrin	89.6	90.7	89.0	86.6	1.20	2.73
	Dimethenamid	99.1	82.9	88.7	84.7	17.8	4.58
	Disulfoton	72.7	59.4	87.3	84.0	20.2	3.84
	Dithiopyr	92.0	79.5	84.9	81.1	14.6	4.46
	Endosulfan I	98.2	95.2	92.3	95.3	3.13	3.18
	Endosulfan II	105	101	100	103	3.55	2.12
	Endosulfan Sulfate	88.7	86.5	89.9	84.5	2.53	6.20
	Endrin	98.3	99.1	93.1	85.4	0.752	8.59
	Endrin Aldehyde	74.3	87.8	65.2	115	16.8	55.3
	Endrin Ketone	89.5	85.0	89.8	80.3	5.13	11.2
	EPTC	62.6	61.7	71.5	70.5	1.49	1.39
	Esfenvalerate	73.4	77.4	89.3	79.3	5.37	11.9
	Ethalfuralin	69.2	73.7	70.6	63.2	6.26	11.1
	Ethion	81.6	70.1	61.6	52.3	15.3	16.3
	Ethoprop	88.7	77.5	87.8	89.1	13.4	1.38
	Fenamiphos	98.9	83.8	77.2	57.9	16.5	28.6
	Fenpropathrin	92.2	102	131	139	10.0	5.85
	Fipronil	108	91.6	106	93.9	16.2	8.07
	Fipronil Desulfinyl	94.1	80.0	92.0	84.8	16.2	6.87
	Fipronil Sulfide	85.7	76.8	70.6	75.2	10.9	6.36
	Fipronil Sulfone	82.4	70.0	88.6	81.3	16.3	6.07
	Flumioxazin	182	156	172	156	15.9	10.2
	Fonofos	81.1	69.1	86.3	84.8	16.0	1.85
	Gamma-BHC	93.9	91.4	102	95.5	2.67	6.97
	Gamma-Chlordane	80.2	83.9	80.1	75.6	4.53	5.83
	Heptachlor	66.0	70.4	66.0	63.4	6.48	4.03
	Heptachlor Epoxide	92.7	91.9	87.9	86.5	0.858	1.69
	Hexachlorobenzene	57.4	59.3	60.6	51.9	3.23	15.5
	Hexazinone	89.0	80.3	91.1	87.3	10.3	4.28
	Imazalil	87.7	79.5	65.4	58.5	9.77	11.0
	Lambda-Cyhalothrin	67.9	70.5	75.1	66.8	3.77	11.7
	Malathion	101	85.1	89.7	85.5	16.7	4.84
	Metalaxyl	90.5	77.2	89.3	80.9	15.9	8.76
	Methoxychlor	81.8	81.1	77.9	68.6	0.863	12.7
	Metolachlor	96.5	82.0			16.3	7.32
	Metribuzin	94.7	83.9	106	96.5	12.0	9.25
	Mevinphos	81.4	76.1	94.9	96.6	6.76	1.72
	MGK-264	37.8	55.6	69.1	69.4	38.1	0.312
	Mirex	57.4	63.0	61.7	55.1	9.38	11.3
	Molinate	72.2	69.2	74.3	73.8	4.18	0.716
	Naled	61.2	58.2	66.5	64.4	4.99	3.22
	Norflurazon	97.8	83.4			15.9	9.26
	Oxadiazon	85.5	72.3	81.2	72.7	16.7	8.16
	Parathion Ethyl	93.4	80.1	88.7	90.9	15.3	2.43
	Parathion Methyl	99.3	84.8	101	99.8	15.7	1.39
	Pendimethalin	91.7	71.7	93.6	87.8	24.6	6.46
	Permethrin	71.1	74.7	76.7	65.6	5.00	15.7
	Phenothrin	28.9	50.7	55.8	46.2	55.0	18.9
	Phorate	80.1	68.3	87.0	84.9	15.9	2.42

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Piperonyl Butoxide	97.3	99.2	103	81.7	1.94	23.4
	Prallethrin	43.0	57.8	57.6	54.2	29.4	6.02
	Prodimamine	81.4	78.2	114	106	3.96	8.04
	Prometon	96.9	84.4	101	99.9	13.7	1.37
	Prometryn	103	86.4	106	98.3	17.7	7.50
	Pronamide	101	84.4	94.8	75.1	17.6	23.2
	Propiconazole	109	89.7	131	119	19.6	9.36
	Simazine	95.2	86.3	109	104	9.83	4.80
	Sulfentrazone	97.6	82.1			17.3	9.95
	Tau-Fluvalinate	79.6	87.3	95.7	84.3	9.25	12.7
	Tebuconazole	73.9	68.4	59.8	48.0	7.83	19.9
	Terbufos	81.1	69.2	90.0	89.2	15.9	0.882
	Terbuthylazine	89.5	77.9	85.4	90.5	13.8	5.74
	Tetramethrin	63.6	68.2	95.1	77.8	7.00	20.0
	Trans-Nonachlor	73.0	75.7	71.4	67.9	3.64	5.09
	Triclosan Methyl	101	99.3	94.1	92.1	1.36	2.11
	Trifluralin	67.7	69.8	70.6	64.4	3.07	9.14
EPA 8276	Chlordane	109	110	112	111	1.43	1.69
	Toxaphene	96.0	106	141	154	9.82	8.36
EPA 8321B	2,4-D	87.0		87.4	76.4		13.4
	3-Hydroxycarbofuran	118		107	115		7.54
	Acesulfame K	133		137	133		3.12
	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	47.8		112	119		5.79
	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	95.3		88.3	85.8		2.86
	Fenuron	84.3		77.6	80.0		3.08
	Fluridone	71.9		74.2	74.3		0.119
	Glufosinate	85.4		93.9	95.7		1.87
	Glyphosate	96.9		79.7	79.7		0.0514
	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
	Mandestrobien	72.7		79.1	80.5		1.79
	MCPD	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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Propoxur	58.2	57.2	56.5			1.27
	Pyraclostrobin	60.5	63.8	64.8			1.57
	Sucralose	103	103	103			0.469
	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)	96.6				2.01	
SM 2320 B-2011	Total Alkalinity	100				0.265	
SM 2540 C-2011	TDS					4.17	
	TDS					1.74	
SM 4500 F-C-2011	Fluoride	96.9	99.8	99.8			0.0
SM 5310 B-2011	Organic Carbon	104	106				0.349

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2199126, 2199129
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2199140, 2199141
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2199140, 2199141
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2199126, 2199129
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2199126, 2199129
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2199127, 2199130
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2199127, 2199130
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2199127, 2199130
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2199127, 2199130
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2199128, 2199131
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2199138
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2199139
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2199138
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2199136
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2199137
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2199137
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2199126, 2199129
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2199126, 2199129
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2199140, 2199141
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2199126, 2199129
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2199126, 2199129
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2199126, 2199129
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2199127, 2199130

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	09/30/2020			09/30/2020 15:18	Yen Ta	2199126, 2199129
EPA 200.7 Rev. 4.4	09/30/2020	10/01/2020 15:15	Elliott D. Healy	10/08/2020 20:17	Betina Topolski	2199140
	09/30/2020	10/01/2020 15:15	Elliott D. Healy	10/08/2020 20:25	Betina Topolski	2199141
EPA 200.8 Rev. 5.4	09/30/2020	10/01/2020 15:15	Elliott D. Healy	10/07/2020 15:49	Alexander Thompson	2199140
	09/30/2020	10/01/2020 15:15	Elliott D. Healy	10/07/2020 15:56	Alexander Thompson	2199141
EPA 300.0 Rev. 2.1	09/30/2020			10/09/2020 20:05	Lipi Saha	2199126
	09/30/2020			10/09/2020 20:18	Lipi Saha	2199129
EPA 350.1 Rev. 2.0	09/30/2020			10/03/2020 15:33	Ping Hua	2199130
	09/30/2020			10/03/2020 15:49	Ping Hua	2199127
EPA 351.2 Rev. 2.0	09/30/2020	10/08/2020 13:12	David Boose	10/09/2020 12:22	Elliott Rodriguez	2199127
	09/30/2020	10/08/2020 13:12	David Boose	10/09/2020 12:23	Elliott Rodriguez	2199130
EPA 353.2 Rev. 2.0	09/30/2020			10/02/2020 09:45	Beverly Y. Sanders	2199130
	09/30/2020			10/02/2020 10:52	Beverly Y. Sanders	2199127
EPA 365.1 Rev. 2.0	09/30/2020	10/02/2020 14:22	Yen Ta	10/05/2020 11:27	Benjamin T. Nordmann	2199127
	09/30/2020	10/02/2020 14:22	Yen Ta	10/05/2020 11:28	Benjamin T. Nordmann	2199130
EPA 365.1 Rev. 2.0 dissolved	09/30/2020			09/30/2020 16:30	Blanca Fach	2199128
	09/30/2020			09/30/2020 16:32	Blanca Fach	2199131
EPA 8270E	09/30/2020	10/01/2020 08:30	Rasheda Ghaffari	10/06/2020 16:15	Vandana T. Nagar	2199139
	09/30/2020	10/02/2020 08:00	Fe-Val Siddell	10/05/2020 22:48	Michael Poppell	2199138
EPA 8276	09/30/2020	10/02/2020 08:00	Fe-Val Siddell	10/09/2020 06:34	Arthur Maknenko	2199138
EPA 8321B	09/30/2020	09/30/2020 14:45	Rebecca Ware	10/01/2020 00:58	Rebecca Ware	2199137
	09/30/2020	09/30/2020 14:45	Rebecca Ware	10/01/2020 16:41	Rebecca Ware	2199137
	09/30/2020	09/30/2020 14:45	Rebecca Ware	10/02/2020 13:58	Rebecca Ware	2199137
	09/30/2020	09/30/2020 15:00	Hoor Shaik	10/01/2020 11:05	Juyoung Kim	2199136
	09/30/2020	10/01/2020 09:00	Hoor Shaik	10/03/2020 11:45	Juyoung Kim	2199137
SM 2120 B-2011	09/30/2020			09/30/2020 16:46	Benjamin T. Nordmann	2199126, 2199129
SM 2320 B-2011	09/30/2020			10/01/2020 23:34	Dale L. Simmons	2199126
	09/30/2020			10/01/2020 23:46	Dale L. Simmons	2199129
SM 2340B	09/30/2020			10/08/2020 20:17	Betina Topolski	2199140
	09/30/2020			10/08/2020 20:25	Betina Topolski	2199141
SM 2540 C-2011	09/30/2020			10/01/2020 15:15	Yijie Li	2199126, 2199129
SM 2540 D-2011	09/30/2020			10/01/2020 15:15	Yijie Li	2199126, 2199129
SM 4500 F-C-2011	09/30/2020			10/01/2020 23:34	Dale L. Simmons	2199126
	09/30/2020			10/01/2020 23:46	Dale L. Simmons	2199129
SM 5310 B-2011	09/30/2020			10/03/2020 01:05	Lauren Lees	2199127
	09/30/2020			10/03/2020 01:17	Lauren Lees	2199130