

Chemical Analysis Report

TLH-ROC-2020-01-21-01

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

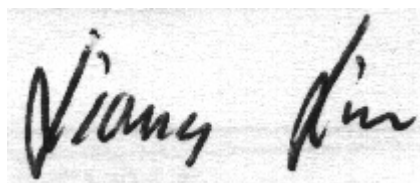
Event Description: **Run 4a**
Request ID: **RQ-2020-01-13-47**
Customer: **TLH-ROC**
Project ID: **SMP**

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

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 10-FEB-2020 15:00

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: MIDDLE OF CHERRY LAKE

Collection Date/Time: 01/20/2020 10:05

Field ID: G1TLHR0048

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150531	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P377471	
	EPA 300.0 Rev. 2.1	Chloride	7.5		mg Cl/L	P377878	
		Sulfate	1.6		mg SO4/L	P377881	
	SM 2120 B-2011	Color (true)	5.0	I	PCU	P377479	
	SM 2320 B-2011	Total Alkalinity	9.5		mg CaCO3/L	P377699	
	SM 2540 C-2011	TDS	21	I	mg/L	P377831	RPD
	SM 2540 D-2011	TSS	2	U	mg/L	P377691	
2150532	SM 4500 F-C-2011	Fluoride	0.055	I	mg F/L	P377704	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P378013	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P377893	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P377673	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P377687	
2150533	SM 5310 B-2011	Organic Carbon	4.4		mg C/L	P377828	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P377533	
2150535	EPA 8321B	Aldicarb	0.020	U	ug/L	P377352	
		Aldicarb Sulfone	0.0020	U	ug/L	P377352	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P377352	
		Carbaryl	0.0020	U	ug/L	P377352	MS
		Carbofuran	0.0020	U	ug/L	P377352	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P377352	
		Methiocarb	0.0020	U	ug/L	P377352	
		Methomyl	0.0020	U	ug/L	P377352	
		Oxamyl	0.0020	U	ug/L	P377352	
		Propoxur	0.0020	U	ug/L	P377352	MS
2150536		2,4-D	0.13		ug/L	P377536	
		Acesulfame K**	0.10	U	ug/L	P377476	
		AMPA**	0.10	U	ug/L	P377476	
		Sucralose**	0.033	I	ug/L	P377476	
		Acetaminophen**	0.0080	U	ug/L	P377536	
		Acetamiprid**	0.0020	U	ug/L	P377536	
		Endothall**	0.25	U	ug/L	P377476	
		Glufosinate**	0.10	U	ug/L	P377476	
		Glyphosate**	0.10	U	ug/L	P377476	
		Afidopyropen**	0.0020	UJ	ug/L	P377536	
		Bentazon	8.0E-04	U	ug/L	P377536	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377536	
		Carbamazepine**	8.0E-04	U	ug/L	P377536	
		Clothianidin**	0.0020	U	ug/L	P377536	
		Dinotefuran**	0.0020	U	ug/L	P377536	
		Diuron	0.14		ug/L	P377536	
		Fenuron	0.016	U	ug/L	P377536	
		Fluridone**	8.0E-04	U	ug/L	P377536	
		Imazapyr**	0.0040	U	ug/L	P377536	

Field ID: G1TLHR0048

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150536	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P377536	
		Ibuprofen**	0.020	U	ug/L	P377536	
		Imidacloprid	0.0020	UJ	ug/L	P377536	MS
		Linuron	0.0040	U	ug/L	P377536	
		Mandestrobin**	0.0020	UJ	ug/L	P377536	
		MCP	0.0020	U	ug/L	P377536	
		Naproxen**	0.0080	UJ	ug/L	P377536	RPD
		Primidone**	0.0040	U	ug/L	P377536	
		Pyraclostrobin**	0.0020	U	ug/L	P377536	
		Thiamethoxam**	0.0020	U	ug/L	P377536	
		Tolfenpyrad**	0.0020	U	ug/L	P377536	
		Triclopyr**	0.0040	U	ug/L	P377536	
2150537	EPA 8270E	Aldrin	4.3	U	ng/L	P377404	
		Alpha-BHC	2.2	U	ng/L	P377404	
		Alpha-Chlordane	1.1	U	ng/L	P377404	
		Beta-BHC	11	U	ng/L	P377404	
		Bifenthrin**	4.3	U	ng/L	P377404	
		Delta-BHC	8.7	UJ	ng/L	P377404	CCV
		Gamma-BHC	8.7	U	ng/L	P377404	
		Carbophenothion	11	UJ	ng/L	P377404	CCV
		Chlorothalonil	2.2	UJ	ng/L	P377404	CCV
		Cis-Nonachlor**	1.1	U	ng/L	P377404	
		Cypermethrin	22	UJ	ng/L	P377404	CCV
		DDD-p,p'	6.5	U	ng/L	P377404	
		DDE-p,p'	6.5	U	ng/L	P377404	
		DDT-p,p'	7.6	U	ng/L	P377404	
		Dicofol	33	U	ng/L	P377404	
		Dieldrin	4.3	U	ng/L	P377404	
		Endosulfan I	4.3	U	ng/L	P377404	
		Endosulfan II	4.3	U	ng/L	P377404	
		Endosulfan Sulfate	2.2	UJ	ng/L	P377404	CCV
		Endrin	2.2	U	ng/L	P377404	
		Endrin Aldehyde	2.2	U	ng/L	P377404	
		Endrin Ketone	2.2	U	ng/L	P377404	
		Ethalfuralin**	3.3	U	ng/L	P377404	
		Gamma-Chlordane	1.1	U	ng/L	P377404	
		Heptachlor	1.6	U	ng/L	P377404	
		Heptachlor Epoxide	2.2	U	ng/L	P377404	
		Hexachlorobenzene	2.2	U	ng/L	P377404	
		Methoxychlor	4.3	U	ng/L	P377404	
		Mirex	2.2	U	ng/L	P377404	
		Permethrin	11	U	ng/L	P377404	
		Trans-Nonachlor**	1.1	U	ng/L	P377404	
		Trifluralin	2.7	U	ng/L	P377404	
	EPA 8276	Chlordane	5.4	U	ng/L	P377404	

Field ID: G1TLHR0048

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150537	EPA 8276	Toxaphene	33	U	ng/L	P377404	
2150538	EPA 8270E	Acetochlor	0.25	U	ng/L	P377534	
		Alachlor	0.25	U	ng/L	P377534	
		Ametryn	0.59	U	ng/L	P377534	
		Atrazine	4.7		ng/L	P377534	
		Atrazine Desethyl	3.4	IJ	ng/L	P377534	CCV
		Azinphos Methyl	2.0	U	ng/L	P377534	
		Bromacil	0.49	U	ng/L	P377534	
		Butylate	0.39	U	ng/L	P377534	
		Carbophenothion	0.49	U	ng/L	P377534	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P377534	
		Chlorpyrifos Methyl	0.049	U	ng/L	P377534	
		Cyanazine	3.2	U	ng/L	P377534	
		Demeton	1.5	U	ng/L	P377534	
		Diazinon	0.12	U	ng/L	P377534	
		Dimethenamid**	0.099	U	ng/L	P377534	
		Disulfoton	0.49	U	ng/L	P377534	
		Dithiopyr**	0.099	U	ng/L	P377534	
		EPTC	1.2	U	ng/L	P377534	
		Ethion	0.15	U	ng/L	P377534	
		Ethoprop	0.099	U	ng/L	P377534	
		Fenamiphos	0.49	U	ng/L	P377534	
		Fipronil	0.25	U	ng/L	P377534	MS
		Fipronil Desulfinyl**	0.12	U	ng/L	P377534	
		Fipronil Sulfide	0.15	U	ng/L	P377534	
		Fipronil Sulfone	0.15	U	ng/L	P377534	
		Flumioxazin**	1.7	U	ng/L	P377534	
		Fonofos	0.20	U	ng/L	P377534	
		Hexazinone	0.49	U	ng/L	P377534	
		Imazalil**	0.74	U	ng/L	P377534	
		Malathion	0.35	UJ	ng/L	P377534	LCS
		Metalaxyl	0.74	U	ng/L	P377534	
		Metolachlor	0.49	U	ng/L	P377534	MS
		Metribuzin	3.2	U	ng/L	P377534	
		Mevinphos	0.49	U	ng/L	P377534	
		Molinate	0.30	U	ng/L	P377534	
		Norflurazon	0.49	U	ng/L	P377534	
		Oxadiazon**	0.099	U	ng/L	P377534	
		Parathion Ethyl	0.25	U	ng/L	P377534	
		Parathion Methyl	0.54	U	ng/L	P377534	
		Pendimethalin	0.99	U	ng/L	P377534	
		Phorate	0.25	U	ng/L	P377534	
		Prodiamine**	0.17	U	ng/L	P377534	
		Prometon	0.89	UJ	ng/L	P377534	CCV, LCS, MS

Field ID: G1TLHR0048

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2150538	EPA 8270E	Prometryn	0.20	UJ	ng/L	P377534	LCS, MS
		Pronamide**	0.15	U	ng/L	P377534	
		Propiconazole**	0.49	U	ng/L	P377534	
		Simazine	0.49	U	ng/L	P377534	
		Sulfentrazone**	0.49	U	ng/L	P377534	
		Tebuconazole**	1.3	I	ng/L	P377534	
		Terbufos	0.099	U	ng/L	P377534	
		Terbuthylazine	0.42	U	ng/L	P377534	

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: J - second source check standards for some analytes were not available for analysis. MS accuracy for diuron and 2,4-D could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377471

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377878

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377881

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378013

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377893

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377673

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377687

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377533

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

Reference Method: EPA 8270E
Batch ID: P377404

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	10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P377404

Component	Result	Code	Units
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	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
Ethalfuralin	3.0	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
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8270E
Batch ID: P377534

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P377534

Component	Result	Code	Units
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
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: P377404

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

Reference Method: EPA 8321B
Batch ID: P377352

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P377352

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

Reference Method: EPA 8321B
Batch ID: P377476

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

Reference Method: EPA 8321B
Batch ID: P377536

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: P377479

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P377699

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P377831

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377691

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377704

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377828

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P377878

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P377881

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P378013

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P377893

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377673

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377687

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: P377533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.2		P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P377404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	34.8	27.9	P/P	20 - 87.0
Alpha-BHC	92.7	94.2	P/P	65 - 142
Alpha-Chlordane	87.9	90.9	P/P	58 - 106
Beta-BHC	102	104	P/P	65 - 179
Bifenthrin	98.8	91.4	P/P	38 - 128
Carbophenothion	113	116	P/P	20 - 144
Chlorothalonil	153	171	P/P	20 - 214
Cis-Nonachlor	90.1	92.7	P/P	56 - 113
Cypermethrin	123	125	P/P	37 - 130
DDD-p,p'	101	105	P/P	66 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P377404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDE-p,p'	80.0	82.7	P/P	53 - 108
DDT-p,p'	81.5	83.0	P/P	57 - 133
Delta-BHC	120	116	P/P	68 - 187
Dicofol	91.3	86.1	P/P	66 - 123
Dieldrin	94.2	97.6	P/P	65 - 111
Endosulfan I	110	107	P/P	65 - 115
Endosulfan II	117	116	P/P	68 - 133
Endosulfan Sulfate	123	116	P/P	62 - 127
Endrin	105	89.6	P/P	64 - 122
Endrin Aldehyde	102	93.0	P/P	61 - 132
Endrin Ketone	108	113	P/P	66 - 120
Ethalfuralin	85.3	87.3	P/P	57 - 127
Gamma-BHC	94.6	94.8	P/P	71 - 158
Gamma-Chlordane	85.4	88.4	P/P	53 - 106
Heptachlor	79.5	81.7	P/P	45 - 96.0
Heptachlor Epoxide	93.1	95.5	P/P	64 - 109
Hexachlorobenzene	70.6	76.5	P/P	46 - 103
Methoxychlor	89.1	94.8	P/P	69 - 149
Mirex	64.5	66.0	P/P	31 - 90.0
Permethrin	88.5	94.0	P/P	41 - 108
Trans-Nonachlor	82.9	84.9	P/P	50 - 107
Trifluralin	81.8	84.2	P/P	58 - 119

Reference Method: EPA 8270E

Batch ID: P377534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	109	108	P/P	71 - 122
Alachlor	111	106	P/P	70 - 121
Ametryn	131	122	P/P	49 - 137
Atrazine	98.2	92.1	P/P	76 - 125
Atrazine Desethyl	67.2	64.8	P/P	31 - 144
Azinphos Methyl	105	100	P/P	67 - 150
Bromacil	88.3	88.9	P/P	36 - 121
Butylate	68.1	70.5	P/P	33 - 88.0
Carbophenothion	77.0	75.7	P/P	50 - 150
Chlorpyrifos Ethyl	77.0	79.2	P/P	73 - 117
Chlorpyrifos Methyl	80.2	82.6	P/P	68 - 121
Cyanazine	171	159	P/P	20 - 250
Demeton	80.1	78.9	P/P	30 - 123
Diazinon	107	103	P/P	70 - 128
Dimethenamid	107	105	P/P	66 - 122
Disulfoton	72.6	70.9	P/P	46 - 124
Dithiopyr	99.8	95.4	P/P	69 - 122
EPTC	56.4	59.0	P/P	31 - 90.0
Ethion	70.8	74.4	P/P	45 - 135
Ethoprop	71.4	78.9	P/P	59 - 118
Fenamiphos	98.1	88.5	P/P	30 - 136
Fipronil	113	109	P/P	57 - 127
Fipronil Desulfinyl	104	98.4	P/P	51 - 122
Fipronil Sulfide	81.7	81.0	P/P	57 - 119
Fipronil Sulfone	89.5	85.9	P/P	51 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P377534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Flumioxazin	149	142	P/P	70 - 200
Fonofos	77.6	82.7	P/P	60 - 120
Hexazinone	99.2	96.7	P/P	57 - 142
Imazalil	94.5	90.4	P/P	50 - 150
Malathion	63.9	71.8	F/P	67 - 128
Metalaxyl	103	97.6	P/P	21 - 148
Metolachlor	113	111	P/P	70 - 120
Metribuzin	101	104	P/P	20 - 253
Mevinphos	71.5	69.9	P/P	47 - 116
Molinate	67.4	70.4	P/P	41 - 99.0
Norflurazon	106	105	P/P	54 - 127
Oxadiazon	90.1	89.0	P/P	65 - 122
Parathion Ethyl	81.6	88.1	P/P	71 - 113
Parathion Methyl	93.6	94.6	P/P	73 - 129
Pendimethalin	87.7	93.3	P/P	63 - 130
Phorate	80.8	80.1	P/P	48 - 118
Prodiamine	43.8	43.1	P/P	20 - 144
Prometon	128	123	F/F	53 - 120
Prometryn	126	118	F/P	63 - 119
Pronamide	108	106	P/P	50 - 150
Propiconazole	113	111	P/P	50 - 150
Simazine	99.0	97.7	P/P	77 - 129
Sulfentrazone	87.6	89.4	P/P	50 - 150
Tebuconazole	88.4	74.9	P/P	20 - 118
Terbufos	81.0	82.6	P/P	61 - 119
Terbutylazine	92.8	88.7	P/P	75 - 119

Reference Method: EPA 8276
Batch ID: P377404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	86.8	88.6	P/P	47 - 119
Toxaphene	103	108	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P377352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	92.3		P	40 - 160
Aldicarb	97.3		P	30 - 160
Aldicarb Sulfone	103		P	40 - 160
Aldicarb Sulfoxide	98.8		P	40 - 160
Carbaryl	69.4		P	40 - 160
Carbofuran	71.7		P	40 - 160
Methiocarb	69.7		P	40 - 160
Methomyl	97.0		P	40 - 160
Oxamyl	99.1		P	40 - 160
Propoxur	68.1		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P377476

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	121		P	40 - 150
AMPA	91.1		P	40 - 150
Endothall	112		P	40 - 150
Glufosinate	93.8		P	40 - 150
Glyphosate	101		P	40 - 140
Sucralose	91.6		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P377536

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	122		P	40 - 160
Acetaminophen	78.9		P	30 - 160
Acetamiprid	79.6		P	40 - 160
Afidopyropen	93.6		P	40 - 160
Bentazon	61.3		P	30 - 160
Benzovindiflupyr	81.8		P	40 - 160
Carbamazepine	97.0		P	40 - 160
Clothianidin	86.4		P	40 - 160
Dinotefuran	101		P	40 - 160
Diuron	73.0		P	40 - 160
Fenuron	102		P	40 - 160
Fluridone	95.3		P	40 - 160
Hydrocodone	91.5		P	40 - 160
Ibuprofen	81.9		P	30 - 160
Imazapyr	77.0		P	40 - 160
Imidacloprid	107		P	40 - 160
Linuron	72.9		P	40 - 160
Mandestrobin	89.0		P	40 - 160
MCPP	108		P	40 - 160
Naproxen	82.7		P	40 - 160
Primidone	93.8		P	40 - 160
Pyraclostrobin	82.8		P	30 - 160
Thiamethoxam	100		P	40 - 160
Tolfenpyrad	65.6		P	40 - 160
Triclopyr	90.3		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P377479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P377699

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	98 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P377704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150292	Chloride	102		P	90 - 110
2150531	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150292	Sulfate	101		P	90 - 110
2150531	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150532	Ammonia-N	99.7	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150544	Kjeldahl Nitrogen	106	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150376	NO2NO3-N	98.2	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150378	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150533	O-Phosphate-P	97.5	96.5	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P377404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150358	Aldrin	42.7	39.6	P/P	32 - 82.0
2150358	Alpha-BHC	104	104	P/P	68 - 157
2150358	Alpha-Chlordane	88.0	91.9	P/P	54 - 108
2150358	Beta-BHC	122	126	P/P	54 - 200
2150358	Bifenthrin	98.1	99.4	P/P	49 - 124
2150358	Carbophenothion	125	128	P/P	42 - 173
2150358	Chlorothalonil	166	167	P/P	10 - 289
2150358	Cis-Nonachlor	91.5	94.4	P/P	53 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P377404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150358	Cypermethrin	133	128	P/P	43 - 141
2150358	DDD-p,p'	103	104	P/P	58 - 125
2150358	DDE-p,p'	80.1	85.8	P/P	50 - 108
2150358	DDT-p,p'	86.6	88.1	P/P	52 - 140
2150358	Delta-BHC	151	150	P/P	61 - 228
2150358	Dicofol	96.9	86.6	P/P	59 - 130
2150358	Dieldrin	99.2	99.4	P/P	57 - 121
2150358	Endosulfan I	110	106	P/P	62 - 123
2150358	Endosulfan II	115	117	P/P	48 - 163
2150358	Endosulfan Sulfate	125	115	P/P	63 - 132
2150358	Endrin	94.4	100	P/P	58 - 128
2150358	Endrin Aldehyde	99.3	110	P/P	44 - 126
2150358	Endrin Ketone	116	110	P/P	68 - 127
2150358	Ethalfuralin	87.9	91.5	P/P	55 - 131
2150358	Gamma-BHC	109	110	P/P	54 - 206
2150358	Gamma-Chlordane	86.9	91.2	P/P	52 - 105
2150358	Heptachlor	75.7	78.4	P/P	47 - 94.0
2150358	Heptachlor Epoxide	94.9	95.4	P/P	61 - 113
2150358	Hexachlorobenzene	70.8	78.5	P/P	45 - 100
2150358	Methoxychlor	99.7	97.4	P/P	63 - 153
2150358	Mirex	68.7	71.2	P/P	38 - 90.0
2150358	Permethrin	98.0	96.4	P/P	45 - 112
2150358	Trans-Nonachlor	81.0	86.7	P/P	50 - 103
2150358	Trifluralin	84.0	89.3	P/P	57 - 122

Reference Method: EPA 8270E
Batch ID: P377534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151501	Acetochlor	122	111	P/P	68 - 126
2151501	Alachlor	121	110	P/P	66 - 125
2151501	Ametryn	148	127	P/P	31 - 182
2151501	Atrazine	118	101	P/P	68 - 137
2151501	Atrazine Desethyl	94.8	76.8	P/P	13 - 161
2151501	Azinphos Methyl	110	95.8	P/P	54 - 162
2151501	Bromacil	113	105	P/P	34 - 144
2151501	Butylate	71.4	58.6	P/P	16 - 92.0
2151501	Carbophenothion	93.0	81.0	P/P	50 - 150
2151501	Chlorpyrifos Ethyl	94.0	78.1	P/P	63 - 124
2151501	Chlorpyrifos Methyl	103	89.2	P/P	64 - 125
2151501	Cyanazine	165	143	P/P	13 - 245
2151501	Demeton	96.4	89.5	P/P	20 - 154
2151501	Diazinon	121	108	P/P	66 - 141
2151501	Dimethenamid	115	105	P/P	50 - 130
2151501	Disulfoton	90.1	83.1	P/P	55 - 130
2151501	Dithiopyr	111	101	P/P	66 - 122
2151501	EPTC	69.2	59.8	P/P	15 - 93.0
2151501	Ethion	45.2	41.3	P/P	15 - 148
2151501	Ethoprop	87.6	85.2	P/P	59 - 126
2151501	Fenamiphos	106	106	P/P	39 - 137
2151501	Fipronil	132	118	F/P	47 - 131
2151501	Fipronil Desulfiny	121	106	P/P	43 - 121

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P377534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2151501	Fipronil Sulfide	99.0	90.3	P/P	29 - 134
2151501	Fipronil Sulfone	83.3	85.2	P/P	19 - 131
2151501	Flumioxazin	142	134	P/P	70 - 200
2151501	Fonofos	104	93.2	P/P	62 - 128
2151501	Hexazinone	113	93.4	P/P	58 - 154
2151501	Imazalil	120	149	P/P	50 - 150
2151501	Malathion	73.1	74.9	P/P	54 - 135
2151501	Metalaxyl	113	103	P/P	46 - 136
2151501	Metolachlor	127	112	F/P	62 - 126
2151501	Metribuzin	173	142	P/P	44 - 277
2151501	Mevinphos	89.8	80.0	P/P	44 - 135
2151501	Molinate	86.7	75.0	P/P	31 - 104
2151501	Norflurazon	112	98.4	P/P	32 - 134
2151501	Oxadiazon	105	91.9	P/P	55 - 123
2151501	Parathion Ethyl	112	93.3	P/P	67 - 120
2151501	Parathion Methyl	119	97.6	P/P	70 - 140
2151501	Pendimethalin	113	93.9	P/P	59 - 145
2151501	Phorate	102	89.8	P/P	52 - 127
2151501	Prodiamine	53.3	43.7	P/P	11 - 157
2151501	Prometon	140	128	F/P	55 - 130
2151501	Prometryn	150	130	F/F	55 - 127
2151501	Pronamide	118	107	P/P	50 - 150
2151501	Propiconazole	123	105	P/P	50 - 150
2151501	Simazine	123	103	P/P	58 - 159
2151501	Sulfentrazone	91.1	86.2	P/P	50 - 150
2151501	Tebuconazole	64.8	59.1	P/P	10 - 122
2151501	Terbufos	105	92.2	P/P	65 - 131
2151501	Terbutylazine	107	94.2	P/P	63 - 131

Reference Method: EPA 8276
Batch ID: P377404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150260	Chlordane	91.4	89.6	P/P	34 - 129
2150260	Toxaphene	121	100	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P377352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150258	3-Hydroxycarbofuran	76.3	81.6	P/P	40 - 160
2150258	Aldicarb	55.2	54.8	P/P	30 - 160
2150258	Aldicarb Sulfone	104	110	P/P	40 - 160
2150258	Aldicarb Sulfoxide	42.0	41.3	P/P	40 - 160
2150258	Carbaryl	35.2	47.7	F/P	40 - 160
2150258	Carbofuran	41.0	48.1	P/P	40 - 160
2150258	Methiocarb	41.0	53.3	P/P	40 - 160
2150258	Methomyl	70.3	68.2	P/P	40 - 160
2150258	Oxamyl	80.8	96.5	P/P	40 - 160
2150258	Propoxur	37.3	42.2	F/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P377476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150259	Acesulfame K	45.1	46.4	P/P	40 - 150
2150259	AMPA	74.8	76.0	P/P	40 - 150
2150259	Endothall	131	135	P/P	40 - 150
2150259	Glufosinate	77.9	83.3	P/P	40 - 150
2150259	Glyphosate	82.0	81.8	P/P	40 - 140
2150259	Sucralose	70.7	53.3	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P377536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150536	Acetaminophen	85.8	79.2	P/P	30 - 160
2150536	Acetamiprid	106	95.8	P/P	40 - 160
2150536	Afidopyropen	105	96.5	P/P	40 - 160
2150536	Bentazon	58.0	51.7	P/P	30 - 160
2150536	Benzovindiflupyr	86.9	80.8	P/P	40 - 160
2150536	Carbamazepine	96.6	87.8	P/P	40 - 160
2150536	Clothianidin	96.1	88.2	P/P	40 - 160
2150536	Dinotefuran	141	132	P/P	40 - 160
2150536	Fenuron	99.0	90.8	P/P	40 - 160
2150536	Fluridone	100	91.2	P/P	40 - 160
2150536	Hydrocodone	98.2	95.2	P/P	40 - 160
2150536	Ibuprofen	90.5	77.5	P/P	30 - 160
2150536	Imazapyr	116	96.9	P/P	40 - 160
2150536	Imidacloprid	161	134	F/P	40 - 160
2150536	Linuron	81.6	71.9	P/P	40 - 160
2150536	Mandestrobin	99.5	89.6	P/P	40 - 160
2150536	MCP	124	106	P/P	40 - 160
2150536	Naproxen	93.3	64.2	P/P	40 - 160
2150536	Primidone	95.3	93.8	P/P	40 - 160
2150536	Pyraclostrobin	97.1	87.1	P/P	30 - 160
2150536	Thiamethoxam	141	127	P/P	40 - 160
2150536	Tolfenpyrad	73.0	66.5	P/P	40 - 160
2150536	Triclopyr	96.3	78.3	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
 Batch ID: P377704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150322	Fluoride	99.6	99.6	P/P	89 - 106

Reference Method: SM 5310 B-2011
 Batch ID: P377828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2150377	Organic Carbon	98.1	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150546	Turbidity	2.41	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150292	Chloride	0.353	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150292	Sulfate	0.0535	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150532	Ammonia-N	1.66	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150544	Kjeldahl Nitrogen	0.876	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150376	NO2NO3-N	0.412	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150378	Total-P	1.12	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150533	O-Phosphate-P	1.03	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P377404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150358	Aldrin	7.51	Spike	P	0 - 30
2150358	Alpha-BHC	0.581	Spike	P	0 - 30
2150358	Alpha-Chlordane	4.12	Spike	P	0 - 30
2150358	Beta-BHC	3.30	Spike	P	0 - 30
2150358	Bifenthrin	1.32	Spike	P	0 - 30
2150358	Carbophenothion	2.17	Spike	P	0 - 30
2150358	Chlorothalonil	0.0702	Spike	P	0 - 30
2150358	Cis-Nonachlor	3.16	Spike	P	0 - 30
2150358	Cypermethrin	4.14	Spike	P	0 - 30
2150358	DDD-p,p'	1.73	Spike	P	0 - 30
2150358	DDE-p,p'	6.87	Spike	P	0 - 30
2150358	DDT-p,p'	1.80	Spike	P	0 - 30
2150358	Delta-BHC	0.788	Spike	P	0 - 30
2150358	Dicofol	11.2	Spike	P	0 - 30
2150358	Dieldrin	0.232	Spike	P	0 - 30
2150358	Endosulfan I	3.42	Spike	P	0 - 30
2150358	Endosulfan II	2.17	Spike	P	0 - 30
2150358	Endosulfan Sulfate	8.40	Spike	P	0 - 30
2150358	Endrin	6.26	Spike	P	0 - 30
2150358	Endrin Aldehyde	9.82	Spike	P	0 - 30
2150358	Endrin Ketone	5.69	Spike	P	0 - 30
2150358	Ethalfuralin	3.91	Spike	P	0 - 30
2150358	Gamma-BHC	0.689	Spike	P	0 - 30
2150358	Gamma-Chlordane	4.86	Spike	P	0 - 30
2150358	Heptachlor	3.48	Spike	P	0 - 30
2150358	Heptachlor Epoxide	0.480	Spike	P	0 - 30
2150358	Hexachlorobenzene	10.4	Spike	P	0 - 30
2150358	Methoxychlor	2.32	Spike	P	0 - 30
2150358	Mirex	3.51	Spike	P	0 - 30
2150358	Permethrin	1.61	Spike	P	0 - 30
2150358	Trans-Nonachlor	6.48	Spike	P	0 - 30
2150358	Trifluralin	6.03	Spike	P	0 - 30
LFB	Aldrin	22.3	LCS	P	0 - 30
LFB	Alpha-BHC	1.60	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.42	LCS	P	0 - 30
LFB	Beta-BHC	1.88	LCS	P	0 - 30
LFB	Bifenthrin	7.79	LCS	P	0 - 30
LFB	Carbophenothion	3.04	LCS	P	0 - 30
LFB	Chlorothalonil	10.6	LCS	P	0 - 30
LFB	Cis-Nonachlor	2.86	LCS	P	0 - 30
LFB	Cypermethrin	1.26	LCS	P	0 - 30
LFB	DDD-p,p'	4.11	LCS	P	0 - 30
LFB	DDE-p,p'	3.35	LCS	P	0 - 30
LFB	DDT-p,p'	1.83	LCS	P	0 - 30
LFB	Delta-BHC	3.42	LCS	P	0 - 30
LFB	Dicofol	5.82	LCS	P	0 - 30
LFB	Dieldrin	3.56	LCS	P	0 - 30
LFB	Endosulfan I	2.75	LCS	P	0 - 30
LFB	Endosulfan II	0.345	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.55	LCS	P	0 - 30
LFB	Endrin	15.4	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P377404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endrin Aldehyde	9.29	LCS	P	0 - 30
LFB	Endrin Ketone	4.14	LCS	P	0 - 30
LFB	Ethalfuralin	2.28	LCS	P	0 - 30
LFB	Gamma-BHC	0.226	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.42	LCS	P	0 - 30
LFB	Heptachlor	2.70	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.55	LCS	P	0 - 30
LFB	Hexachlorobenzene	7.92	LCS	P	0 - 30
LFB	Methoxychlor	6.20	LCS	P	0 - 30
LFB	Mirex	2.32	LCS	P	0 - 30
LFB	Permethrin	6.04	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.41	LCS	P	0 - 30
LFB	Trifluralin	2.88	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P377534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151501	Acetochlor	8.94	Spike	P	0 - 30
2151501	Alachlor	9.80	Spike	P	0 - 30
2151501	Ametryn	15.2	Spike	P	0 - 30
2151501	Atrazine	14.3	Spike	P	0 - 30
2151501	Atrazine Desethyl	18.9	Spike	P	0 - 30
2151501	Azinphos Methyl	13.7	Spike	P	0 - 30
2151501	Bromacil	7.90	Spike	P	0 - 30
2151501	Butylate	19.8	Spike	P	0 - 30
2151501	Carbophenothion	13.8	Spike	P	0 - 30
2151501	Chlorpyrifos Ethyl	18.5	Spike	P	0 - 30
2151501	Chlorpyrifos Methyl	14.5	Spike	P	0 - 30
2151501	Cyanazine	14.2	Spike	P	0 - 30
2151501	Demeton	7.47	Spike	P	0 - 30
2151501	Diazinon	11.8	Spike	P	0 - 30
2151501	Dimethenamid	9.57	Spike	P	0 - 30
2151501	Disulfoton	8.12	Spike	P	0 - 30
2151501	Dithiopyr	9.88	Spike	P	0 - 30
2151501	EPTC	14.6	Spike	P	0 - 30
2151501	Ethion	9.00	Spike	P	0 - 30
2151501	Ethoprop	2.75	Spike	P	0 - 30
2151501	Fenamiphos	0.0353	Spike	P	0 - 30
2151501	Fipronil	11.1	Spike	P	0 - 30
2151501	Fipronil Desulfinyl	13.4	Spike	P	0 - 30
2151501	Fipronil Sulfide	9.10	Spike	P	0 - 30
2151501	Fipronil Sulfone	2.16	Spike	P	0 - 30
2151501	Flumioxazin	5.90	Spike	P	0 - 30
2151501	Fonofos	11.2	Spike	P	0 - 30
2151501	Hexazinone	16.8	Spike	P	0 - 30
2151501	Imazalil	21.2	Spike	P	0 - 30
2151501	Malathion	2.44	Spike	P	0 - 30
2151501	Metalaxyl	9.54	Spike	P	0 - 30
2151501	Metolachlor	12.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P377534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2151501	Metribuzin	19.9	Spike	P	0 - 30
2151501	Mevinphos	11.6	Spike	P	0 - 30
2151501	Molinate	14.4	Spike	P	0 - 30
2151501	Norflurazon	13.1	Spike	P	0 - 30
2151501	Oxadiazon	12.9	Spike	P	0 - 30
2151501	Parathion Ethyl	18.4	Spike	P	0 - 30
2151501	Parathion Methyl	19.6	Spike	P	0 - 30
2151501	Pendimethalin	18.6	Spike	P	0 - 30
2151501	Phorate	12.8	Spike	P	0 - 30
2151501	Prodiamine	19.8	Spike	P	0 - 30
2151501	Prometon	8.62	Spike	P	0 - 30
2151501	Prometryn	13.9	Spike	P	0 - 30
2151501	Pronamide	10.4	Spike	P	0 - 30
2151501	Propiconazole	15.8	Spike	P	0 - 30
2151501	Simazine	14.2	Spike	P	0 - 30
2151501	Sulfentrazone	5.49	Spike	P	0 - 30
2151501	Tebuconazole	9.21	Spike	P	0 - 30
2151501	Terbufos	12.6	Spike	P	0 - 30
2151501	Terbutylazine	12.4	Spike	P	0 - 30
LFB	Acetochlor	0.848	LCS	P	0 - 30
LFB	Alachlor	4.78	LCS	P	0 - 30
LFB	Ametryn	7.01	LCS	P	0 - 30
LFB	Atrazine	6.38	LCS	P	0 - 30
LFB	Atrazine Desethyl	3.58	LCS	P	0 - 30
LFB	Azinphos Methyl	4.64	LCS	P	0 - 30
LFB	Bromacil	0.639	LCS	P	0 - 30
LFB	Butylate	3.44	LCS	P	0 - 30
LFB	Carbophenothion	1.70	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.84	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.91	LCS	P	0 - 30
LFB	Cyanazine	7.20	LCS	P	0 - 30
LFB	Demeton	1.45	LCS	P	0 - 30
LFB	Diazinon	3.33	LCS	P	0 - 30
LFB	Dimethenamid	1.72	LCS	P	0 - 30
LFB	Disulfoton	2.30	LCS	P	0 - 30
LFB	Dithiopyr	4.51	LCS	P	0 - 30
LFB	EPTC	4.50	LCS	P	0 - 30
LFB	Ethion	4.97	LCS	P	0 - 30
LFB	Ethoprop	10.1	LCS	P	0 - 30
LFB	Fenamiphos	10.3	LCS	P	0 - 30
LFB	Fipronil	3.96	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	5.46	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.845	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.09	LCS	P	0 - 30
LFB	Flumioxazin	4.59	LCS	P	0 - 30
LFB	Fonofos	6.26	LCS	P	0 - 30
LFB	Hexazinone	2.48	LCS	P	0 - 30
LFB	Imazalil	4.49	LCS	P	0 - 30
LFB	Malathion	11.7	LCS	P	0 - 30
LFB	Metalaxyl	5.35	LCS	P	0 - 30
LFB	Metolachlor	1.72	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P377534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Metribuzin	2.93	LCS	P	0 - 30
LFB	Mevinphos	2.24	LCS	P	0 - 30
LFB	Molinate	4.46	LCS	P	0 - 30
LFB	Norflurazon	1.29	LCS	P	0 - 30
LFB	Oxadiazon	1.22	LCS	P	0 - 30
LFB	Parathion Ethyl	7.65	LCS	P	0 - 30
LFB	Parathion Methyl	0.997	LCS	P	0 - 30
LFB	Pendimethalin	6.23	LCS	P	0 - 30
LFB	Phorate	0.846	LCS	P	0 - 30
LFB	Prodiamine	1.64	LCS	P	0 - 30
LFB	Prometon	3.57	LCS	P	0 - 30
LFB	Prometryn	6.52	LCS	P	0 - 30
LFB	Pronamide	2.58	LCS	P	0 - 30
LFB	Propiconazole	1.85	LCS	P	0 - 30
LFB	Simazine	1.40	LCS	P	0 - 30
LFB	Sulfentrazone	2.03	LCS	P	0 - 30
LFB	Tebuconazole	16.5	LCS	P	0 - 30
LFB	Terbufos	2.05	LCS	P	0 - 30
LFB	Terbutylazine	4.52	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P377404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150260	Chlordane	2.01	Spike	P	0 - 30
2150260	Toxaphene	18.8	Spike	P	0 - 30
LFB	Chlordane	2.04	LCS	P	0 - 30
LFB	Toxaphene	4.60	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150258	3-Hydroxycarbofuran	6.68	Spike	P	0 - 30
2150258	Aldicarb	0.827	Spike	P	0 - 30
2150258	Aldicarb Sulfone	5.26	Spike	P	0 - 30
2150258	Aldicarb Sulfoxide	1.65	Spike	P	0 - 30
2150258	Carbaryl	30.0	Spike	P	0 - 30
2150258	Carbofuran	15.9	Spike	P	0 - 30
2150258	Methiocarb	26.1	Spike	P	0 - 30
2150258	Methomyl	2.93	Spike	P	0 - 30
2150258	Oxamyl	17.7	Spike	P	0 - 30
2150258	Propoxur	12.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P377476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150259	Acesulfame K	2.83	Spike	P	0 - 30
2150259	AMPA	1.01	Spike	P	0 - 30
2150259	Endothall	3.02	Spike	P	0 - 30
2150259	Glufosinate	6.76	Spike	P	0 - 30
2150259	Glyphosate	0.139	Spike	P	0 - 30
2150259	Sucralose	27.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150536	2,4-D	15.2	Spike	P	0 - 30
2150536	Acetaminophen	8.09	Spike	P	0 - 30
2150536	Acetamiprid	9.81	Spike	P	0 - 30
2150536	Afidopyropen	8.86	Spike	P	0 - 30
2150536	Bentazon	11.5	Spike	P	0 - 30
2150536	Benzovindiflupyr	7.35	Spike	P	0 - 30
2150536	Carbamazepine	9.62	Spike	P	0 - 30
2150536	Clothianidin	8.56	Spike	P	0 - 30
2150536	Dinotefuran	6.60	Spike	P	0 - 30
2150536	Diuron	3.45	Spike	P	0 - 30
2150536	Fenuron	8.66	Spike	P	0 - 30
2150536	Fluridone	9.70	Spike	P	0 - 30
2150536	Hydrocodone	3.13	Spike	P	0 - 30
2150536	Ibuprofen	15.5	Spike	P	0 - 30
2150536	Imazapyr	18.0	Spike	P	0 - 30
2150536	Imidacloprid	18.2	Spike	P	0 - 30
2150536	Linuron	12.6	Spike	P	0 - 30
2150536	Mandestrobin	10.5	Spike	P	0 - 30
2150536	MCPP	16.4	Spike	P	0 - 30
2150536	Naproxen	36.9	Spike	F	0 - 30
2150536	Primidone	1.55	Spike	P	0 - 30
2150536	Pyraclostrobin	10.8	Spike	P	0 - 30
2150536	Thiamethoxam	10.1	Spike	P	0 - 30
2150536	Tolfenpyrad	9.33	Spike	P	0 - 30
2150536	Triclopyr	20.6	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P377479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150543	Color (true)	0.514	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P377699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150322	Total Alkalinity	0.476	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P377831

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150602	TDS	15.5	Sample	F	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P377704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150322	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P377828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2150377	Organic Carbon	0.0896	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2150535
Field Sample ID: G1TLHR0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	41.0	P	30 - 160

Lab Sample ID: 2150536
Field Sample ID: G1TLHR0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.7	P	30 - 160
EPA 8321B	Diuron-d6	70.1	P	30 - 160
EPA 8321B	Diuron-d6	70.1	P	30 - 160
EPA 8321B	Endothall-d6	136	P	30 - 160
EPA 8321B	Endothall-d6	136	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.8	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	91.1	P	30 - 160
EPA 8321B	Sucralose-d6	91.1	P	30 - 160

Lab Sample ID: 2150537
Field Sample ID: G1TLHR0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	66.6	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	54.7	P	34 - 106
EPA 8276	Decachlorobiphenyl	52.0	P	26 - 97.0
EPA 8276	PCNB	72.5	P	38 - 141

Lab Sample ID: 2150538
Field Sample ID: G1TLHR0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	90.8	P	72 - 135
EPA 8270E	Terbufos-d10	96.1	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97007

Included Lab Sample IDs: 2150531

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

Reference Method: SM 2120 B-2011

Run ID: A97020

Included Lab Sample IDs: 2150531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	85 - 115

Reference Method: EPA 8321B

Run ID: A97022

Included Lab Sample IDs: 2150535

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	110	109	P/P	60 - 150
Aldicarb	110	131	P/P	60 - 150
Aldicarb Sulfone	104	109	P/P	50 - 150
Aldicarb Sulfoxide	117	116	P/P	50 - 150
Carbaryl	106	106	P/P	60 - 150
Carbofuran	101	103	P/P	50 - 150
Methiocarb	106	108	P/P	50 - 150
Methomyl	111	115	P/P	50 - 150
Oxamyl	107	103	P/P	50 - 150
Propoxur	106	96.5	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97047

Included Lab Sample IDs: 2150533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.4	97.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97071

Included Lab Sample IDs: 2150536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	77.1	73.8	P/P	25 - 200
Glufosinate	95.8	78.5	P/P	25 - 200
Glyphosate	95.9	99.7	P/P	25 - 200

Reference Method: EPA 8321B

Run ID: A97072

Included Lab Sample IDs: 2150536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.3	97.8	P/P	60 - 160
Endothall	132	131	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97091

Included Lab Sample IDs: 2150532

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

Reference Method: SM 2320 B-2011

Run ID: A97099

Included Lab Sample IDs: 2150531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A97099

Included Lab Sample IDs: 2150531

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

Reference Method: EPA 8321B

Run ID: A97109

Included Lab Sample IDs: 2150536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	94.2	103	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A97121

Included Lab Sample IDs: 2150536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.7	114	P/P	50 - 150
Acetaminophen	81.9	107	P/P	60 - 160
Acetamiprid	93.2	112	P/P	50 - 150
Afidopyropen	105	105	P/P	50 - 150
Bentazon	86.2	87.0	P/P	50 - 160
Benzovindiflupyr	106	110	P/P	50 - 150
Carbamazepine	106	110	P/P	60 - 150
Clothianidin	98.3	108	P/P	60 - 150
Dinotefuran	101	118	P/P	50 - 150
Diuron	101	111	P/P	60 - 150
Fenuron	96.9	110	P/P	60 - 150
Fluridone	107	108	P/P	60 - 160
Hydrocodone	99.9	106	P/P	60 - 150
Ibuprofen	89.1	89.1	P/P	50 - 160
Imazapyr	87.4	101	P/P	50 - 150
Imidacloprid	96.3	112	P/P	60 - 150
Linuron	106	106	P/P	60 - 150
Mandestrobin	106	110	P/P	50 - 150
MCPP	108	100	P/P	50 - 150
Naproxen	127	125	P/P	50 - 160
Primidone	101	93.9	P/P	60 - 150
Pyraclostrobin	112	109	P/P	60 - 150
Thiamethoxam	92.6	104	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A97121
Included Lab Sample IDs: 2150536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tolfenpyrad	108	113	P/P	60 - 150
Triclopyr	110	110	P/P	50 - 150

Reference Method: EPA 8276
Run ID: A97130
Included Lab Sample IDs: 2150537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.4		P	80 - 120
Toxaphene	96.7		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A97157
Included Lab Sample IDs: 2150532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A97170
Included Lab Sample IDs: 2150531

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A97171
Included Lab Sample IDs: 2150532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	106	103	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A97189
Included Lab Sample IDs: 2150537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	107		P	80 - 120
Alpha-BHC	110		P	80 - 120
Alpha-Chlordane	110		P	80 - 120
Beta-BHC	110		P	80 - 120
Bifenthrin	116		P	80 - 120
Carbophenothion	127*		F	80 - 120
Chlorothalonil	152*		F	80 - 120
Cis-Nonachlor	110		P	80 - 120
Cypermethrin	128*		F	80 - 120
DDD-p,p'	115		P	80 - 120
DDE-p,p'	105		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	123*		F	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A97189
Included Lab Sample IDs: 2150537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dicofol	117		P	80 - 120
Dieldrin	111		P	80 - 120
Endosulfan I	114		P	80 - 120
Endosulfan II	112		P	80 - 120
Endosulfan Sulfate	125*		F	80 - 120
Endrin	116		P	80 - 120
Endrin Aldehyde	114		P	80 - 120
Endrin Ketone	116		P	80 - 120
Ethalfuralin	112		P	80 - 120
Gamma-BHC	115		P	80 - 120
Gamma-Chlordane	109		P	80 - 120
Heptachlor	115		P	80 - 120
Heptachlor Epoxide	110		P	80 - 120
Hexachlorobenzene	108		P	80 - 120
Methoxychlor	108		P	80 - 120
Mirex	111		P	80 - 120
Permethrin	111		P	80 - 120
Trans-Nonachlor	110		P	80 - 120
Trifluralin	111		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A97208
Included Lab Sample IDs: 2150532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A97220
Included Lab Sample IDs: 2150532

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

Reference Method: EPA 8270E
Run ID: A97284
Included Lab Sample IDs: 2150538

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	108		P	80 - 120
Ametryn	108		P	80 - 120
Atrazine	105		P	80 - 120
Atrazine Desethyl	77.4*		F	80 - 120
Azinphos Methyl	95.4		P	80 - 120
Bromacil	105		P	80 - 120
Butylate	104		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorpyrifos Ethyl	90.8		P	80 - 120
Chlorpyrifos Methyl	97.4		P	80 - 120
Cyanazine	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A97284

Included Lab Sample IDs: 2150538

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Demeton	97.4		P	80 - 120
Diazinon	109		P	80 - 120
Dimethenamid	105		P	80 - 120
Disulfoton	83.7		P	80 - 120
Dithiopyr	105		P	80 - 120
EPTC	102		P	80 - 120
Ethion	91.5		P	80 - 120
Ethoprop	80.9		P	80 - 120
Fenamiphos	102		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	96.4		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Flumioxazin	98.1		P	80 - 120
Fonofos	99.2		P	80 - 120
Hexazinone	98.2		P	80 - 120
Imazalil	96.8		P	80 - 120
Malathion	102		P	80 - 120
Metalaxyl	104		P	80 - 120
Metolachlor	111		P	80 - 120
Metribuzin	85.8		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	105		P	80 - 120
Norflurazon	108		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	104		P	80 - 120
Parathion Methyl	99.2		P	80 - 120
Pendimethalin	99.8		P	80 - 120
Phorate	98.4		P	80 - 120
Prodiamine	100		P	80 - 120
Prometon	129*		F	80 - 120
Prometryn	112		P	80 - 120
Pronamide	106		P	80 - 120
Propiconazole	111		P	80 - 120
Simazine	105		P	80 - 120
Sulfentrazone	96.9		P	80 - 120
Tebuconazole	108		P	80 - 120
Terbufos	98.6		P	80 - 120
Terbutylazine	101		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						2.41	
EPA 300.0 Rev. 2.1	Chloride	103		102	104		0.353	
	Sulfate	103		101	103		0.0535	
EPA 350.1 Rev. 2.0	Ammonia-N	100		99.7	102			1.66
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105		106	107			0.876
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102		98.2	98.8			0.412
EPA 365.1 Rev. 2.0	Total-P	105		106	105			1.12
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.2		97.5	96.5			1.03
EPA 8270E	Acetochlor	109	108	111	122	0.848		8.94
	Alachlor	111	106	121	110	4.78		9.80
	Aldrin	27.9	34.8	42.7	39.6	22.3		7.51
	Alpha-BHC	94.2	92.7	104	104	1.60		0.581
	Alpha-Chlordane	90.9	87.9	88.0	91.9	3.42		4.12
	Ametryn	131	122	148	127	7.01		15.2
	Atrazine	98.2	92.1	118	101	6.38		14.3
	Atrazine Desethyl	67.2	64.8	94.8	76.8	3.58		18.9
	Azinphos Methyl	105	100	110	95.8	4.64		13.7
	Beta-BHC	104	102	122	126	1.88		3.30
	Bifenthrin	91.4	98.8	98.1	99.4	7.79		1.32
	Bromacil	88.3	88.9	105	113	0.639		7.90
	Butylate	68.1	70.5	71.4	58.6	3.44		19.8
	Carbophenothion	116	113	125	128	3.04		2.17
	Carbophenothion	75.7	77.0	81.0	93.0	1.70		13.8
	Chlorothalonil	171	153	166	167	10.6		0.0702
	Chlorpyrifos Ethyl	77.0	79.2	94.0	78.1	2.84		18.5
	Chlorpyrifos Methyl	80.2	82.6	103	89.2	2.91		14.5
	Cis-Nonachlor	92.7	90.1	91.5	94.4	2.86		3.16
	Cyanazine	171	159	143	165	7.20		14.2
	Cypermethrin	125	123	133	128	1.26		4.14
	DDD-p,p'	105	101	103	104	4.11		1.73
	DDE-p,p'	82.7	80.0	80.1	85.8	3.35		6.87
	DDT-p,p'	83.0	81.5	86.6	88.1	1.83		1.80
	Delta-BHC	116	120	151	150	3.42		0.788
	Demeton	80.1	78.9	89.5	96.4	1.45		7.47
	Diazinon	107	103	108	121	3.33		11.8
	Dicofol	86.1	91.3	96.9	86.6	5.82		11.2
	Dieldrin	97.6	94.2	99.2	99.4	3.56		0.232
	Dimethenamid	107	105	105	115	1.72		9.57
	Disulfoton	72.6	70.9	83.1	90.1	2.30		8.12
	Dithiopyr	99.8	95.4	111	101	4.51		9.88
	Endosulfan I	107	110	110	106	2.75		3.42
	Endosulfan II	116	117	115	117	0.345		2.17
	Endosulfan Sulfate	116	123	125	115	6.55		8.40
	Endrin	89.6	105	94.4	100	15.4		6.26
	Endrin Aldehyde	93.0	102	99.3	110	9.29		9.82
	Endrin Ketone	113	108	116	110	4.14		5.69
	EPTC	56.4	59.0	69.2	59.8	4.50		14.6
	Ethalfuralin	87.3	85.3	87.9	91.5	2.28		3.91
	Ethion	70.8	74.4	41.3	45.2	4.97		9.00
	Ethoprop	71.4	78.9	85.2	87.6	10.1		2.75
	Fenamiphos	98.1	88.5	106	106	10.3		0.0353
	Fipronil	113	109	118	132	3.96		11.1
	Fipronil Desulfinyl	104	98.4	106	121	5.46		13.4
	Fipronil Sulfide	81.7	81.0	90.3	99.0	0.845		9.10

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Fipronil Sulfone	89.5	85.9	85.2	83.3	4.09		2.16
	Flumioxazin	149	142	134	142	4.59		5.90
	Fonofos	77.6	82.7	104	93.2	6.26		11.2
	Gamma-BHC	94.8	94.6	109	110	0.226		0.689
	Gamma-Chlordane	88.4	85.4	86.9	91.2	3.42		4.86
	Heptachlor	81.7	79.5	75.7	78.4	2.70		3.48
	Heptachlor Epoxide	95.5	93.1	94.9	95.4	2.55		0.480
	Hexachlorobenzene	76.5	70.6	70.8	78.5	7.92		10.4
	Hexazinone	99.2	96.7	113	93.4	2.48		16.8
	Imazalil	94.5	90.4	120	149	4.49		21.2
	Malathion	63.9	71.8	73.1	74.9	11.7		2.44
	Metalaxyl	103	97.6	113	103	5.35		9.54
	Methoxychlor	94.8	89.1	99.7	97.4	6.20		2.32
	Metolachlor	113	111	127	112	1.72		12.0
	Metribuzin	101	104	173	142	2.93		19.9
	Mevinphos	71.5	69.9	89.8	80.0	2.24		11.6
	Mirex	66.0	64.5	68.7	71.2	2.32		3.51
	Molinate	67.4	70.4	86.7	75.0	4.46		14.4
	Norflurazon	106	105	112	98.4	1.29		13.1
	Oxadiazon	90.1	89.0	105	91.9	1.22		12.9
	Parathion Ethyl	81.6	88.1	112	93.3	7.65		18.4
	Parathion Methyl	93.6	94.6	119	97.6	0.997		19.6
	Pendimethalin	87.7	93.3	113	93.9	6.23		18.6
	Permethrin	94.0	88.5	98.0	96.4	6.04		1.61
	Phorate	80.8	80.1	102	89.8	0.846		12.8
	Prodiamine	43.8	43.1	53.3	43.7	1.64		19.8
	Prometon	128	123	140	128	3.57		8.62
	Prometryn	126	118	150	130	6.52		13.9
	Pronamide	108	106	118	107	2.58		10.4
	Propiconazole	113	111	123	105	1.85		15.8
	Simazine	99.0	97.7	123	103	1.40		14.2
	Sulfentrazone	87.6	89.4	91.1	86.2	2.03		5.49
	Tebuconazole	88.4	74.9	64.8	59.1	16.5		9.21
	Terbufos	81.0	82.6	105	92.2	2.05		12.6
	Terbutylazine	92.8	88.7	107	94.2	4.52		12.4
	Trans-Nonachlor	84.9	82.9	81.0	86.7	2.41		6.48
	Trifluralin	84.2	81.8	84.0	89.3	2.88		6.03
EPA 8276	Chlordane	86.8	88.6	91.4	89.6	2.04		2.01
	Toxaphene	103	108	121	100	4.60		18.8
EPA 8321B	2,4-D	122						15.2
	3-Hydroxycarbofuran	92.3		76.3	81.6			6.68
	Acesulfame K	121		45.1	46.4			2.83
	Acetaminophen	78.9		85.8	79.2			8.09
	Acetamiprid	79.6		106	95.8			9.81
	Afidopyropen	93.6		105	96.5			8.86
	Aldicarb	97.3		55.2	54.8			0.827
	Aldicarb Sulfone	103		104	110			5.26
	Aldicarb Sulfoxide	98.8		42.0	41.3			1.65
	AMPA	91.1		74.8	76.0			1.01
	Bentazon	61.3		58.0	51.7			11.5
	Benzovindiflupyr	81.8		86.9	80.8			7.35
	Carbamazepine	97.0		96.6	87.8			9.62
	Carbaryl	69.4		35.2	47.7			30.0
	Carbofuran	71.7		41.0	48.1			15.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Clothianidin	86.4	96.1	88.2			8.56
	Dinotefuran	101	141	132			6.60
	Diuron	73.0					3.45
	Endothall	112	131	135			3.02
	Fenuron	102	99.0	90.8			8.66
	Fluridone	95.3	100	91.2			9.70
	Glufosinate	93.8	77.9	83.3			6.76
	Glyphosate	101	82.0	81.8			0.139
	Hydrocodone	91.5	98.2	95.2			3.13
	Ibuprofen	81.9	90.5	77.5			15.5
	Imazapyr	77.0	116	96.9			18.0
	Imidacloprid	107	161	134			18.2
	Linuron	72.9	81.6	71.9			12.6
	Mandestrobin	89.0	99.5	89.6			10.5
	MCPPP	108	124	106			16.4
	Methiocarb	69.7	41.0	53.3			26.1
	Methomyl	97.0	70.3	68.2			2.93
	Naproxen	82.7	93.3	64.2			36.9
	Oxamyl	99.1	80.8	96.5			17.7
	Primidone	93.8	95.3	93.8			1.55
	Propoxur	68.1	37.3	42.2			12.4
	Pyraclostrobin	82.8	97.1	87.1			10.8
	Sucralose	91.6	70.7	53.3			27.1
	Thiamethoxam	100	141	127			10.1
	Tolfenpyrad	65.6	73.0	66.5			9.33
	Triclopyr	90.3	96.3	78.3			20.6
SM 2120 B-2011	Color (true)	103				0.514	
SM 2320 B-2011	Total Alkalinity	105				0.476	
SM 2540 C-2011	TDS					15.5	
SM 4500 F-C-2011	Fluoride	99.5	99.6	99.6			0.0
SM 5310 B-2011	Organic Carbon	96.5	98.1	98.2			0.0896

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2150531
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2150531
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2150531
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2150532
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2150532
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2150532
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2150532
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2150533
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2150537
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2150538
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2150537

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2150535
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2150536
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2150536
SM 2120 B-2011 / E31780	True Color measured at 450 nm (not valid for NPDES monitoring)	2150531
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2150531
SM 2540 C-2011 / E31780	Total Dissolved Solids in aqueous matrices	2150531
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2150531
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2150531
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2150532

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	01/21/2020			01/21/2020 16:26	Yen Ta	2150531
EPA 300.0 Rev. 2.1	01/21/2020			01/29/2020 08:11	Lipi Saha	2150531
EPA 350.1 Rev. 2.0	01/21/2020			01/29/2020 13:35	Ping Hua	2150532
EPA 351.2 Rev. 2.0	01/21/2020	01/29/2020 14:30	Jhamieka S. Greenwood	01/30/2020 11:29	Jhamieka S. Greenwood	2150532
EPA 353.2 Rev. 2.0	01/21/2020			01/24/2020 10:44	Beverly Y. Sanders	2150532
EPA 365.1 Rev. 2.0	01/21/2020	01/24/2020 13:35	Yen Ta	01/29/2020 14:23	Benjamin T. Nordmann	2150532
EPA 365.1 Rev. 2.0 dissolved	01/21/2020			01/21/2020 16:40	Carlos Miranda	2150533
EPA 8270E	01/21/2020	01/22/2020 08:00	Fe-Val Siddell	01/30/2020 09:02	Arthur Maknenko	2150537
	01/21/2020	01/24/2020 09:30	Rasheda Ghaffari	01/28/2020 16:37	Vandana T. Nagar	2150538
EPA 8276	01/21/2020	01/22/2020 08:00	Fe-Val Siddell	01/25/2020 06:16	Julie Wi	2150537
EPA 8321B	01/21/2020	01/21/2020 11:00	Hoor Shaik	01/21/2020 20:24	Juyoung Kim	2150535
	01/21/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 13:10	Rebecca Ware	2150536
	01/21/2020	01/22/2020 10:30	Rebecca Ware	01/22/2020 17:52	Rebecca Ware	2150536
	01/21/2020	01/22/2020 10:30	Rebecca Ware	01/24/2020 05:31	Rebecca Ware	2150536
	01/21/2020	01/23/2020 10:00	Hoor Shaik	01/24/2020 23:09	Juyoung Kim	2150536
SM 2120 B-2011	01/21/2020			01/21/2020 18:13	Madeline Funaro	2150531
SM 2320 B-2011	01/21/2020			01/25/2020 19:30	Dale L. Simmons	2150531
SM 2540 C-2011	01/21/2020			01/23/2020 17:00	Blanca Fach	2150531
SM 2540 D-2011	01/21/2020			01/23/2020 17:00	Blanca Fach	2150531
SM 4500 F-C-2011	01/21/2020			01/25/2020 19:30	Dale L. Simmons	2150531
SM 5310 B-2011	01/21/2020			01/28/2020 00:40	Madeline Funaro	2150532