

Chemical Analysis Report

TLH-ROC-2020-10-15-01

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-2020-10-12-44**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
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2600 Blair Stone Rd
Tallahassee, FL 32399
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 05-NOV-2020 11:06



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: Wilson Mill Creek @ Cr274

Collection Date/Time: 10/15/2020 09:15

Field ID: G2TLHR0032

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2202746	EPA 180.1 Rev. 2.0	Turbidity	4.5	A	NTU	P388816	
	EPA 300.0 Rev. 2.1	Chloride	8.5		mg Cl/L	P389333	
		Sulfate	0.80		mg SO4/L	P389476	
	SM 2120 B-2011	Color (true)	150		PCU	P388751	
	SM 2320 B-2011	Total Alkalinity	22		mg CaCO3/L	P389112	
	SM 2540 C-2011	TDS	82		mg/L	P389040	
	SM 2540 D-2011	TSS	8	I	mg/L	P388973	
	SM 4500 F-C-2011	Fluoride	0.042	I	mg F/L	P389117	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P388846	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P389046	
2202747	EPA 353.2 Rev. 2.0	NO2NO3-N	0.98		mg N/L	P388933	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P388949	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P388947	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.01	I	mg P/L	P388747	
	dissolved						
2202759	EPA 8321B	Aldicarb	0.020	U	ug/L	P388916	MS
		Aldicarb Sulfone	0.0020	U	ug/L	P388916	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P388916	MS
		Carbaryl	0.0020	U	ug/L	P388916	MS
		Carbofuran	0.0020	U	ug/L	P388916	MS
		3-Hydroxycarbofuran	0.0020	U	ug/L	P388916	
		Methiocarb	0.0020	U	ug/L	P388916	
		Methomyl	0.0020	U	ug/L	P388916	
		Oxamyl	0.0020	U	ug/L	P388916	
		Propoxur	0.0020	U	ug/L	P388916	MS
2202760		2,4-D	0.0020	U	ug/L	P388895	
		Acesulfame K**	0.10	U	ug/L	P388857	
		AMPA**	0.10	U	ug/L	P388857	
		Sucralose**	0.071		ug/L	P388857	
		Acetaminophen**	0.0080	U	ug/L	P388895	
		Acetamiprid**	0.0020	U	ug/L	P388895	
		Endothall**	0.25	U	ug/L	P388857	
		Glufosinate**	0.10	U	ug/L	P388857	
		Glyphosate**	0.10	U	ug/L	P388857	
		Afidopyropen**	0.0020	U	ug/L	P388895	
		Bentazon	8.0E-04	U	ug/L	P388895	MS
		Benzovindiflupyr**	0.0031	I	ug/L	P388895	
		Carbamazepine**	8.0E-04	U	ug/L	P388895	
		Clothianidin**	0.0020	U	ug/L	P388895	
		Dinotefuran**	0.15		ug/L	P388895	
		Diuron	0.0020	U	ug/L	P388895	MS, RPD
		Fenuron	0.016	U	ug/L	P388895	
		Fluridone**	8.0E-04	U	ug/L	P388895	
		Imazapyr**	0.015	I	ug/L	P388895	MS

Field ID: G2TLHR0032

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2202760	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P388895	
		Ibuprofen**	0.020	U	ug/L	P388895	
		Imidacloprid	0.024		ug/L	P388895	
		Linuron	0.0040	U	ug/L	P388895	
		Mandestrobin**	0.0020	U	ug/L	P388895	
		MCP	0.0020	U	ug/L	P388895	
		Naproxen**	0.0080	U	ug/L	P388895	MS
		Primidone**	0.0040	U	ug/L	P388895	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P388895	
		Thiamethoxam**	0.0020	U	ug/L	P388895	
		Tolfenpyrad**	0.0020	U	ug/L	P388895	
		Triclopyr**	0.0040	U	ug/L	P388895	
2202761	EPA 8270E	Aldrin	4.4	U	ng/L	P388782	
		Alpha-BHC	2.2	U	ng/L	P388782	
		Alpha-Chlordane	1.1	U	ng/L	P388782	
		Beta-BHC	8.8	U	ng/L	P388782	
		Beta-Cyfluthrin**	17	U	ng/L	P388782	
		Bifenthrin**	4.4	U	ng/L	P388782	
		Delta-BHC	8.8	U	ng/L	P388782	
		Gamma-BHC	8.8	U	ng/L	P388782	
		Chlorothalonil	2.2	U	ng/L	P388782	
		Cis-Nonachlor**	1.1	U	ng/L	P388782	
		Cypermethrin	22	U	ng/L	P388782	
		Dacthal**	1.1	U	ng/L	P388782	
		DDD-p,p'	5.5	U	ng/L	P388782	
		DDE-p,p'	5.5	U	ng/L	P388782	
		DDT-p,p'	6.6	U	ng/L	P388782	
		Deltamethrin**	22	U	ng/L	P388782	
		Dicofol	33	U	ng/L	P388782	MS, RPD
		Dieldrin	4.4	U	ng/L	P388782	
		Endosulfan I	4.4	U	ng/L	P388782	
		Endosulfan II	4.4	UJ	ng/L	P388782	CCV
		Endosulfan Sulfate	2.2	U	ng/L	P388782	
		Endrin	2.2	U	ng/L	P388782	
		Endrin Aldehyde	2.2	U	ng/L	P388782	
		Endrin Ketone	2.2	U	ng/L	P388782	
		Ethalfuralin**	3.3	U	ng/L	P388782	MS
		Gamma-Chlordane	1.1	U	ng/L	P388782	
		Dichlobenil**	2.2	U	ng/L	P388782	
		Esfenvalerate**	22	U	ng/L	P388782	
		Fenpropathrin**	11	U	ng/L	P388782	
		Heptachlor	1.7	U	ng/L	P388782	
		Heptachlor Epoxide	2.2	U	ng/L	P388782	
		Hexachlorobenzene	2.2	U	ng/L	P388782	MS
		Lambda-Cyhalothrin**	17	U	ng/L	P388782	

Field ID: G2TLHR0032

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2202761	EPA 8270E	Methoxychlor	4.4	U	ng/L	P388782	
		Mirex	2.2	U	ng/L	P388782	
		MGK-264**	3.3	U	ng/L	P388782	
		Permethrin	11	U	ng/L	P388782	
		Phenothrin**	33	U	ng/L	P388782	
		Piperonyl Butoxide**	1.7	U	ng/L	P388782	RPD
		Prallethrin**	28	U	ng/L	P388782	
		Tau-Fluvalinate**	3.9	U	ng/L	P388782	
		Tetramethrin**	8.8	U	ng/L	P388782	
		Trans-Nonachlor**	1.1	U	ng/L	P388782	
		Triclosan Methyl**	1.1	U	ng/L	P388782	
		Trifluralin	2.8	U	ng/L	P388782	MS
		Chlordane	5.5	U	ng/L	P388782	
2202762	EPA 8270E	Toxaphene	33	U	ng/L	P388782	
		Acetochlor	0.26	U	ng/L	P388720	
		Alachlor	13		ng/L	P388720	
		Ametryn	0.62	U	ng/L	P388720	
		Atrazine	0.26	U	ng/L	P388720	
		Atrazine Desethyl	1.5	U	ng/L	P388720	
		Azinphos Methyl	2.1	U	ng/L	P388720	
		Bromacil	0.51	U	ng/L	P388720	
		Butylate	0.41	U	ng/L	P388720	
		Carbophenothion	0.51	U	ng/L	P388720	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P388720	
		Chlorpyrifos Methyl	0.051	U	ng/L	P388720	
		Cyanazine	3.3	U	ng/L	P388720	
		Demeton	1.5	U	ng/L	P388720	
		Diazinon	0.13	U	ng/L	P388720	
		Dimethenamid**	0.10	U	ng/L	P388720	
		Disulfoton	0.51	U	ng/L	P388720	
		Dithiopyr**	0.10	U	ng/L	P388720	
		EPTC	1.3	U	ng/L	P388720	
		Ethion	0.15	U	ng/L	P388720	
		Ethoprop	0.10	U	ng/L	P388720	
		Fenamiphos	0.51	U	ng/L	P388720	
		Fipronil	0.26	U	ng/L	P388720	
		Fipronil Desulfinyl**	0.13	U	ng/L	P388720	
		Fipronil Sulfide	0.15	U	ng/L	P388720	
		Fipronil Sulfone	0.15	U	ng/L	P388720	
		Flumioxazin**	1.8	U	ng/L	P388720	
		Fonofos	0.21	U	ng/L	P388720	
		Hexazinone	0.51	U	ng/L	P388720	
		Imazalil**	0.77	U	ng/L	P388720	
		Malathion	0.36	U	ng/L	P388720	
		Metalaxyl	0.77	U	ng/L	P388720	

Field ID: G2TLHR0032

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2202762	EPA 8270E	Metolachlor	19		ng/L	P388720	
		Metribuzin	6.1	I	ng/L	P388720	
		Mevinphos	0.51	U	ng/L	P388720	
		Molinate	0.31	U	ng/L	P388720	
		Naled**	1.5	U	ng/L	P388720	
		Norflurazon	0.55	I	ng/L	P388720	
		Oxadiazon	0.10	U	ng/L	P388720	
		Parathion Ethyl	0.26	U	ng/L	P388720	
		Parathion Methyl	0.57	U	ng/L	P388720	
		Pendimethalin	1.0	U	ng/L	P388720	
		Phorate	0.26	U	ng/L	P388720	
		Prodiamine**	0.18	UJ	ng/L	P388720	RPD
		Prometon	0.93	U	ng/L	P388720	
		Prometryn	0.21	U	ng/L	P388720	
		Pronamide**	0.15	U	ng/L	P388720	
		Propiconazole**	1.0	I	ng/L	P388720	
		Simazine	0.51	UJ	ng/L	P388720	LCS
		Sulfentrazone**	0.51	U	ng/L	P388720	
		Tebuconazole**	1.1	I	ng/L	P388720	
		Terbufos	0.10	U	ng/L	P388720	
		Terbutylazine	0.44	U	ng/L	P388720	
2202764	EPA 200.7 Rev. 4.4	Barium	60.9		ug/L	P388938	
		Calcium	7.79		mg/L	P388938	
		Iron	1.77E+03		ug/L	P388938	
		Magnesium	3.93		mg/L	P388938	
		Potassium	2.9		mg/L	P388938	
		Sodium	2.4		mg/L	P388938	
		Zinc	8.0	I	ug/L	P388938	
	EPA 200.8 Rev. 5.4	Aluminum	214		ug/L	P388938	
		Antimony	0.050	U	ug/L	P388938	
		Arsenic	0.87		ug/L	P388938	
		Beryllium	0.024	I	ug/L	P388938	
		Boron**	17.2		ug/L	P388938	
		Cadmium	0.020	U	ug/L	P388938	
		Chromium	0.43	I	ug/L	P388938	
		Copper	0.49	I	ug/L	P388938	
		Lead	0.28	I	ug/L	P388938	
		Nickel	0.50	U	ug/L	P388938	
		Selenium	0.20	U	ug/L	P388938	
		Silver	0.010	U	ug/L	P388938	
		Thallium	0.10	U	ug/L	P388938	
	SM 2340B	Hardness	35.7		mg/L	P388938	

Field ID: G2TLHR0032

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 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for ametryn and atrazine 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: Apalachicola River 500m From Lola Landing Boat Ramp

Collection Date/Time: 10/15/2020 10:55

Field ID: G2TLHR0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2202749	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P388816	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P389333	
		Sulfate	6.6		mg SO4/L	P389336	
		Color (true)	53		PCU	P388751	
	SM 2320 B-2011	Total Alkalinity	38		mg CaCO3/L	P389112	
	SM 2540 C-2011	TDS	73		mg/L	P389040	
	SM 2540 D-2011	TSS	11		mg/L	P388973	
	SM 4500 F-C-2011	Fluoride	0.070	I	mg F/L	P389117	
2202750	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P388846	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P389090	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.58		mg N/L	P388933	
	EPA 365.1 Rev. 2.0	Total-P	0.039		mg P/L	P388949	
	SM 5310 B-2011	Organic Carbon	3.2		mg C/L	P388947	
2202751	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P388747	
2202765	EPA 200.7 Rev. 4.4	Barium	23.5		ug/L	P388938	
		Calcium	13.4		mg/L	P388938	
		Iron	910		ug/L	P388938	
		Magnesium	1.74		mg/L	P388938	
		Potassium	2.0		mg/L	P388938	
		Sodium	5.8		mg/L	P388938	
		Zinc	5.0	U	ug/L	P388938	
	EPA 200.8 Rev. 5.4	Aluminum	469		ug/L	P388938	
		Antimony	0.067	I	ug/L	P388938	
		Arsenic	0.60		ug/L	P388938	
		Beryllium	0.041		ug/L	P388938	
		Boron**	17.6		ug/L	P388938	
		Cadmium	0.020	U	ug/L	P388938	
		Chromium	0.92	I	ug/L	P388938	
		Copper	0.85		ug/L	P388938	
		Lead	0.41		ug/L	P388938	
		Nickel	0.56	I	ug/L	P388938	
		Selenium	0.20	U	ug/L	P388938	
		Silver	0.010	U	ug/L	P388938	
		Thallium	0.10	U	ug/L	P388938	
		Hardness	40.6		mg/L	P388938	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P388816

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P388938

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: P388938

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: P389333

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389336

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389476

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P388846

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P389046

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P389090

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P388933

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P388949

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P388747

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

Reference Method: EPA 8270E
 Batch ID: P388720

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P388720

Component	Result	Code	Units
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
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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270E
Batch ID: P388782

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P388782

Component	Result	Code	Units
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
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: P388782

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

Reference Method: EPA 8321B
Batch ID: P388857

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P388895

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: EPA 8321B
Batch ID: P388916

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: SM 2120 B-2011
Batch ID: P388751

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P389112

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P389040

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P388973

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P389117

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P388947

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: P388938

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	103		P	85 - 115
Iron	106		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	102		P	85 - 115
Sodium	99.3		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P388938

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.1		P	85 - 115
Antimony	97.7		P	85 - 115
Arsenic	99.1		P	85 - 115
Beryllium	94.3		P	85 - 115
Boron	97.9		P	85 - 115
Cadmium	97.4		P	85 - 115
Chromium	95.3		P	85 - 115
Copper	97.7		P	85 - 115
Lead	94.2		P	85 - 115
Nickel	96.6		P	85 - 115
Selenium	96.5		P	85 - 115
Silver	97.2		P	85 - 115
Thallium	97.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389333

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389336

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389476

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P388846

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P389046

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P389090

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P388933

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P388949

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P388747

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

Reference Method: EPA 8270E
 Batch ID: P388720

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	87.4	78.9	P/P	71 - 122
Alachlor	87.0	83.7	P/P	70 - 121
Ametryn	91.4	83.4	P/P	49 - 137
Atrazine	90.6	82.3	P/P	76 - 125
Atrazine Desethyl	71.8	69.5	P/P	31 - 144
Azinphos Methyl	97.9	82.2	P/P	67 - 150
Bromacil	56.5	50.0	P/P	36 - 121
Butylate	63.9	54.8	P/P	33 - 88.0
Carbophenothion	79.8	73.6	P/P	66 - 116
Chlorpyrifos Ethyl	84.1	74.6	P/P	73 - 117
Chlorpyrifos Methyl	90.0	81.7	P/P	68 - 121
Cyanazine	100	99.1	P/P	20 - 250
Demeton	81.1	71.5	P/P	30 - 123
Diazinon	83.8	77.3	P/P	70 - 128
Dimethenamid	81.9	77.6	P/P	66 - 122
Disulfoton	70.4	72.7	P/P	46 - 124
Dithiopyr	78.6	73.2	P/P	69 - 122
EPTC	60.6	53.8	P/P	31 - 90.0
Ethion	73.5	73.6	P/P	45 - 135
Ethoprop	82.6	73.2	P/P	59 - 118
Fenamiphos	75.6	80.5	P/P	30 - 136
Fipronil	84.0	80.6	P/P	57 - 127

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P388720

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil Desulfinyl	84.6	79.4	P/P	51 - 122
Fipronil Sulfide	76.6	66.6	P/P	57 - 119
Fipronil Sulfone	85.4	69.6	P/P	51 - 119
Flumioxazin	131	116	P/P	20 - 250
Fonofos	82.8	73.0	P/P	60 - 120
Hexazinone	79.1	72.8	P/P	57 - 142
Imazalil	79.3	71.2	P/P	30 - 139
Malathion	90.7	86.2	P/P	67 - 128
Metalaxyl	87.8	81.5	P/P	21 - 148
Metolachlor	88.2	82.4	P/P	70 - 120
Metribuzin	92.1	82.3	P/P	20 - 250
Mevinphos	70.0	67.5	P/P	47 - 116
Molinate	74.2	63.2	P/P	41 - 99.0
Naled	50.3	45.2	P/P	38 - 97.0
Norflurazon	76.4	67.0	P/P	54 - 127
Oxadiazon	74.8	69.2	P/P	65 - 122
Parathion Ethyl	85.1	80.2	P/P	71 - 113
Parathion Methyl	91.6	79.9	P/P	73 - 129
Pendimethalin	72.8	66.0	P/P	63 - 130
Phorate	101	103	P/P	48 - 118
Prodiamine	76.8	36.8	P/P	20 - 144
Prometon	83.5	76.2	P/P	53 - 120
Prometryn	83.2	79.1	P/P	63 - 119
Pronamide	92.3	82.6	P/P	81 - 122
Propiconazole	71.0	66.5	P/P	62 - 124
Simazine	92.2	76.1	P/F	77 - 129
Sulfentrazone	62.7	59.1	P/P	20 - 137
Tebuconazole	41.4	44.0	P/P	20 - 118
Terbufos	80.1	72.6	P/P	61 - 119
Terbutylazine	90.2	84.7	P/P	75 - 119

Reference Method: EPA 8270E

Batch ID: P388782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	44.6	41.2	P/P	20 - 87.0
Alpha-BHC	80.9	81.0	P/P	65 - 142
Alpha-Chlordane	80.7	84.7	P/P	58 - 106
Beta-BHC	80.6	89.2	P/P	65 - 179
Beta-Cyfluthrin	83.9	82.6	P/P	39 - 153
Bifenthrin	84.0	81.8	P/P	38 - 128
Chlorothalonil	70.6	54.3	P/P	20 - 214
Cis-Nonachlor	83.9	87.0	P/P	56 - 113
Cypermethrin	92.5	85.5	P/P	37 - 130
Dacthal	92.2	96.6	P/P	75 - 109
DDD-p,p'	86.8	91.0	P/P	66 - 119
DDE-p,p'	76.6	81.4	P/P	53 - 108
DDT-p,p'	89.3	87.6	P/P	57 - 133
Delta-BHC	113	114	P/P	68 - 187
Deltamethrin	90.9	117	P/P	50 - 200
Dichlobenil	37.5	36.0	P/P	25 - 140
Dicofol	92.6	96.7	P/P	66 - 123

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P388782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dieldrin	87.1	87.7	P/P	65 - 111
Endosulfan I	99.4	95.8	P/P	65 - 115
Endosulfan II	107	116	P/P	68 - 133
Endosulfan Sulfate	89.4	86.4	P/P	62 - 127
Endrin	98.4	95.2	P/P	64 - 122
Endrin Aldehyde	85.7	97.4	P/P	61 - 132
Endrin Ketone	89.2	87.4	P/P	66 - 120
Esfenvalerate	75.7	72.5	P/P	50 - 150
Ethalfuralin	74.1	72.0	P/P	57 - 127
Fenpropathrin	88.8	82.3	P/P	60 - 160
Gamma-BHC	83.6	93.2	P/P	71 - 158
Gamma-Chlordane	77.9	80.3	P/P	53 - 106
Heptachlor	73.5	74.6	P/P	45 - 96.0
Heptachlor Epoxide	84.4	86.7	P/P	64 - 109
Hexachlorobenzene	70.9	69.2	P/P	46 - 103
Lambda-Cyhalothrin	94.1	91.0	P/P	38 - 145
Methoxychlor	91.2	91.2	P/P	69 - 149
MGK-264	53.2	53.0	P/P	50 - 150
Mirex	77.0	75.7	P/P	31 - 90.0
Permethrin	77.3	83.5	P/P	41 - 108
Phenothrin	50.9	46.9	P/P	22 - 91.0
Piperonyl Butoxide	99.6	107	P/P	50 - 150
Prallethrin	55.8	58.2	P/P	32 - 92.0
Tau-Fluvalinate	92.1	89.6	P/P	50 - 150
Tetramethrin	156	149	P/P	60 - 160
Trans-Nonachlor	80.5	82.4	P/P	50 - 107
Triclosan Methyl	89.6	95.8	P/P	50 - 150
Trifluralin	74.4	70.7	P/P	58 - 119

Reference Method: EPA 8276
Batch ID: P388782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	92.9	93.0	P/P	47 - 119
Toxaphene	91.9	86.7	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P388857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	69.4		P	40 - 150
AMPA	114		P	40 - 150
Endothall	109		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	104		P	40 - 140
Sucralose	116		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P388895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	45.5		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P388895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	53.8		P	30 - 160
Acetamiprid	61.5		P	30 - 160
Afidopyropen	50.6		P	30 - 160
Bentazon	48.3		P	30 - 160
Benzovindiflupyr	65.0		P	30 - 160
Carbamazepine	63.9		P	30 - 160
Clothianidin	101		P	30 - 160
Dinotefuran	84.8		P	30 - 160
Diuron	70.2		P	30 - 160
Fenuron	100		P	30 - 160
Fluridone	83.0		P	30 - 160
Hydrocodone	79.0		P	30 - 160
Ibuprofen	48.4		P	30 - 160
Imazapyr	52.0		P	30 - 160
Imidacloprid	77.2		P	30 - 160
Linuron	61.1		P	30 - 160
Mandestrobin	78.8		P	30 - 160
MCPP	58.1		P	30 - 160
Naproxen	45.5		P	30 - 160
Primidone	90.5		P	30 - 160
Pyraclostrobin	58.8		P	30 - 160
Thiamethoxam	85.6		P	30 - 160
Tolfenpyrad	38.6		P	30 - 160
Triclopyr	50.2		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P388916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	79.7		P	30 - 160
Aldicarb	48.4		P	30 - 160
Aldicarb Sulfone	83.1		P	30 - 160
Aldicarb Sulfoxide	89.1		P	30 - 160
Carbaryl	63.1		P	30 - 160
Carbofuran	53.5		P	30 - 160
Methiocarb	80.9		P	30 - 160
Methomyl	89.2		P	30 - 160
Oxamyl	88.7		P	30 - 160
Propoxur	50.7		P	30 - 160

Reference Method: SM 2120 B-2011

Batch ID: P388751

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

Reference Method: SM 2320 B-2011

Batch ID: P389112

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.7		P	93 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P389117

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P388947

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P388938

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202972	Barium	105	101	P/P	80 - 120
2202972	Calcium	102		P	80 - 120
2202972	Iron	108	103	P/P	80 - 120
2202972	Magnesium	108	100	P/P	80 - 120
2202972	Potassium	103	97.8	P/P	80 - 120
2202972	Sodium	98.8		P	80 - 120
2202972	Zinc	104	98.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P388938

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202972	Aluminum	99.3	99.3	P/P	80 - 120
2202972	Antimony	100	100	P/P	80 - 120
2202972	Arsenic	102	102	P/P	80 - 120
2202972	Beryllium	98.3	98.2	P/P	80 - 120
2202972	Boron	101	100	P/P	80 - 120
2202972	Cadmium	99.3	103	P/P	80 - 120
2202972	Chromium	98.7	98.6	P/P	80 - 120
2202972	Copper	100	99.9	P/P	80 - 120
2202972	Lead	96.1	95.5	P/P	80 - 120
2202972	Nickel	99.8	99.5	P/P	80 - 120
2202972	Selenium	98.8	98.2	P/P	80 - 120
2202972	Silver	97.0	98.0	P/P	80 - 120
2202972	Thallium	99.4	99.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P389333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202412	Chloride	103		P	90 - 110
2202832	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P389336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202412	Sulfate	103		P	90 - 110
2202832	Sulfate	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P389476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204000	Sulfate	102		P	90 - 110
2204104	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P388846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202750	Ammonia-N	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202747	Kjeldahl Nitrogen	99.3	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202890	Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388933

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202874	NO2NO3-N	99.8	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388949

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202646	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P388747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202647	O-Phosphate-P	97.8	100	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P388720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202161	Acetochlor	88.0	73.8	P/P	68 - 126
2202161	Alachlor	83.8	72.4	P/P	66 - 125
2202161	Atrazine Desethyl	64.2	48.3	P/P	13 - 161
2202161	Azinphos Methyl	88.2	76.1	P/P	54 - 162
2202161	Bromacil	61.0	48.0	P/P	34 - 144
2202161	Butylate	47.3	37.9	P/P	16 - 92.0
2202161	Carbophenothion	73.3	66.4	P/P	30 - 131
2202161	Chlorpyrifos Ethyl	87.9	72.5	P/P	63 - 124
2202161	Chlorpyrifos Methyl	87.6	75.3	P/P	64 - 125
2202161	Cyanazine	100	84.9	P/P	13 - 245
2202161	Demeton	83.4	74.3	P/P	20 - 154
2202161	Diazinon	86.5	74.6	P/P	66 - 141
2202161	Dimethenamid	80.6	70.7	P/P	50 - 130
2202161	Disulfoton	70.1	62.6	P/P	55 - 130
2202161	Dithiopyr	78.8	68.6	P/P	66 - 122
2202161	EPTC	45.8	34.0	P/P	15 - 93.0
2202161	Ethion	72.6	71.8	P/P	15 - 148
2202161	Ethoprop	83.6	69.5	P/P	59 - 126
2202161	Fenamiphos	43.4	44.7	P/P	39 - 137
2202161	Fipronil	84.2	72.9	P/P	47 - 131
2202161	Fipronil Desulfanyl	84.2	72.5	P/P	43 - 121
2202161	Fipronil Sulfide	72.6	58.7	P/P	29 - 134

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P388720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202161	Fipronil Sulfone	79.0	70.8	P/P	19 - 131
2202161	Flumioxazin	144	130	P/P	10 - 300
2202161	Fonofos	81.6	76.0	P/P	62 - 128
2202161	Hexazinone	86.4	70.7	P/P	58 - 154
2202161	Imazalil	70.5	66.3	P/P	10 - 215
2202161	Malathion	90.1	78.2	P/P	54 - 135
2202161	Metalaxyl	88.7	73.6	P/P	46 - 136
2202161	Metolachlor	86.8	72.6	P/P	62 - 126
2202161	Metribuzin	103	89.3	P/P	44 - 277
2202161	Mevinphos	75.3	62.5	P/P	44 - 135
2202161	Molinate	67.9	51.0	P/P	31 - 104
2202161	Naled	48.7	37.7	P/P	33 - 113
2202161	Norflurazon	71.6	60.7	P/P	32 - 134
2202161	Oxadiazon	72.4	64.3	P/P	55 - 123
2202161	Parathion Ethyl	89.0	76.3	P/P	67 - 120
2202161	Parathion Methyl	90.6	75.6	P/P	70 - 140
2202161	Pendimethalin	79.7	70.3	P/P	59 - 145
2202161	Phorate	87.2	79.3	P/P	52 - 127
2202161	Prodiamine	47.4	56.8	P/P	11 - 157
2202161	Prometon	82.6	71.0	P/P	55 - 130
2202161	Prometryn	82.3	70.8	P/P	55 - 127
2202161	Pronamide	94.9	79.6	P/P	66 - 150
2202161	Propiconazole	67.5	51.8	P/P	14 - 178
2202161	Simazine	89.5	76.5	P/P	58 - 159
2202161	Sulfentrazone	68.9	59.1	P/P	21 - 144
2202161	Tebuconazole	37.3	35.9	P/P	10 - 122
2202161	Terbufos	84.1	72.5	P/P	65 - 131
2202161	Terbutylazine	91.5	78.6	P/P	63 - 131

Reference Method: EPA 8270E
Batch ID: P388782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2201857	Aldrin	40.6	39.6	P/P	32 - 82.0
2201857	Alpha-BHC	74.3	78.3	P/P	68 - 157
2201857	Alpha-Chlordane	58.4	58.6	P/P	54 - 108
2201857	Beta-BHC	87.7	92.3	P/P	54 - 200
2201857	Beta-Cyfluthrin	82.9	77.0	P/P	50 - 154
2201857	Bifenthrin	69.6	74.8	P/P	49 - 124
2201857	Chlorothalonil	188	192	P/P	10 - 289
2201857	Cis-Nonachlor	63.7	65.6	P/P	53 - 112
2201857	Cypermethrin	84.0	85.3	P/P	43 - 141
2201857	Dacthal	78.3	80.0	P/P	75 - 112
2201857	DDD-p,p'	61.7	62.2	P/P	58 - 125
2201857	DDE-p,p'	51.1	52.0	P/P	50 - 108
2201857	DDT-p,p'	61.8	59.9	P/P	52 - 140
2201857	Delta-BHC	121	138	P/P	61 - 228
2201857	Deltamethrin	95.0	105	P/P	50 - 200
2201857	Dichlobenil	51.6	57.6	P/P	25 - 140
2201857	Dicofol	50.0	67.7	F/P	59 - 130
2201857	Dieldrin	61.8	62.0	P/P	57 - 121
2201857	Endosulfan I	72.9	76.1	P/P	62 - 123

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P388782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2201857	Endosulfan II	83.6	107	P/P	48 - 163
2201857	Endosulfan Sulfate	79.9	86.4	P/P	63 - 132
2201857	Endrin	69.1	71.8	P/P	58 - 128
2201857	Endrin Aldehyde	113	114	P/P	44 - 126
2201857	Endrin Ketone	79.9	85.0	P/P	68 - 127
2201857	Esfenvalerate	64.0	67.3	P/P	50 - 150
2201857	Ethalfuralin	54.1	52.6	F/F	55 - 131
2201857	Fenpropathrin	117	110	P/P	60 - 160
2201857	Gamma-BHC	95.6	95.5	P/P	54 - 206
2201857	Gamma-Chlordane	56.9	56.7	P/P	52 - 105
2201857	Heptachlor	53.8	48.3	P/P	47 - 94.0
2201857	Heptachlor Epoxide	62.0	62.7	P/P	61 - 113
2201857	Hexachlorobenzene	44.5	46.0	F/P	45 - 100
2201857	Lambda-Cyhalothrin	93.4	99.2	P/P	37 - 165
2201857	Methoxychlor	84.0	80.7	P/P	63 - 153
2201857	MGK-264	63.5	65.5	P/P	50 - 150
2201857	Mirex	60.6	60.7	P/P	38 - 90.0
2201857	Permethrin	60.1	70.8	P/P	45 - 112
2201857	Phenothrin	48.2	49.8	P/P	22 - 118
2201857	Piperonyl Butoxide	81.9	54.9	P/P	50 - 150
2201857	Prallethrin	46.2	55.2	P/P	21 - 114
2201857	Tau-Fluvalinate	92.6	95.5	P/P	50 - 150
2201857	Tetramethrin	144	159	P/P	60 - 160
2201857	Trans-Nonachlor	57.8	58.4	P/P	50 - 103
2201857	Triclosan Methyl	59.3	61.9	P/P	50 - 150
2201857	Trifluralin	50.8	49.7	F/F	57 - 122

Reference Method: EPA 8276
Batch ID: P388782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202152	Chlordane	90.1	96.6	P/P	34 - 129
2202152	Toxaphene	144	133	P/P	16 - 148

Reference Method: EPA 8321B
Batch ID: P388857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202760	Acesulfame K	89.4	90.0	P/P	40 - 150
2202760	AMPA	120	122	P/P	40 - 150
2202760	Endothall	108	109	P/P	40 - 150
2202760	Glufosinate	97.4	92.7	P/P	40 - 150
2202760	Glyphosate	85.1	86.0	P/P	40 - 140
2202760	Sucralose	122	119	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P388895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202818	2,4-D	40.9	42.4	P/P	30 - 160
2202818	Acetaminophen	85.6	100	P/P	30 - 160
2202818	Acetamiprid	60.5	51.3	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P388895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202818	Afidopyropen	45.1	34.0	P/P	30 - 160
2202818	Bentazon	20.2	19.8	F/F	30 - 160
2202818	Benzovindiflupyr	57.5	49.0	P/P	30 - 160
2202818	Carbamazepine	49.3	39.3	P/P	30 - 160
2202818	Clothianidin	76.6	66.5	P/P	30 - 160
2202818	Dinotefuran	68.1	63.9	P/P	30 - 160
2202818	Diuron	30.1	20.7	P/F	30 - 160
2202818	Fenuron	61.7	70.3	P/P	30 - 160
2202818	Fluridone	66.7	51.6	P/P	30 - 160
2202818	Hydrocodone	56.5	57.6	P/P	30 - 160
2202818	Ibuprofen	36.6	35.8	P/P	30 - 160
2202818	Imazapyr	28.2	26.5	F/F	30 - 160
2202818	Imidacloprid	112	95.4	P/P	30 - 160
2202818	Linuron	53.7	54.4	P/P	30 - 160
2202818	Mandestrobin	64.4	58.6	P/P	30 - 160
2202818	MCCP	63.1	58.3	P/P	30 - 160
2202818	Naproxen	32.2	29.6	P/F	30 - 160
2202818	Primidone	63.4	40.6	P/P	30 - 160
2202818	Pyraclostrobin	57.0	50.1	P/P	30 - 160
2202818	Thiamethoxam	83.0	69.4	P/P	30 - 160
2202818	Tolfenpyrad	35.7	32.5	P/P	30 - 160
2202818	Triclopyr	54.4	46.4	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P388916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202302	3-Hydroxycarbofuran	48.7	39.3	P/P	30 - 160
2202302	Aldicarb	27.9	24.6	F/F	30 - 160
2202302	Aldicarb Sulfone	36.6	32.8	P/P	30 - 160
2202302	Aldicarb Sulfoxide	11.4	10.6	F/F	30 - 160
2202302	Carbaryl	24.8	22.1	F/F	30 - 160
2202302	Carbofuran	22.0	24.1	F/F	30 - 160
2202302	Methiocarb	49.4	40.9	P/P	30 - 160
2202302	Methomyl	44.5	41.7	P/P	30 - 160
2202302	Oxamyl	38.4	41.3	P/P	30 - 160
2202302	Propoxur	24.7	23.2	F/F	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P389117

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202774	Fluoride	99.1	103	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P388947

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2202404	Organic Carbon	97.1	98.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P388816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202746	Turbidity	2.65	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P388938

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202972	Barium	4.21	Spike	P	0 - 20
2202972	Calcium	3.12	Spike	P	0 - 20
2202972	Iron	3.93	Spike	P	0 - 20
2202972	Magnesium	4.46	Spike	P	0 - 20
2202972	Potassium	3.95	Spike	P	0 - 20
2202972	Sodium	3.19	Spike	P	0 - 20
2202972	Zinc	5.43	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P388938

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202972	Aluminum	0.0358	Spike	P	0 - 20
2202972	Antimony	0.00951	Spike	P	0 - 20
2202972	Arsenic	0.361	Spike	P	0 - 20
2202972	Beryllium	0.103	Spike	P	0 - 20
2202972	Boron	0.966	Spike	P	0 - 20
2202972	Cadmium	3.29	Spike	P	0 - 20
2202972	Chromium	0.0942	Spike	P	0 - 20
2202972	Copper	0.113	Spike	P	0 - 20
2202972	Lead	0.608	Spike	P	0 - 20
2202972	Nickel	0.316	Spike	P	0 - 20
2202972	Selenium	0.627	Spike	P	0 - 20
2202972	Silver	1.00	Spike	P	0 - 20
2202972	Thallium	0.304	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202412	Chloride	0.105	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202412	Sulfate	0.161	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204104	Sulfate	0.388	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P388846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202750	Ammonia-N	0.347	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202747	Kjeldahl Nitrogen	4.66	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202890	Kjeldahl Nitrogen	0.865	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P388933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202874	NO2NO3-N	1.33	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P388949

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202646	Total-P	0.941	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P388747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202647	O-Phosphate-P	2.42	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P388720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202161	Acetochlor	17.4	Spike	P	0 - 30
2202161	Alachlor	14.6	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P388720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202161	Ametryn	17.6	Spike	P	0 - 30
2202161	Atrazine	15.0	Spike	P	0 - 30
2202161	Atrazine Desethyl	18.4	Spike	P	0 - 30
2202161	Azinphos Methyl	14.7	Spike	P	0 - 30
2202161	Bromacil	23.8	Spike	P	0 - 30
2202161	Butylate	22.1	Spike	P	0 - 30
2202161	Carbophenothion	9.89	Spike	P	0 - 30
2202161	Chlorpyrifos Ethyl	19.2	Spike	P	0 - 30
2202161	Chlorpyrifos Methyl	15.0	Spike	P	0 - 30
2202161	Cyanazine	16.4	Spike	P	0 - 30
2202161	Demeton	11.6	Spike	P	0 - 30
2202161	Diazinon	14.8	Spike	P	0 - 30
2202161	Dimethenamid	13.0	Spike	P	0 - 30
2202161	Disulfoton	11.3	Spike	P	0 - 30
2202161	Dithiopyr	13.8	Spike	P	0 - 30
2202161	EPTC	29.5	Spike	P	0 - 30
2202161	Ethion	1.12	Spike	P	0 - 30
2202161	Ethoprop	18.5	Spike	P	0 - 30
2202161	Fenamiphos	2.95	Spike	P	0 - 30
2202161	Fipronil	14.4	Spike	P	0 - 30
2202161	Fipronil Desulfinyl	15.0	Spike	P	0 - 30
2202161	Fipronil Sulfide	21.3	Spike	P	0 - 30
2202161	Fipronil Sulfone	11.0	Spike	P	0 - 30
2202161	Flumioxazin	10.2	Spike	P	0 - 30
2202161	Fonofos	7.04	Spike	P	0 - 30
2202161	Hexazinone	12.4	Spike	P	0 - 30
2202161	Imazalil	6.25	Spike	P	0 - 30
2202161	Malathion	14.2	Spike	P	0 - 30
2202161	Metalaxyl	18.6	Spike	P	0 - 30
2202161	Metolachlor	15.4	Spike	P	0 - 30
2202161	Metribuzin	13.9	Spike	P	0 - 30
2202161	Mevinphos	18.5	Spike	P	0 - 30
2202161	Molinate	28.3	Spike	P	0 - 30
2202161	Naled	25.5	Spike	P	0 - 30
2202161	Norflurazon	16.5	Spike	P	0 - 30
2202161	Oxadiazon	11.9	Spike	P	0 - 30
2202161	Parathion Ethyl	15.4	Spike	P	0 - 30
2202161	Parathion Methyl	18.0	Spike	P	0 - 30
2202161	Pendimethalin	12.6	Spike	P	0 - 30
2202161	Phorate	9.45	Spike	P	0 - 30
2202161	Prodiamine	18.1	Spike	P	0 - 30
2202161	Prometon	15.1	Spike	P	0 - 30
2202161	Prometryn	13.4	Spike	P	0 - 30
2202161	Pronamide	17.6	Spike	P	0 - 30
2202161	Propiconazole	11.3	Spike	P	0 - 30
2202161	Simazine	15.6	Spike	P	0 - 30
2202161	Sulfentrazone	15.4	Spike	P	0 - 30
2202161	Tebuconazole	3.88	Spike	P	0 - 30
2202161	Terbufos	14.8	Spike	P	0 - 30
2202161	Terbutylazine	15.2	Spike	P	0 - 30
LFB	Acetochlor	10.3	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P388720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Alachlor	3.94	LCS	P	0 - 30
LFB	Ametryn	9.23	LCS	P	0 - 30
LFB	Atrazine	9.68	LCS	P	0 - 30
LFB	Atrazine Desethyl	3.21	LCS	P	0 - 30
LFB	Azinphos Methyl	17.4	LCS	P	0 - 30
LFB	Bromacil	12.2	LCS	P	0 - 30
LFB	Butylate	15.2	LCS	P	0 - 30
LFB	Carbophenothion	8.14	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	11.9	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	9.68	LCS	P	0 - 30
LFB	Cyanazine	0.899	LCS	P	0 - 30
LFB	Demeton	12.6	LCS	P	0 - 30
LFB	Diazinon	8.05	LCS	P	0 - 30
LFB	Dimethenamid	5.41	LCS	P	0 - 30
LFB	Disulfoton	3.21	LCS	P	0 - 30
LFB	Dithiopyr	7.08	LCS	P	0 - 30
LFB	EPTC	11.8	LCS	P	0 - 30
LFB	Ethion	0.150	LCS	P	0 - 30
LFB	Ethoprop	12.1	LCS	P	0 - 30
LFB	Fenamiphos	6.31	LCS	P	0 - 30
LFB	Fipronil	4.17	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	6.32	LCS	P	0 - 30
LFB	Fipronil Sulfide	13.9	LCS	P	0 - 30
LFB	Fipronil Sulfone	20.5	LCS	P	0 - 30
LFB	Flumioxazin	12.4	LCS	P	0 - 30
LFB	Fonofos	12.7	LCS	P	0 - 30
LFB	Hexazinone	8.35	LCS	P	0 - 30
LFB	Imazalil	10.8	LCS	P	0 - 30
LFB	Malathion	5.09	LCS	P	0 - 30
LFB	Metalaxyl	7.46	LCS	P	0 - 30
LFB	Metolachlor	6.77	LCS	P	0 - 30
LFB	Metribuzin	11.2	LCS	P	0 - 30
LFB	Mevinphos	3.72	LCS	P	0 - 30
LFB	Molinate	15.9	LCS	P	0 - 30
LFB	Naled	10.8	LCS	P	0 - 30
LFB	Norflurazon	13.1	LCS	P	0 - 30
LFB	Oxadiazon	7.80	LCS	P	0 - 30
LFB	Parathion Ethyl	5.96	LCS	P	0 - 30
LFB	Parathion Methyl	13.7	LCS	P	0 - 30
LFB	Pendimethalin	9.71	LCS	P	0 - 30
LFB	Phorate	1.63	LCS	P	0 - 30
LFB	Prodiamine	70.4	LCS	F	0 - 30
LFB	Prometon	9.09	LCS	P	0 - 30
LFB	Prometryn	5.03	LCS	P	0 - 30
LFB	Pronamide	11.1	LCS	P	0 - 30
LFB	Propiconazole	6.56	LCS	P	0 - 30
LFB	Simazine	19.1	LCS	P	0 - 30
LFB	Sulfentrazone	5.88	LCS	P	0 - 30
LFB	Tebuconazole	6.23	LCS	P	0 - 30
LFB	Terbufos	9.74	LCS	P	0 - 30
LFB	Terbutylazine	6.31	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P388782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2201857	Aldrin	2.31	Spike	P	0 - 30
2201857	Alpha-BHC	5.35	Spike	P	0 - 30
2201857	Alpha-Chlordane	0.317	Spike	P	0 - 30
2201857	Beta-BHC	5.12	Spike	P	0 - 30
2201857	Beta-Cyfluthrin	7.40	Spike	P	0 - 30
2201857	Bifenthrin	7.16	Spike	P	0 - 30
2201857	Chlorothalonil	2.43	Spike	P	0 - 30
2201857	Cis-Nonachlor	2.95	Spike	P	0 - 30
2201857	Cypermethrin	1.62	Spike	P	0 - 30
2201857	Dacthal	2.16	Spike	P	0 - 30
2201857	DDD-p,p'	0.869	Spike	P	0 - 30
2201857	DDE-p,p'	1.74	Spike	P	0 - 30
2201857	DDT-p,p'	3.08	Spike	P	0 - 30
2201857	Delta-BHC	13.1	Spike	P	0 - 30
2201857	Deltamethrin	9.89	Spike	P	0 - 30
2201857	Dichlobenil	11.0	Spike	P	0 - 30
2201857	Dicofol	30.1	Spike	F	0 - 30
2201857	Dieldrin	0.179	Spike	P	0 - 30
2201857	Endosulfan I	4.28	Spike	P	0 - 30
2201857	Endosulfan II	24.7	Spike	P	0 - 30
2201857	Endosulfan Sulfate	7.91	Spike	P	0 - 30
2201857	Endrin	3.78	Spike	P	0 - 30
2201857	Endrin Aldehyde	0.709	Spike	P	0 - 30
2201857	Endrin Ketone	6.21	Spike	P	0 - 30
2201857	Esfenvalerate	5.13	Spike	P	0 - 30
2201857	Ethalfuralin	2.73	Spike	P	0 - 30
2201857	Fenpropathrin	5.79	Spike	P	0 - 30
2201857	Gamma-BHC	0.108	Spike	P	0 - 30
2201857	Gamma-Chlordane	0.232	Spike	P	0 - 30
2201857	Heptachlor	10.7	Spike	P	0 - 30
2201857	Heptachlor Epoxide	1.02	Spike	P	0 - 30
2201857	Hexachlorobenzene	3.39	Spike	P	0 - 30
2201857	Lambda-Cyhalothrin	5.97	Spike	P	0 - 30
2201857	Methoxychlor	4.07	Spike	P	0 - 30
2201857	MGK-264	3.14	Spike	P	0 - 30
2201857	Mirex	0.0836	Spike	P	0 - 30
2201857	Permethrin	16.4	Spike	P	0 - 30
2201857	Phenothrin	3.26	Spike	P	0 - 30
2201857	Piperonyl Butoxide	39.5	Spike	F	0 - 30
2201857	Prallethrin	17.7	Spike	P	0 - 30
2201857	Tau-Fluvalinate	3.04	Spike	P	0 - 30
2201857	Tetramethrin	9.46	Spike	P	0 - 30
2201857	Trans-Nonachlor	1.10	Spike	P	0 - 30
2201857	Triclosan Methyl	4.32	Spike	P	0 - 30
2201857	Trifluralin	2.22	Spike	P	0 - 30
LFB	Aldrin	7.90	LCS	P	0 - 30
LFB	Alpha-BHC	0.154	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.77	LCS	P	0 - 30
LFB	Beta-BHC	10.1	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	1.57	LCS	P	0 - 30
LFB	Bifenthrin	2.64	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P388782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlorothalonil	26.1	LCS	P	0 - 30
LFB	Cis-Nonachlor	3.61	LCS	P	0 - 30
LFB	Cypermethrin	7.96	LCS	P	0 - 30
LFB	Dacthal	4.67	LCS	P	0 - 30
LFB	DDD-p,p'	4.73	LCS	P	0 - 30
LFB	DDE-p,p'	6.09	LCS	P	0 - 30
LFB	DDT-p,p'	1.87	LCS	P	0 - 30
LFB	Delta-BHC	0.502	LCS	P	0 - 30
LFB	Deltamethrin	25.4	LCS	P	0 - 30
LFB	Dichlobenil	3.96	LCS	P	0 - 30
LFB	Dicofol	4.26	LCS	P	0 - 30
LFB	Dieldrin	0.694	LCS	P	0 - 30
LFB	Endosulfan I	3.68	LCS	P	0 - 30
LFB	Endosulfan II	7.83	LCS	P	0 - 30
LFB	Endosulfan Sulfate	3.44	LCS	P	0 - 30
LFB	Endrin	3.33	LCS	P	0 - 30
LFB	Endrin Aldehyde	12.7	LCS	P	0 - 30
LFB	Endrin Ketone	2.08	LCS	P	0 - 30
LFB	Esfenvalerate	4.28	LCS	P	0 - 30
LFB	Ethalfuralin	2.86	LCS	P	0 - 30
LFB	Fenpropathrin	7.63	LCS	P	0 - 30
LFB	Gamma-BHC	10.9	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.96	LCS	P	0 - 30
LFB	Heptachlor	1.42	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.69	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.45	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	3.35	LCS	P	0 - 30
LFB	Methoxychlor	0.0230	LCS	P	0 - 30
LFB	MGK-264	0.238	LCS	P	0 - 30
LFB	Mirex	1.69	LCS	P	0 - 30
LFB	Permethrin	7.73	LCS	P	0 - 30
LFB	Phenothrin	8.22	LCS	P	0 - 30
LFB	Piperonyl Butoxide	7.46	LCS	P	0 - 30
LFB	Prallethrin	4.10	LCS	P	0 - 30
LFB	Tau-Fluvalinate	2.74	LCS	P	0 - 30
LFB	Tetramethrin	4.07	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.44	LCS	P	0 - 30
LFB	Triclosan Methyl	6.74	LCS	P	0 - 30
LFB	Trifluralin	5.06	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P388782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202152	Chlordane	6.94	Spike	P	0 - 30
2202152	Toxaphene	7.43	Spike	P	0 - 30
LFB	Chlordane	0.105	LCS	P	0 - 30
LFB	Toxaphene	5.79	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P388857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202760	Acesulfame K	0.707	Spike	P	0 - 30
2202760	AMPA	0.939	Spike	P	0 - 30
2202760	Endothall	0.924	Spike	P	0 - 30
2202760	Glufosinate	4.95	Spike	P	0 - 30
2202760	Glyphosate	1.02	Spike	P	0 - 30
2202760	Sucralose	2.67	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P388895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202818	2,4-D	2.97	Spike	P	0 - 30
2202818	Acetaminophen	15.7	Spike	P	0 - 30
2202818	Acetamiprid	16.4	Spike	P	0 - 30
2202818	Afidopyropen	28.0	Spike	P	0 - 30
2202818	Bentazon	0.898	Spike	P	0 - 30
2202818	Benzovindiflupyr	15.9	Spike	P	0 - 30
2202818	Carbamazepine	22.4	Spike	P	0 - 30
2202818	Clothianidin	14.1	Spike	P	0 - 30
2202818	Dinotefuran	6.44	Spike	P	0 - 30
2202818	Diuron	31.8	Spike	F	0 - 30
2202818	Fenuron	13.0	Spike	P	0 - 30
2202818	Fluridone	20.5	Spike	P	0 - 30
2202818	Hydrocodone	2.04	Spike	P	0 - 30
2202818	Ibuprofen	2.25	Spike	P	0 - 30
2202818	Imazapyr	3.05	Spike	P	0 - 30
2202818	Imidacloprid	15.4	Spike	P	0 - 30
2202818	Linuron	1.34	Spike	P	0 - 30
2202818	Mandestrobin	9.44	Spike	P	0 - 30
2202818	MCPP	8.05	Spike	P	0 - 30
2202818	Naproxen	8.26	Spike	P	0 - 30
2202818	Primidone	43.7	Spike	F	0 - 30
2202818	Pyraclostrobin	12.9	Spike	P	0 - 30
2202818	Thiamethoxam	17.7	Spike	P	0 - 30
2202818	Tolfenpyrad	9.44	Spike	P	0 - 30
2202818	Triclopyr	15.9	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P388916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202302	3-Hydroxycarbofuran	21.6	Spike	P	0 - 30
2202302	Aldicarb	12.5	Spike	P	0 - 30
2202302	Aldicarb Sulfone	10.8	Spike	P	0 - 30
2202302	Aldicarb Sulfoxide	7.67	Spike	P	0 - 30
2202302	Carbaryl	9.17	Spike	P	0 - 30
2202302	Carbofuran	8.92	Spike	P	0 - 30
2202302	Methiocarb	18.9	Spike	P	0 - 30
2202302	Methomyl	6.36	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P388916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202302	Oxamyl	7.26	Spike	P	0 - 30
2202302	Propoxur	5.92	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P388751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202412	Color (true)	0.253	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P389112

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202774	Total Alkalinity	0.527	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P389040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202775	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P389117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202774	Fluoride	0.928	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P388947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2202404	Organic Carbon	1.29	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2202759
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	36.1	P	30 - 160

Lab Sample ID: 2202760
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	60.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.0	P	30 - 160
EPA 8321B	Diuron-d6	38.0	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.2	P	30 - 160
EPA 8321B	Primidone-d5	52.1	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	30 - 160

Lab Sample ID: 2202761
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	75.8	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	41.8	P	34 - 106
EPA 8276	Decachlorobiphenyl	45.3	P	26 - 97.0
EPA 8276	PCNB	51.5	P	38 - 141

Lab Sample ID: 2202762
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	91.3	P	72 - 135
EPA 8270E	Terbufos-d10	87.3	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A101545

Included Lab Sample IDs: 2202748, 2202751

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	99.1	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A101546

Included Lab Sample IDs: 2202746, 2202749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	103	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101567

Included Lab Sample IDs: 2202746, 2202749

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101575

Included Lab Sample IDs: 2202747, 2202750

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

Reference Method: EPA 8321B

Run ID: A101618

Included Lab Sample IDs: 2202760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	75.1	69.4	P/P	50 - 160
Endothall	111	123	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101626

Included Lab Sample IDs: 2202747, 2202750

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

Reference Method: SM 5310 B-2011

Run ID: A101631

Included Lab Sample IDs: 2202747, 2202750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	95.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A101643

Included Lab Sample IDs: 2202760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	117	110	P/P	50 - 160
Glufosinate	105	108	P/P	50 - 160
Glyphosate	102	106	P/P	50 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101646

Included Lab Sample IDs: 2202764, 2202765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	102	P/P	90 - 110
Calcium	103	103	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	103	102	P/P	90 - 110
Potassium	101	99.1	P/P	90 - 110
Sodium	101	100	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101652

Included Lab Sample IDs: 2202759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	88.8	96.2	P/P	60 - 150
Aldicarb	83.0	86.7	P/P	60 - 150
Aldicarb Sulfone	82.3	88.1	P/P	50 - 150
Aldicarb Sulfoxide	96.0	92.4	P/P	50 - 150
Carbaryl	78.4	69.3	P/P	60 - 150
Carbofuran	67.3	60.9	P/P	50 - 150
Methiocarb	77.5	81.2	P/P	50 - 150
Methomyl	91.8	81.1	P/P	50 - 150
Oxamyl	99.5	91.7	P/P	50 - 150
Propoxur	72.4	68.9	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101667

Included Lab Sample IDs: 2202764, 2202765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.6	97.9	P/P	90 - 110
Antimony	97.4	96.5	P/P	90 - 110
Arsenic	100	98.7	P/P	90 - 110
Boron	101	100	P/P	90 - 110
Cadmium	98.6	97.1	P/P	90 - 110
Chromium	94.3	92.0	P/P	90 - 110
Copper	96.5	94.9	P/P	90 - 110
Lead	96.7	96.2	P/P	90 - 110
Nickel	96.1	95.3	P/P	90 - 110
Selenium	97.4	96.6	P/P	90 - 110
Silver	101	99.3	P/P	90 - 110
Thallium	93.7	94.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A101671
 Included Lab Sample IDs: 2202760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	75.7	80.2	P/P	50 - 150
Acetaminophen	98.3	115	P/P	60 - 160
Acetamiprid	117	118	P/P	50 - 150
Afidopyropen	90.2	94.6	P/P	50 - 150
Bentazon	80.7	80.7	P/P	50 - 160
Benzovindiflupyr	99.9	92.9	P/P	50 - 150
Carbamazepine	109	99.5	P/P	60 - 150
Clothianidin	107	100	P/P	60 - 150
Dinotefuran	92.4	94.8	P/P	50 - 150
Diuron	101	100	P/P	60 - 160
Fenuron	106	110	P/P	60 - 150
Fluridone	97.3	101	P/P	60 - 160
Hydrocodone	98.8	100	P/P	60 - 150
Ibuprofen	79.9	80.9	P/P	50 - 160
Imazapyr	112	113	P/P	50 - 160
Imidacloprid	89.6	96.4	P/P	60 - 150
Linuron	62.6	67.6	P/P	60 - 150
Mandestrobin	101	109	P/P	50 - 150
MCPP	70.2	63.7	P/P	50 - 150
Naproxen	83.3	124	P/P	50 - 160
Primidone	82.2	102	P/P	60 - 150
Pyraclostrobin	97.0	90.9	P/P	60 - 150
Thiamethoxam	91.6	90.1	P/P	50 - 150
Tolfenpyrad	76.5	89.6	P/P	60 - 150
Triclopyr	71.7	79.4	P/P	50 - 150

Reference Method: EPA 8321B
 Run ID: A101686
 Included Lab Sample IDs: 2202760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	120	114	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A101693
 Included Lab Sample IDs: 2202747

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

Reference Method: SM 2320 B-2011
 Run ID: A101694
 Included Lab Sample IDs: 2202746, 2202749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.7	99.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A101694

Included Lab Sample IDs: 2202746, 2202749

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101699

Included Lab Sample IDs: 2202764, 2202765

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101723

Included Lab Sample IDs: 2202750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	96.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A101757

Included Lab Sample IDs: 2202761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.6		P	80 - 120
Alpha-BHC	98.0		P	80 - 120
Alpha-Chlordane	98.2		P	80 - 120
Beta-BHC	95.0		P	80 - 120
Beta-Cyfluthrin	93.3		P	80 - 120
Bifenthrin	106		P	80 - 120
Chlorothalonil	119		P	80 - 120
Cis-Nonachlor	95.1		P	80 - 120
Cypermethrin	94.4		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	99.0		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	105		P	80 - 120
Deltamethrin	95.3		P	80 - 120
Dichlobenil	89.4		P	80 - 120
Dicofol	93.1		P	80 - 120
Diieldrin	104		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	132*		F	80 - 120
Endosulfan Sulfate	92.3		P	80 - 120
Endrin	96.0		P	80 - 120
Endrin Aldehyde	98.2		P	80 - 120
Endrin Ketone	89.7		P	80 - 120
Esfenvalerate	89.6		P	80 - 120
Ethalfuralin	98.2		P	80 - 120
Fenpropathrin	97.0		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	96.4		P	80 - 120
Heptachlor	97.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A101757

Included Lab Sample IDs: 2202761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Heptachlor Epoxide	96.0		P	80 - 120
Hexachlorobenzene	105		P	80 - 120
Lambda-Cyhalothrin	95.7		P	80 - 120
Methoxychlor	106		P	80 - 120
MGK-264	96.9		P	80 - 120
Mirex	95.8		P	80 - 120
Permethrin	90.6		P	80 - 120
Phenothrin	90.3		P	80 - 120
Piperonyl Butoxide	103		P	80 - 120
Prallethrin	89.9		P	80 - 120
Tau-Fluvalinate	97.7		P	80 - 120
Tetramethrin	104		P	80 - 120
Trans-Nonachlor	96.4		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	99.6		P	80 - 120

Reference Method: EPA 8276

Run ID: A101762

Included Lab Sample IDs: 2202761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	106		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101770

Included Lab Sample IDs: 2202747, 2202750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	92.0	91.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101798

Included Lab Sample IDs: 2202746, 2202749

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

Reference Method: EPA 8270E

Run ID: A101840

Included Lab Sample IDs: 2202762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.5		P	80 - 120
Alachlor	97.6		P	80 - 120
Ametryn	91.3		P	80 - 120
Atrazine	97.0		P	80 - 120
Atrazine Desethyl	96.2		P	80 - 120
Azinphos Methyl	91.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A101840
 Included Lab Sample IDs: 2202762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	92.0		P	80 - 120
Butylate	100		P	80 - 120
Carbophenothion	94.9		P	80 - 120
Chlorpyrifos Ethyl	94.9		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	95.0		P	80 - 120
Demeton	96.8		P	80 - 120
Diazinon	98.2		P	80 - 120
Dimethenamid	97.0		P	80 - 120
Disulfoton	97.2		P	80 - 120
Dithiopyr	96.9		P	80 - 120
EPTC	99.1		P	80 - 120
Ethion	90.3		P	80 - 120
Ethoprop	98.3		P	80 - 120
Fenamiphos	91.1		P	80 - 120
Fipronil	95.1		P	80 - 120
Fipronil Desulfinyl	98.9		P	80 - 120
Fipronil Sulfide	93.7		P	80 - 120
Fipronil Sulfone	94.4		P	80 - 120
Flumioxazin	86.0		P	80 - 120
Fonofos	97.9		P	80 - 120
Hexazinone	94.9		P	80 - 120
Imazalil	94.8		P	80 - 120
Malathion	92.0		P	80 - 120
Metalaxyl	97.7		P	80 - 120
Metolachlor	97.4		P	80 - 120
Metribuzin	92.7		P	80 - 120
Mevinphos	96.3		P	80 - 120
Molinate	97.4		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	92.6		P	80 - 120
Oxadiazon	95.9		P	80 - 120
Parathion Ethyl	94.0		P	80 - 120
Parathion Methyl	95.2		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	96.5		P	80 - 120
Prodiamine	95.1		P	80 - 120
Prometon	94.1		P	80 - 120
Prometryn	94.8		P	80 - 120
Pronamide	93.6		P	80 - 120
Propiconazole	89.9		P	80 - 120
Simazine	99.9		P	80 - 120
Sulfentrazone	91.8		P	80 - 120
Tebuconazole	93.2		P	80 - 120
Terbufos	99.0		P	80 - 120
Terbutylazine	98.2		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						2.65	
EPA 200.7 Rev. 4.4	Barium	102		105	101			4.21
	Calcium	103		102				3.12
	Iron	106		108	103			3.93
	Magnesium	107		108	100			4.46
	Potassium	102		103	97.8			3.95
	Sodium	99.3		98.8				3.19
	Zinc	101		104	98.3			5.43
EPA 200.8 Rev. 5.4	Aluminum	99.1		99.3	99.3			0.0358
	Antimony	97.7		100	100			0.0095
	Arsenic	99.1		102	102			0.361
	Beryllium	94.3		98.3	98.2			0.103
	Boron	97.9		101	100			0.966
	Cadmium	97.4		99.3	103			3.29
	Chromium	95.3		98.7	98.6			0.0942
	Copper	97.7		100	99.9			0.113
	Lead	94.2		96.1	95.5			0.608
	Nickel	96.6		99.8	99.5			0.316
	Selenium	96.5		98.8	98.2			0.627
	Silver	97.2		97.0	98.0			1.00
	Thallium	97.6		99.4	99.7			0.304
EPA 300.0 Rev. 2.1	Chloride	102		103	102		0.105	
	Sulfate	103		103	103		0.161	
	Sulfate	101		101	102		0.388	
EPA 350.1 Rev. 2.0	Ammonia-N	102		101	102			0.347
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		99.3	107			4.66
	Kjeldahl Nitrogen	102		103	104			0.865
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101		99.8	98.3			1.33
EPA 365.1 Rev. 2.0	Total-P	107		105	106			0.941
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		97.8	100			2.42
EPA 8270E	Acetochlor	87.4	78.9	73.8	88.0	10.3		17.4
	Alachlor	87.0	83.7	72.4	83.8	3.94		14.6
	Aldrin	44.6	41.2	40.6	39.6	7.90		2.31
	Alpha-BHC	80.9	81.0	74.3	78.3	0.154		5.35
	Alpha-Chlordane	80.7	84.7	58.4	58.6	4.77		0.317
	Ametryn	91.4	83.4			9.23		17.6
	Atrazine	90.6	82.3			9.68		15.0
	Atrazine Desethyl	71.8	69.5	48.3	64.2	3.21		18.4
	Azinphos Methyl	97.9	82.2	76.1	88.2	17.4		14.7
	Beta-BHC	80.6	89.2	87.7	92.3	10.1		5.12
	Beta-Cyfluthrin	83.9	82.6	82.9	77.0	1.57		7.40
	Bifenthrin	84.0	81.8	69.6	74.8	2.64		7.16
	Bromacil	56.5	50.0	61.0	48.0	12.2		23.8
	Butylate	63.9	54.8	47.3	37.9	15.2		22.1
	Carbophenothion	79.8	73.6	66.4	73.3	8.14		9.89
	Chlorothalonil	70.6	54.3	188	192	26.1		2.43
	Chlorpyrifos Ethyl	84.1	74.6	72.5	87.9	11.9		19.2
	Chlorpyrifos Methyl	90.0	81.7	75.3	87.6	9.68		15.0
	Cis-Nonachlor	83.9	87.0	63.7	65.6	3.61		2.95
	Cyanazine	100	99.1	84.9	100	0.899		16.4
	Cypermethrin	92.5	85.5	84.0	85.3	7.96		1.62
	Dacthal	92.2	96.6	78.3	80.0	4.67		2.16
	DDD-p,p'	86.8	91.0	61.7	62.2	4.73		0.869
	DDE-p,p'	76.6	81.4	51.1	52.0	6.09		1.74

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	DDT-p,p'	89.3	87.6	61.8	59.9	1.87		3.08
	Delta-BHC	113	114	121	138	0.502		13.1
	Deltamethrin	90.9	117	95.0	105	25.4		9.89
	Demeton	81.1	71.5	74.3	83.4	12.6		11.6
	Diazinon	83.8	77.3	74.6	86.5	8.05		14.8
	Dichlobenil	37.5	36.0	51.6	57.6	3.96		11.0
	Dicofol	92.6	96.7	50.0	67.7	4.26		30.1
	Dieldrin	87.1	87.7	61.8	62.0	0.694		0.179
	Dimethenamid	81.9	77.6	70.7	80.6	5.41		13.0
	Disulfoton	70.4	72.7	62.6	70.1	3.21		11.3
	Dithiopyr	78.6	73.2	68.6	78.8	7.08		13.8
	Endosulfan I	99.4	95.8	72.9	76.1	3.68		4.28
	Endosulfan II	107	116	83.6	107	7.83		24.7
	Endosulfan Sulfate	89.4	86.4	79.9	86.4	3.44		7.91
	Endrin	98.4	95.2	69.1	71.8	3.33		3.78
	Endrin Aldehyde	85.7	97.4	113	114	12.7		0.709
	Endrin Ketone	89.2	87.4	79.9	85.0	2.08		6.21
	EPTC	60.6	53.8	34.0	45.8	11.8		29.5
	Esfenvalerate	75.7	72.5	64.0	67.3	4.28		5.13
	Ethalfuralin	74.1	72.0	54.1	52.6	2.86		2.73
	Ethion	73.5	73.6	71.8	72.6	0.150		1.12
	Ethoprop	82.6	73.2	69.5	83.6	12.1		18.5
	Fenamiphos	75.6	80.5	44.7	43.4	6.31		2.95
	Fenpropathrin	88.8	82.3	117	110	7.63		5.79
	Fipronil	84.0	80.6	72.9	84.2	4.17		14.4
	Fipronil Desulfinyl	84.6	79.4	72.5	84.2	6.32		15.0
	Fipronil Sulfide	76.6	66.6	58.7	72.6	13.9		21.3
	Fipronil Sulfone	85.4	69.6	70.8	79.0	20.5		11.0
	Flumioxazin	131	116	130	144	12.4		10.2
	Fonofos	82.8	73.0	76.0	81.6	12.7		7.04
	Gamma-BHC	83.6	93.2	95.6	95.5	10.9		0.108
	Gamma-Chlordane	77.9	80.3	56.9	56.7	2.96		0.232
	Heptachlor	73.5	74.6	53.8	48.3	1.42		10.7
	Heptachlor Epoxide	84.4	86.7	62.0	62.7	2.69		1.02
	Hexachlorobenzene	70.9	69.2	44.5	46.0	2.45		3.39
	Hexazinone	79.1	72.8	70.7	86.4	8.35		12.4
	Imazalil	79.3	71.2	66.3	70.5	10.8		6.25
	Lambda-Cyhalothrin	94.1	91.0	93.4	99.2	3.35		5.97
	Malathion	90.7	86.2	78.2	90.1	5.09		14.2
	Metalaxyl	87.8	81.5	73.6	88.7	7.46		18.6
	Methoxychlor	91.2	91.2	84.0	80.7	0.0230		4.07
	Metolachlor	88.2	82.4	72.6	86.8	6.77		15.4
	Metribuzin	92.1	82.3	89.3	103	11.2		13.9
	Mevinphos	70.0	67.5	62.5	75.3	3.72		18.5
	MGK-264	53.2	53.0	63.5	65.5	0.238		3.14
	Mirex	77.0	75.7	60.6	60.7	1.69		0.0836
	Molinate	74.2	63.2	51.0	67.9	15.9		28.3
	Naled	50.3	45.2	37.7	48.7	10.8		25.5
	Norflurazon	76.4	67.0	60.7	71.6	13.1		16.5
	Oxadiazon	74.8	69.2	64.3	72.4	7.80		11.9
	Parathion Ethyl	85.1	80.2	76.3	89.0	5.96		15.4
	Parathion Methyl	91.6	79.9	75.6	90.6	13.7		18.0
	Pendimethalin	72.8	66.0	70.3	79.7	9.71		12.6
	Permethrin	77.3	83.5	60.1	70.8	7.73		16.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Phenothrin	50.9	46.9	48.2	49.8	8.22		3.26
	Phorate	101	103	79.3	87.2	1.63		9.45
	Piperonyl Butoxide	99.6	107	81.9	54.9	7.46		39.5
	Prallethrin	55.8	58.2	46.2	55.2	4.10		17.7
	Prodimamine	76.8	36.8	56.8	47.4	70.4		18.1
	Prometon	83.5	76.2	71.0	82.6	9.09		15.1
	Prometryn	83.2	79.1	70.8	82.3	5.03		13.4
	Pronamide	92.3	82.6	79.6	94.9	11.1		17.6
	Propiconazole	71.0	66.5	51.8	67.5	6.56		11.3
	Simazine	92.2	76.1	76.5	89.5	19.1		15.6
	Sulfentrazone	62.7	59.1	59.1	68.9	5.88		15.4
	Tau-Fluvalinate	92.1	89.6	92.6	95.5	2.74		3.04
	Tebuconazole	41.4	44.0	35.9	37.3	6.23		3.88
	Terbufos	80.1	72.6	72.5	84.1	9.74		14.8
	Terbuthylazine	90.2	84.7	91.5	78.6	6.31		15.2
	Tetramethrin	156	149	144	159	4.07		9.46
	Trans-Nonachlor	80.5	82.4	57.8	58.4	2.44		1.10
	Triclosan Methyl	89.6	95.8	59.3	61.9	6.74		4.32
	Trifluralin	74.4	70.7	50.8	49.7	5.06		2.22
EPA 8276	Chlordane	92.9	93.0	90.1	96.6	0.105		6.94
	Toxaphene	91.9	86.7	144	133	5.79		7.43
EPA 8321B	2,4-D	45.5		40.9	42.4			2.97
	3-Hydroxycarbofuran	79.7		48.7	39.3			21.6
	Acesulfame K	69.4		89.4	90.0			0.707
	Acetaminophen	53.8		85.6	100			15.7
	Acetamiprid	61.5		60.5	51.3			16.4
	Afidopyropen	50.6		45.1	34.0			28.0
	Aldicarb	48.4		27.9	24.6			12.5
	Aldicarb Sulfone	83.1		36.6	32.8			10.8
	Aldicarb Sulfoxide	89.1		11.4	10.6			7.67
	AMPA	114		120	122			0.939
	Bentazon	48.3		20.2	19.8			0.898
	Benzovindiflupyr	65.0		57.5	49.0			15.9
	Carbamazepine	63.9		49.3	39.3			22.4
	Carbaryl	63.1		24.8	22.1			9.17
	Carbofuran	53.5		22.0	24.1			8.92
	Clothianidin	101		76.6	66.5			14.1
	Dinotefuran	84.8		68.1	63.9			6.44
	Diuron	70.2		30.1	20.7			31.8
	Endothall	109		108	109			0.924
	Fenuron	100		61.7	70.3			13.0
	Fluridone	83.0		66.7	51.6			20.5
	Glufosinate	100		97.4	92.7			4.95
	Glyphosate	104		85.1	86.0			1.02
	Hydrocodone	79.0		56.5	57.6			2.04
	Ibuprofen	48.4		36.6	35.8			2.25
	Imazapyr	52.0		28.2	26.5			3.05
	Imidacloprid	77.2		112	95.4			15.4
	Linuron	61.1		53.7	54.4			1.34
	Mandestrobin	78.8		64.4	58.6			9.44
	MCPD	58.1		63.1	58.3			8.05
	Methiocarb	80.9		49.4	40.9			18.9
	Methomyl	89.2		44.5	41.7			6.36
	Naproxen	45.5		32.2	29.6			8.26

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Oxamyl	88.7	38.4	41.3			7.26
	Primidone	90.5	63.4	40.6			43.7
	Propoxur	50.7	24.7	23.2			5.92
	Pyraclostrobin	58.8	57.0	50.1			12.9
	Sucralose	116	122	119			2.67
	Thiamethoxam	85.6	83.0	69.4			17.7
	Tolfenpyrad	38.6	35.7	32.5			9.44
	Triclopyr	50.2	54.4	46.4			15.9
SM 2120 B-2011	Color (true)	102				0.253	
SM 2320 B-2011	Total Alkalinity	99.7				0.527	
SM 2540 C-2011	TDS					0.0	
SM 4500 F-C-2011	Fluoride	98.3	99.1	103			0.928
SM 5310 B-2011	Organic Carbon	95.8	97.1	98.8			1.29

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2202746, 2202749
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2202764, 2202765
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2202764, 2202765
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2202746, 2202749
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2202746, 2202749
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2202747, 2202750
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2202747, 2202750
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2202747, 2202750
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2202747, 2202750
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2202748, 2202751
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2202761
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2202762
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2202761
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2202759
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2202760
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2202760
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2202746, 2202749
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2202746, 2202749
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2202764, 2202765
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2202746, 2202749
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2202746, 2202749
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2202746, 2202749
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2202747, 2202750

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	10/15/2020			10/16/2020 15:33	Yen Ta	2202746, 2202749
EPA 200.7 Rev. 4.4	10/15/2020	10/20/2020 12:25	Elliott D. Healy	10/20/2020 21:02	Betina Topolski	2202764
	10/15/2020	10/20/2020 12:25	Elliott D. Healy	10/20/2020 21:10	Betina Topolski	2202765
EPA 200.8 Rev. 5.4	10/15/2020	10/20/2020 12:25	Elliott D. Healy	10/21/2020 14:04	Alexander Thompson	2202764
	10/15/2020	10/20/2020 12:25	Elliott D. Healy	10/21/2020 14:12	Alexander Thompson	2202765
	10/15/2020	10/20/2020 12:25	Elliott D. Healy	10/22/2020 15:41	Alexander Thompson	2202764
	10/15/2020	10/20/2020 12:25	Elliott D. Healy	10/22/2020 15:49	Alexander Thompson	2202765
EPA 300.0 Rev. 2.1	10/15/2020			10/27/2020 09:48	Lipi Saha	2202746
	10/15/2020			10/27/2020 10:01	Lipi Saha	2202749
	10/15/2020			10/28/2020 20:03	Lipi Saha	2202746
EPA 350.1 Rev. 2.0	10/15/2020			10/18/2020 12:14	Ping Hua	2202750
	10/15/2020			10/18/2020 12:37	Ping Hua	2202747
EPA 351.2 Rev. 2.0	10/15/2020	10/21/2020 13:55	David Boose	10/22/2020 15:18	Elliott Rodriguez	2202747
	10/15/2020	10/22/2020 13:36	David Boose	10/23/2020 12:11	Elliott Rodriguez	2202750
EPA 353.2 Rev. 2.0	10/15/2020			10/20/2020 10:16	Beverly Y. Sanders	2202750
	10/15/2020			10/20/2020 11:13	Beverly Y. Sanders	2202747
EPA 365.1 Rev. 2.0	10/15/2020	10/20/2020 12:45	Yen Ta	10/26/2020 14:06	Shengyu Wang	2202747
	10/15/2020	10/20/2020 12:45	Yen Ta	10/26/2020 14:07	Shengyu Wang	2202750
EPA 365.1 Rev. 2.0 dissolved	10/15/2020			10/15/2020 16:14	Virginia P. Brown	2202748
	10/15/2020			10/15/2020 16:15	Virginia P. Brown	2202751
EPA 8270E	10/15/2020	10/16/2020 08:00	Fe-Val Siddell	10/19/2020 19:01	Vandana T. Nagar	2202762
	10/15/2020	10/19/2020 08:00	Fe-Val Siddell	10/22/2020 23:05	Arthur Maknenko	2202761
EPA 8276	10/15/2020	10/19/2020 08:00	Fe-Val Siddell	10/22/2020 11:29	Michael Poppell	2202761
EPA 8321B	10/15/2020	10/19/2020 10:15	Rebecca Ware	10/19/2020 12:34	Rebecca Ware	2202760
	10/15/2020	10/19/2020 10:15	Rebecca Ware	10/20/2020 11:24	Rebecca Ware	2202760
	10/15/2020	10/19/2020 10:15	Rebecca Ware	10/22/2020 02:04	Rebecca Ware	2202760
	10/15/2020	10/20/2020 13:30	Hoor Shaik	10/20/2020 22:58	Juyoung Kim	2202759
	10/15/2020	10/20/2020 13:30	Hoor Shaik	10/22/2020 00:22	Juyoung Kim	2202760
SM 2120 B-2011	10/15/2020			10/15/2020 15:34	Blanca Fach	2202746
	10/15/2020			10/15/2020 15:35	Blanca Fach	2202749
SM 2320 B-2011	10/15/2020			10/22/2020 03:40	Samantha Davila	2202746
	10/15/2020			10/22/2020 03:52	Samantha Davila	2202749
SM 2340B	10/15/2020			10/20/2020 21:02	Betina Topolski	2202764
	10/15/2020			10/20/2020 21:10	Betina Topolski	2202765
SM 2540 C-2011	10/15/2020			10/16/2020 19:04	Madeline Gruver	2202746, 2202749
SM 2540 D-2011	10/15/2020			10/16/2020 20:07	Madeline Gruver	2202746, 2202749
SM 4500 F-C-2011	10/15/2020			10/22/2020 03:40	Samantha Davila	2202746
	10/15/2020			10/22/2020 03:52	Samantha Davila	2202749
SM 5310 B-2011	10/15/2020			10/20/2020 03:31	Lauren Lees	2202747
	10/15/2020			10/20/2020 03:43	Lauren Lees	2202750