

Chemical Analysis Report

NW-DIST-2018-03-15-01

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

Event Description: **SMP BIOASSESSMENTS**

Request ID: **RQ-2018-02-26-20**

Customer: **NW-DIST**

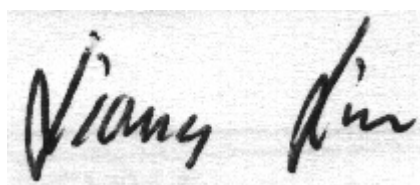
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 23-APR-2018 15:14

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

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: FOURMILE CREEK UPSTREAM OF

Collection Date/Time: 03/14/2018 11:50

Field ID: G3NW0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974900	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P341637	
	EPA 300.0 Rev. 2.1	Chloride	3.0		mg Cl/L	P342127	
		Sulfate	2.7		mg SO4/L	P342131	
	SM 2120 B	Color (true)	40	A	PCU	P341641	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P341930	RPD
	SM 2540 C-97	TDS	17	I	mg/L	P342232	
	SM 2540 D-97	TSS	2	U	mg/L	P341766	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P342154	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P342105	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P341806	
1974901	EPA 353.2 Rev. 2.0	NO2NO3-N	0.065		mg N/L	P341734	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P341742	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P342185	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.005	I	mg P/L	P341649	
	dissolved						
1974918	EPA 8321B	Aldicarb	0.020	U	ug/L	P341543	
		Aldicarb Sulfone	0.0020	U	ug/L	P341543	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P341543	
		Carbaryl	0.0020	U	ug/L	P341543	
		Carbofuran	0.0020	U	ug/L	P341543	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P341543	
		Methiocarb	0.0020	U	ug/L	P341543	
		Methomyl	0.0020	U	ug/L	P341543	
		Oxamyl	0.0020	U	ug/L	P341543	
		Propoxur	0.0020	U	ug/L	P341543	RPD
1974925	EPA 8270D	Aldrin	4.3	UQ	ng/L	P342551	
		Alpha-BHC	2.2	UQ	ng/L	P342551	
		Beta-BHC	4.3	UQ	ng/L	P342551	
		Delta-BHC	4.3	UQ	ng/L	P342551	
		Gamma-BHC	4.3	UQ	ng/L	P342551	
		Carbophenothion	4.3	UQJ	ng/L	P342551	RPD
		Chlorothalonil	2.2	UQ	ng/L	P342551	
		Cypermethrin	22	UQ	ng/L	P342551	
		DDD-p,p'	3.3	UQ	ng/L	P342551	
		DDE-p,p'	3.3	UQ	ng/L	P342551	
		DDT-p,p'	3.3	UQ	ng/L	P342551	
		Dieldrin	4.3	UQ	ng/L	P342551	
		Endosulfan I	4.3	UQ	ng/L	P342551	
		Endosulfan II	4.3	UQ	ng/L	P342551	
		Endosulfan Sulfate	2.2	UQ	ng/L	P342551	
		Endrin	2.2	UQ	ng/L	P342551	
		Endrin Aldehyde	2.2	UQ	ng/L	P342551	
		Heptachlor	1.6	UQ	ng/L	P342551	
		Heptachlor Epoxide	2.2	UQ	ng/L	P342551	

Field ID: G3NW0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974925	EPA 8270D	Methoxychlor	4.3	UQ	ng/L	P342551	
		Mirex	2.2	UQ	ng/L	P342551	
		Permethrin	11	UQ	ng/L	P342551	
		Trifluralin	1.1	UQ	ng/L	P342551	
		Alpha-Chlordane	1.1	UQ	ng/L	P342551	
		Gamma-Chlordane	1.1	UQ	ng/L	P342551	
		Endrin Ketone	2.2	UQ	ng/L	P342551	
		Dicofol	33	UQ	ng/L	P342551	
		Chlordane**	2.7	U	ng/L	P341660	
		Toxaphene**	32	U	ng/L	P341660	
1974926	EPA 200.7 Rev. 4.4	Calcium	1.34		mg/L	P341685	
		Iron	64	I	ug/L	P341685	
		Magnesium	0.41		mg/L	P341685	
		Potassium	0.30	U	mg/L	P341685	
		Sodium	1.7	I	mg/L	P341685	
		Zinc	5.0	U	ug/L	P341685	
	EPA 200.8 Rev. 5.4	Arsenic	0.081	I	ug/L	P341685	
		Cadmium	0.020	U	ug/L	P341685	
		Chromium	0.40	U	ug/L	P341685	
		Copper	0.20	U	ug/L	P341685	
		Lead	0.071	I	ug/L	P341685	
		Nickel	0.20	U	ug/L	P341685	
		Silver	0.010	U	ug/L	P341685	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8270D: Sample expired due to need for re-extraction. Refer to the narrative for an explanation of QC Codes.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium, and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: FOURMILE CREEK UPSTREAM OF

Collection Date/Time: 03/14/2018 11:50

Field ID: G3NW0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974937	EPA 8270D	Alachlor	0.25	U	ng/L	P341873	
		Ametryn	0.33	U	ng/L	P341873	
		Atrazine	0.25	U	ng/L	P341873	
		Atrazine Desethyl	1.5	U	ng/L	P341873	
		Azinphos Methyl	2.3	U	ng/L	P341873	
		Bromacil	9.0	J	ng/L	P341873	LCS
		Butylate	0.40	U	ng/L	P341873	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P341873	
		Chlorpyrifos Methyl	0.10	U	ng/L	P341873	
		Demeton	2.0	U	ng/L	P341873	
		Diazinon	0.13	U	ng/L	P341873	
		Disulfoton	0.50	U	ng/L	P341873	
		EPTC	1.3	U	ng/L	P341873	
		Ethion	0.15	U	ng/L	P341873	

Field ID: G3NW0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1974937	EPA 8270D	Ethoprop	0.10	U	ng/L	P341873	
		Fenamiphos	0.25	U	ng/L	P341873	
		Fipronil	0.25	U	ng/L	P341873	
		Fipronil Sulfide	0.15	U	ng/L	P341873	
		Fipronil Sulfone	0.15	U	ng/L	P341873	
		Hexazinone	0.50	U	ng/L	P341873	
		Malathion	0.35	U	ng/L	P341873	
		Metribuzin	0.20	UJ	ng/L	P341873	LCS
		Mevinphos	0.50	U	ng/L	P341873	
		Molinate	0.30	U	ng/L	P341873	
		Norflurazon	0.50	U	ng/L	P341873	
		Pendimethalin	1.0	U	ng/L	P341873	
		Phorate	0.25	U	ng/L	P341873	
		Prometon	0.90	U	ng/L	P341873	
		Prometryn	0.20	U	ng/L	P341873	
		Simazine	0.50	U	ng/L	P341873	
		Terbufos	0.10	U	ng/L	P341873	
		Terbuthylazine	0.43	U	ng/L	P341873	
		Fonofos	0.20	U	ng/L	P341873	
		Metalaxyl	0.25	U	ng/L	P341873	
		Metolachlor	0.42	I	ng/L	P341873	
		Acetochlor	0.25	U	ng/L	P341873	
		Cyanazine	0.50	U	ng/L	P341873	
		Parathion Ethyl	0.25	U	ng/L	P341873	
		Parathion Methyl	0.25	U	ng/L	P341873	

Ref. Method and Comment:

EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: FOURMILE CREEK UPSTREAM OF

Collection Date/Time: 03/14/2018 11:50

Field ID: G3NW0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1975063	EPA 8321B	2,4-D	0.0020	U	ug/L	P341543	
		Sucralose**	0.043		ug/L	P341600	
		Bentazon	8.0E-04	UJ	ug/L	P341543	MS
		MCP	0.0020	UJ	ug/L	P341543	MS
		Triclopyr**	0.0040	U	ug/L	P341543	
		Imidacloprid	0.0020	U	ug/L	P341543	
		Diuron	0.0020	U	ug/L	P341543	
		Pyraclostrobin**	0.0020	U	ug/L	P341543	
		Primidone**	0.0040	U	ug/L	P341543	
		Linuron	0.0040	U	ug/L	P341543	
		Acetaminophen**	0.0080	U	ug/L	P341543	
		Fenuron	0.016	U	ug/L	P341543	
		Imazapyr**	0.0040	U	ug/L	P341543	
		Carbamazepine**	4.0E-04	U	ug/L	P341543	

Field ID: G3NW0112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1975063	EPA 8321B	Fluridone**	8.0E-04	U	ug/L	P341543	
		Glyphosate**	0.10	U	ug/L	P341499	
		AMPA**	0.10	U	ug/L	P341499	

Ref. Method and Comment:

EPA 8321B: Fenuron was detected in the method blank slightly above the MDL. Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P341637

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P341685

Component	Result	Code	Units
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: P341685

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P342127

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P342131

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P342105

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341806

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

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: P341742

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341649

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

Reference Method: EPA 8270D
Batch ID: P341873

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P341873

Component	Result	Code	Units
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P342551

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	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	3.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	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
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8276
Batch ID: P341660

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
 Batch ID: P341499

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Reference Method: EPA 8321B
 Batch ID: P341543

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.024	I	ug/L
Fluridone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
 Batch ID: P341600

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
 Batch ID: P341641

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
 Batch ID: P341930

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
 Batch ID: P342232

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
 Batch ID: P341766

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
 Batch ID: P342154

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
 Batch ID: P342185

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: P341685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	112		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	99.1		P	85 - 115
Sodium	101		P	85 - 115
Zinc	108		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P341685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	107		P	85 - 115
Chromium	104		P	85 - 115
Copper	103		P	85 - 115
Lead	103		P	85 - 115
Nickel	102		P	85 - 115
Silver	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P342127

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342131

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	93.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341806

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341742

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341649

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	104		P	90 - 110

Reference Method: EPA 8270D
Batch ID: P341873

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	85.5	86.0	P/P	74 - 119
Alachlor	86.9	86.2	P/P	75 - 118
Ametryn	78.0	65.3	P/P	59 - 137
Atrazine	98.7	98.6	P/P	73 - 120
Atrazine Desethyl	110	124	P/P	19 - 129
Azinphos Methyl	114	105	P/P	65 - 181
Bromacil	47.8	42.3	P/F	43 - 123
Butylate	49.3	57.0	P/P	28 - 85.0
Chlorpyrifos Ethyl	87.8	89.8	P/P	55 - 112
Chlorpyrifos Methyl	95.5	97.4	P/P	35 - 124
Cyanazine	200	207	P/P	26 - 262
Demeton	80.4	84.4	P/P	43 - 122
Diazinon	93.9	93.6	P/P	72 - 120
Disulfoton	86.1	86.0	P/P	45 - 137
EPTC	46.2	54.6	P/P	28 - 95.0
Ethion	77.0	64.3	P/P	63 - 127

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P341873

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethoprop	93.0	96.3	P/P	63 - 109
Fenamiphos	93.7	95.1	P/P	66 - 136
Fipronil	87.2	85.4	P/P	63 - 126
Fipronil Sulfide	86.8	86.8	P/P	59 - 123
Fipronil Sulfone	80.2	80.6	P/P	56 - 122
Fonofos	86.0	92.5	P/P	64 - 114
Hexazinone	93.8	94.2	P/P	49 - 144
Malathion	90.3	94.4	P/P	68 - 131
Metalaxyl	92.7	90.5	P/P	57 - 126
Metolachlor	84.5	85.0	P/P	75 - 118
Metribuzin	165	201	P/F	46 - 169
Mevinphos	78.9	82.9	P/P	34 - 126
Molinate	53.6	57.2	P/P	37 - 101
Norflurazon	85.7	80.4	P/P	63 - 127
Parathion Ethyl	94.1	92.1	P/P	78 - 109
Parathion Methyl	102	105	P/P	74 - 123
Pendimethalin	109	112	P/P	51 - 130
Phorate	73.9	73.9	P/P	53 - 116
Prometon	81.2	75.8	P/P	66 - 124
Prometryn	89.1	85.2	P/P	66 - 124
Simazine	97.1	104	P/P	62 - 134
Terbufos	88.1	91.7	P/P	59 - 115
Terbutylazine	95.6	94.0	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P342551

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	65.2	69.5	P/P	24 - 89.0
Alpha-BHC	81.5	75.2	P/P	58 - 117
Alpha-Chlordane	87.3	90.2	P/P	56 - 115
Beta-BHC	104	125	P/P	55 - 137
Carbophenothion	66.8	90.7	P/P	37 - 145
Chlorothalonil	77.3	88.8	P/P	26 - 163
Cypermethrin	83.7	87.6	P/P	42 - 156
DDD-p,p'	101	108	P/P	59 - 129
DDE-p,p'	87.9	91.3	P/P	52 - 117
DDT-p,p'	85.1	88.7	P/P	48 - 128
Delta-BHC	108	116	P/P	59 - 158
Dicofol	89.8	83.5	P/P	19 - 124
Dieldrin	91.1	90.8	P/P	57 - 126
Endosulfan I	87.6	85.2	P/P	59 - 133
Endosulfan II	102	109	P/P	58 - 148
Endosulfan Sulfate	101	108	P/P	56 - 135
Endrin	86.3	83.3	P/P	50 - 140
Endrin Aldehyde	91.6	100	P/P	47 - 141
Endrin Ketone	93.2	97.4	P/P	63 - 123
Gamma-BHC	84.7	99.7	P/P	59 - 132
Gamma-Chlordane	84.3	88.7	P/P	55 - 112
Heptachlor	69.7	67.8	P/P	45 - 102
Heptachlor Epoxide	84.7	88.9	P/P	61 - 116
Methoxychlor	93.7	95.4	P/P	60 - 133

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P342551

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mirex	73.9	76.6	P/P	40 - 98.0
Permethrin	80.5	82.2	P/P	45 - 131
Trifluralin	77.8	80.8	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P341660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	82.1	62.5	P/P	47 - 125
Toxaphene	104	97.9	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P341499

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	96.0		P	40 - 150
Glyphosate	106		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.8		P	40 - 150
3-Hydroxycarbofuran	103		P	40 - 150
Acetaminophen	113		P	30 - 150
Aldicarb	79.1		P	30 - 150
Aldicarb Sulfone	114		P	40 - 150
Aldicarb Sulfoxide	123		P	40 - 150
Bentazon	77.1		P	30 - 150
Carbamazepine	94.6		P	40 - 150
Carbaryl	65.4		P	40 - 150
Carbofuran	69.1		P	40 - 150
Diuron	69.0		P	40 - 150
Fenuron	107		P	40 - 150
Fluridone	69.1		P	40 - 150
Imazapyr	74.4		P	40 - 150
Imidacloprid	98.7		P	40 - 160
Linuron	84.6		P	40 - 150
MCPP	79.4		P	40 - 150
Methiocarb	66.5		P	40 - 150
Methomyl	99.7		P	40 - 150
Oxamyl	100		P	40 - 150
Primidone	99.9		P	40 - 150
Propoxur	75.2		P	40 - 150
Pyraclostrobin	65.0		P	40 - 150
Triclopyr	79.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341600

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	99.4		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P341930

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P342154

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.3		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P342185

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974672	Iron	106	107	P/P	80 - 120
1974672	Zinc	110	105	P/P	80 - 120
1974685	Calcium	104		P	80 - 120
1974685	Iron	112		P	80 - 120
1974685	Magnesium	114		P	80 - 120
1974685	Potassium	106		P	80 - 120
1974685	Sodium	104		P	80 - 120
1974685	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974672	Arsenic	109	109	P/P	80 - 120
1974672	Cadmium	103	101	P/P	80 - 120
1974672	Chromium	97.0	97.2	P/P	80 - 120
1974672	Copper	95.0	95.3	P/P	80 - 120
1974672	Lead	108	107	P/P	80 - 120
1974672	Nickel	90.1	89.6	P/P	80 - 120
1974672	Silver	96.2	96.4	P/P	80 - 120
1974685	Arsenic	102		P	80 - 120
1974685	Cadmium	105		P	80 - 120
1974685	Chromium	99.0		P	80 - 120
1974685	Copper	94.3		P	80 - 120
1974685	Lead	103		P	80 - 120
1974685	Nickel	95.6		P	80 - 120
1974685	Silver	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974679	Chloride	103		P	90 - 110
1974863	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974679	Sulfate	106		P	90 - 110
1974863	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974866	Ammonia-N	97.6	94.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974901	Kjeldahl Nitrogen	90.4	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974901	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974868	Total-P	103	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975228	O-Phosphate-P	97.5	98.4	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P341873

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974937	Acetochlor	86.6	90.0	P/P	67 - 125
1974937	Alachlor	86.8	90.9	P/P	69 - 123
1974937	Ametryn	66.5	69.5	P/P	52 - 151
1974937	Atrazine	105	102	P/P	71 - 125
1974937	Atrazine Desethyl	103	117	P/P	10 - 129
1974937	Azinphos Methyl	108	118	P/P	48 - 200
1974937	Bromacil	78.2	78.0	P/P	46 - 130
1974937	Butylate	46.9	51.8	P/P	10 - 85.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P341873

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974937	Chlorpyrifos Ethyl	91.3	93.5	P/P	54 - 115
1974937	Chlorpyrifos Methyl	94.0	98.2	P/P	44 - 117
1974937	Cyanazine	189	213	P/P	10 - 262
1974937	Demeton	68.9	75.0	P/P	24 - 145
1974937	Diazinon	99.3	102	P/P	66 - 129
1974937	Disulfoton	89.2	88.7	P/P	45 - 139
1974937	EPTC	47.3	47.9	P/P	10 - 86.0
1974937	Ethion	73.8	83.5	P/P	59 - 133
1974937	Ethoprop	97.8	104	P/P	54 - 116
1974937	Fenamiphos	101	99.4	P/P	55 - 140
1974937	Fipronil	87.4	90.1	P/P	37 - 142
1974937	Fipronil Sulfide	81.7	87.2	P/P	37 - 130
1974937	Fipronil Sulfone	76.6	83.2	P/P	18 - 143
1974937	Fonofos	92.4	98.3	P/P	55 - 118
1974937	Hexazinone	108	122	P/P	62 - 140
1974937	Malathion	89.1	96.8	P/P	64 - 132
1974937	Metalaxyl	92.2	100	P/P	55 - 129
1974937	Metolachlor	81.5	84.4	P/P	56 - 137
1974937	Metribuzin	185	207	P/P	16 - 218
1974937	Mevinphos	82.3	90.6	P/P	34 - 129
1974937	Molinate	53.4	58.5	P/P	16 - 99.0
1974937	Norflurazon	85.3	88.6	P/P	43 - 135
1974937	Parathion Ethyl	91.7	99.3	P/P	71 - 112
1974937	Parathion Methyl	103	111	P/P	65 - 127
1974937	Pendimethalin	112	118	P/P	35 - 159
1974937	Phorate	66.4	81.4	P/P	41 - 129
1974937	Prometon	83.9	85.3	P/P	56 - 140
1974937	Prometryn	85.1	87.8	P/P	65 - 130
1974937	Simazine	100	106	P/P	54 - 148
1974937	Terbufos	93.8	99.7	P/P	53 - 126
1974937	Terbuthylazine	97.1	102	P/P	73 - 114

Reference Method: EPA 8270D

Batch ID: P342551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978128	Aldrin	61.1	62.9	P/P	26 - 96.0
1978128	Alpha-BHC	81.8	92.3	P/P	51 - 123
1978128	Alpha-Chlordane	73.9	80.2	P/P	45 - 120
1978128	Beta-BHC	119	116	P/P	43 - 146
1978128	Carbophenothion	108	96.8	P/P	26 - 179
1978128	Chlorothalonil	171	138	P/P	10 - 215
1978128	Cypermethrin	92.8	99.5	P/P	35 - 169
1978128	DDD-p,p'	81.3	95.2	P/P	49 - 131
1978128	DDE-p,p'	69.3	76.6	P/P	39 - 127
1978128	DDT-p,p'	67.7	75.0	P/P	49 - 120
1978128	Delta-BHC	114	122	P/P	49 - 187
1978128	Dicofol	67.1	74.9	P/P	10 - 129
1978128	Dieldrin	78.0	85.4	P/P	46 - 132
1978128	Endosulfan I	92.8	96.6	P/P	57 - 130
1978128	Endosulfan II	127	119	P/P	52 - 148
1978128	Endosulfan Sulfate	115	116	P/P	55 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P342551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978128	Endrin	78.4	80.8	P/P	45 - 133
1978128	Endrin Aldehyde	78.4	90.7	P/P	26 - 140
1978128	Endrin Ketone	99.6	108	P/P	60 - 125
1978128	Gamma-BHC	117	123	P/P	50 - 145
1978128	Gamma-Chlordane	73.8	78.7	P/P	44 - 118
1978128	Heptachlor	64.2	66.5	P/P	35 - 106
1978128	Heptachlor Epoxide	79.7	88.5	P/P	52 - 123
1978128	Methoxychlor	83.4	87.4	P/P	54 - 132
1978128	Mirex	66.1	67.8	P/P	36 - 107
1978128	Permethrin	79.6	84.8	P/P	47 - 135
1978128	Trifluralin	67.1	70.9	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P341660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974321	Chlordane	69.3	64.8	P/P	41 - 134
1974321	Toxaphene	96.6	89.0	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P341499

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974062	AMPA	86.8	89.6	P/P	40 - 150
1974062	Glyphosate	98.8	100	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975063	2,4-D	56.1	48.2	P/P	40 - 150
1975063	3-Hydroxycarbofuran	79.3	102	P/P	40 - 150
1975063	Acetaminophen	128	118	P/P	30 - 150
1975063	Aldicarb	62.4	79.3	P/P	30 - 150
1975063	Aldicarb Sulfone	114	110	P/P	40 - 150
1975063	Aldicarb Sulfoxide	108	109	P/P	40 - 150
1975063	Bentazon	31.5	28.3	P/F	30 - 150
1975063	Carbamazepine	85.2	106	P/P	40 - 150
1975063	Carbaryl	55.9	63.3	P/P	40 - 150
1975063	Carbofuran	54.3	73.0	P/P	40 - 150
1975063	Diuron	66.4	72.7	P/P	40 - 150
1975063	Fenuron	98.8	108	P/P	40 - 150
1975063	Fluridone	58.0	65.4	P/P	40 - 150
1975063	Imazapyr	68.7	70.3	P/P	40 - 150
1975063	Imidacloprid	135	114	P/P	40 - 160
1975063	Linuron	87.3	84.3	P/P	40 - 150
1975063	MCPP	44.6	40.0	P/F	40 - 150
1975063	Methiocarb	64.4	70.3	P/P	40 - 150
1975063	Methomyl	92.1	103	P/P	40 - 150
1975063	Oxamyl	95.6	97.8	P/P	40 - 150
1975063	Primidone	100	101	P/P	40 - 150
1975063	Propoxur	51.7	75.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P341543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1975063	Pyraclostrobin	73.5	75.5	P/P	40 - 150
1975063	Triclopyr	44.8	43.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341600

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974898	Sucralose	118	112	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P342154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974865	Fluoride	95.0	96.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P342185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974680	Organic Carbon	98.6	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974930	Turbidity	2.67	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974672	Calcium	3.25	Spike	P	0 - 20
1974672	Iron	0.134	Spike	P	0 - 20
1974672	Magnesium	3.01	Spike	P	0 - 20
1974672	Potassium	2.66	Spike	P	0 - 20
1974672	Sodium	4.00	Spike	P	0 - 20
1974672	Zinc	5.04	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974672	Arsenic	0.0524	Spike	P	0 - 20
1974672	Cadmium	2.26	Spike	P	0 - 20
1974672	Chromium	0.156	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974672	Copper	0.399	Spike	P	0 - 20
1974672	Lead	0.718	Spike	P	0 - 20
1974672	Nickel	0.555	Spike	P	0 - 20
1974672	Silver	0.145	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974679	Chloride	0.267	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974679	Sulfate	0.0839	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974866	Ammonia-N	1.59	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974901	Kjeldahl Nitrogen	4.98	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974901	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974868	Total-P	2.33	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975228	O-Phosphate-P	0.538	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P341873

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974937	Acetochlor	3.93	Spike	P	0 - 30
1974937	Alachlor	4.68	Spike	P	0 - 30
1974937	Ametryn	4.49	Spike	P	0 - 30
1974937	Atrazine	2.30	Spike	P	0 - 30
1974937	Atrazine Desethyl	12.7	Spike	P	0 - 30
1974937	Azinphos Methyl	9.48	Spike	P	0 - 30
1974937	Bromacil	0.0645	Spike	P	0 - 30
1974937	Butylate	9.89	Spike	P	0 - 30
1974937	Chlorpyrifos Ethyl	2.35	Spike	P	0 - 30
1974937	Chlorpyrifos Methyl	4.39	Spike	P	0 - 30
1974937	Cyanazine	11.9	Spike	P	0 - 30
1974937	Demeton	8.44	Spike	P	0 - 30
1974937	Diazinon	2.48	Spike	P	0 - 30
1974937	Disulfoton	0.594	Spike	P	0 - 30
1974937	EPTC	1.28	Spike	P	0 - 30
1974937	Ethion	12.3	Spike	P	0 - 30
1974937	Ethoprop	6.27	Spike	P	0 - 30
1974937	Fenamiphos	1.20	Spike	P	0 - 30
1974937	Fipronil	3.06	Spike	P	0 - 30
1974937	Fipronil Sulfide	6.53	Spike	P	0 - 30
1974937	Fipronil Sulfone	8.17	Spike	P	0 - 30
1974937	Fonofos	6.23	Spike	P	0 - 30
1974937	Hexazinone	12.3	Spike	P	0 - 30
1974937	Malathion	8.36	Spike	P	0 - 30
1974937	Metalaxyl	8.20	Spike	P	0 - 30
1974937	Metolachlor	3.27	Spike	P	0 - 30
1974937	Metribuzin	11.4	Spike	P	0 - 30
1974937	Mevinphos	9.54	Spike	P	0 - 30
1974937	Molinate	9.16	Spike	P	0 - 30
1974937	Norflurazon	3.81	Spike	P	0 - 30
1974937	Parathion Ethyl	7.99	Spike	P	0 - 30
1974937	Parathion Methyl	7.28	Spike	P	0 - 30
1974937	Pendimethalin	5.04	Spike	P	0 - 30
1974937	Phorate	20.3	Spike	P	0 - 30
1974937	Prometon	1.69	Spike	P	0 - 30
1974937	Prometryn	3.20	Spike	P	0 - 30
1974937	Simazine	5.86	Spike	P	0 - 30
1974937	Terbufos	6.13	Spike	P	0 - 30
1974937	Terbutylazine	5.18	Spike	P	0 - 30
LFB	Acetochlor	0.509	LCS	P	0 - 30
LFB	Alachlor	0.837	LCS	P	0 - 30
LFB	Ametryn	17.7	LCS	P	0 - 30
LFB	Atrazine	0.122	LCS	P	0 - 30
LFB	Atrazine Desethyl	11.5	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P341873

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Azinphos Methyl	8.63	LCS	P	0 - 30
LFB	Bromacil	12.1	LCS	P	0 - 30
LFB	Butylate	14.5	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.18	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.06	LCS	P	0 - 30
LFB	Cyanazine	3.19	LCS	P	0 - 30
LFB	Demeton	4.80	LCS	P	0 - 30
LFB	Diazinon	0.331	LCS	P	0 - 30
LFB	Disulfoton	0.0465	LCS	P	0 - 30
LFB	EPTC	16.7	LCS	P	0 - 30
LFB	Ethion	17.9	LCS	P	0 - 30
LFB	Ethoprop	3.48	LCS	P	0 - 30
LFB	Fenamiphos	1.48	LCS	P	0 - 30
LFB	Fipronil	2.07	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.0259	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.549	LCS	P	0 - 30
LFB	Fonofos	7.28	LCS	P	0 - 30
LFB	Hexazinone	0.470	LCS	P	0 - 30
LFB	Malathion	4.44	LCS	P	0 - 30
LFB	Metalaxyl	2.34	LCS	P	0 - 30
LFB	Metolachlor	0.626	LCS	P	0 - 30
LFB	Metribuzin	19.3	LCS	P	0 - 30
LFB	Mevinphos	4.92	LCS	P	0 - 30
LFB	Molinate	6.45	LCS	P	0 - 30
LFB	Norflurazon	6.43	LCS	P	0 - 30
LFB	Parathion Ethyl	2.14	LCS	P	0 - 30
LFB	Parathion Methyl	3.43	LCS	P	0 - 30
LFB	Pendimethalin	3.31	LCS	P	0 - 30
LFB	Phorate	0.0440	LCS	P	0 - 30
LFB	Prometon	6.88	LCS	P	0 - 30
LFB	Prometryn	4.49	LCS	P	0 - 30
LFB	Simazine	7.22	LCS	P	0 - 30
LFB	Terbufos	4.00	LCS	P	0 - 30
LFB	Terbuthylazine	1.71	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P342551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978128	Aldrin	2.90	Spike	P	0 - 30
1978128	Alpha-BHC	12.1	Spike	P	0 - 30
1978128	Alpha-Chlordane	8.23	Spike	P	0 - 30
1978128	Beta-BHC	1.90	Spike	P	0 - 30
1978128	Carbophenothion	11.3	Spike	P	0 - 30
1978128	Chlorothalonil	20.9	Spike	P	0 - 30
1978128	Cypermethrin	6.90	Spike	P	0 - 30
1978128	DDD-p,p'	15.8	Spike	P	0 - 30
1978128	DDE-p,p'	10.0	Spike	P	0 - 30
1978128	DDT-p,p'	10.3	Spike	P	0 - 30
1978128	Delta-BHC	6.71	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P342551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978128	Dicofol	11.0	Spike	P	0 - 30
1978128	Dieldrin	9.11	Spike	P	0 - 30
1978128	Endosulfan I	4.06	Spike	P	0 - 30
1978128	Endosulfan II	6.30	Spike	P	0 - 30
1978128	Endosulfan Sulfate	0.141	Spike	P	0 - 30
1978128	Endrin	3.03	Spike	P	0 - 30
1978128	Endrin Aldehyde	14.5	Spike	P	0 - 30
1978128	Endrin Ketone	8.29	Spike	P	0 - 30
1978128	Gamma-BHC	4.96	Spike	P	0 - 30
1978128	Gamma-Chlordane	6.48	Spike	P	0 - 30
1978128	Heptachlor	3.63	Spike	P	0 - 30
1978128	Heptachlor Epoxide	10.5	Spike	P	0 - 30
1978128	Methoxychlor	4.70	Spike	P	0 - 30
1978128	Mirex	2.59	Spike	P	0 - 30
1978128	Permethrin	6.30	Spike	P	0 - 30
1978128	Trifluralin	5.52	Spike	P	0 - 30
LFB	Aldrin	6.45	LCS	P	0 - 30
LFB	Alpha-BHC	8.06	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.31	LCS	P	0 - 30
LFB	Beta-BHC	19.0	LCS	P	0 - 30
LFB	Carbophenothion	30.4	LCS	F	0 - 30
LFB	Chlorothalonil	13.8	LCS	P	0 - 30
LFB	Cypermethrin	4.55	LCS	P	0 - 30
LFB	DDD-p,p'	6.99	LCS	P	0 - 30
LFB	DDE-p,p'	3.83	LCS	P	0 - 30
LFB	DDT-p,p'	4.15	LCS	P	0 - 30
LFB	Delta-BHC	6.69	LCS	P	0 - 30
LFB	Dicofol	7.29	LCS	P	0 - 30
LFB	Dieldrin	0.371	LCS	P	0 - 30
LFB	Endosulfan I	2.77	LCS	P	0 - 30
LFB	Endosulfan II	7.12	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.63	LCS	P	0 - 30
LFB	Endrin	3.61	LCS	P	0 - 30
LFB	Endrin Aldehyde	9.03	LCS	P	0 - 30
LFB	Endrin Ketone	4.40	LCS	P	0 - 30
LFB	Gamma-BHC	16.3	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.02	LCS	P	0 - 30
LFB	Heptachlor	2.80	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.84	LCS	P	0 - 30
LFB	Methoxychlor	1.81	LCS	P	0 - 30
LFB	Mirex	3.62	LCS	P	0 - 30
LFB	Permethrin	2.01	LCS	P	0 - 30
LFB	Trifluralin	3.75	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P341660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974321	Chlordane	6.72	Spike	P	0 - 30
1974321	Toxaphene	8.20	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P341660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	27.1	LCS	P	0 - 30
LFB	Toxaphene	5.58	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341499

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974062	AMPA	3.23	Spike	P	0 - 30
1974062	Glyphosate	1.41	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975063	2,4-D	15.1	Spike	P	0 - 30
1975063	3-Hydroxycarbofuran	25.3	Spike	P	0 - 30
1975063	Acetaminophen	8.26	Spike	P	0 - 30
1975063	Aldicarb	23.8	Spike	P	0 - 30
1975063	Aldicarb Sulfone	3.24	Spike	P	0 - 30
1975063	Aldicarb Sulfoxide	1.26	Spike	P	0 - 30
1975063	Bentazon	10.7	Spike	P	0 - 30
1975063	Carbamazepine	22.1	Spike	P	0 - 30
1975063	Carbaryl	12.5	Spike	P	0 - 30
1975063	Carbofuran	29.4	Spike	P	0 - 30
1975063	Diuron	9.14	Spike	P	0 - 30
1975063	Fenuron	8.63	Spike	P	0 - 30
1975063	Fluridone	12.0	Spike	P	0 - 30
1975063	Imazapyr	2.35	Spike	P	0 - 30
1975063	Imidacloprid	16.2	Spike	P	0 - 30
1975063	Linuron	3.52	Spike	P	0 - 30
1975063	MCPP	10.8	Spike	P	0 - 30
1975063	Methiocarb	8.76	Spike	P	0 - 30
1975063	Methomyl	11.3	Spike	P	0 - 30
1975063	Oxamyl	2.31	Spike	P	0 - 30
1975063	Primidone	0.686	Spike	P	0 - 30
1975063	Propoxur	36.9	Spike	F	0 - 30
1975063	Pyraclostrobin	2.70	Spike	P	0 - 30
1975063	Triclopyr	2.60	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341600

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974898	Sucralose	3.50	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P341641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974900	Color (true)	1.52	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974865	Total Alkalinity	2.13	Sample	F	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P342232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1975123	TDS	1.12	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P342154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974865	Fluoride	1.42	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P342185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974680	Organic Carbon	1.55	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 1974918
Field Sample ID: G3NW0112

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	63.7	P	30 - 160

Lab Sample ID: 1974925
Field Sample ID: G3NW0112

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	84.5	P	37 - 117
EPA 8270D	Decachlorobiphenyl	71.5	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	69.8	P	34 - 101
EPA 8270D	Tetrachloro-m-xylene	55.0	P	34 - 101

Quality Assurance Report Surrogates

Lab Sample ID: 1974925
Field Sample ID: G3NW0112

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	75.5	P	31 - 108
EPA 8276	PCNB	62.9	P	62 - 142

Lab Sample ID: 1974937
Field Sample ID: G3NW0112

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	109	P	71 - 126
EPA 8270D	Terbufos-d10	93.2	P	50 - 130

Lab Sample ID: 1975063
Field Sample ID: G3NW0112

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	53.9	P	30 - 160
EPA 8321B	2,4-D-d3	53.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.5	P	30 - 160
EPA 8321B	Diuron-d6	71.0	P	30 - 160
EPA 8321B	Diuron-d6	71.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	96.4	P	40 - 160
EPA 8321B	Primidone-d5	93.3	P	30 - 160
EPA 8321B	Primidone-d5	93.3	P	30 - 160
EPA 8321B	Sucralose-d6	62.6	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A82630
Included Lab Sample IDs: 1975063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	105	104	P/P	70 - 130
Glyphosate	97.2	95.4	P/P	70 - 160

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82640
Included Lab Sample IDs: 1974900

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A82641
Included Lab Sample IDs: 1974900

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

Reference Method: SM 2120 B
 Run ID: A82641
 Included Lab Sample IDs: 1974900

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.8	99.3	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Run ID: A82644
 Included Lab Sample IDs: 1974902

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

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A82687
 Included Lab Sample IDs: 1974901

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
 Run ID: A82709
 Included Lab Sample IDs: 1974926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	103	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Magnesium	104	104	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	103	103	P/P	90 - 110

Reference Method: EPA 8321B
 Run ID: A82710
 Included Lab Sample IDs: 1975063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	87.4	99.1	P/P	60 - 150

Reference Method: EPA 8321B
 Run ID: A82734
 Included Lab Sample IDs: 1975063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	114	118	P/P	60 - 150
Carbamazepine	133	106	P/P	60 - 150
Diuron	119	119	P/P	60 - 150
Fenuron	114	114	P/P	60 - 150
Fluridone	117	121	P/P	60 - 160
Imazapyr	101	103	P/P	50 - 150
Imidacloprid	108	112	P/P	60 - 150
Linuron	110	128	P/P	60 - 150
Primidone	105	102	P/P	60 - 150
Pyraclostrobin	119	117	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A82750

Included Lab Sample IDs: 1974900

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.7	100	P/P	90 - 110
Sulfate	97.2	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A82760

Included Lab Sample IDs: 1974900

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.4	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82769

Included Lab Sample IDs: 1974901

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	90.8	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82773

Included Lab Sample IDs: 1974901

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82811

Included Lab Sample IDs: 1974901

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	98.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A82826

Included Lab Sample IDs: 1974900

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

Reference Method: EPA 8276

Run ID: A82828

Included Lab Sample IDs: 1974925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	106		P	80 - 120
Toxaphene	109		P	80 - 120

Reference Method: SM 5310 B-00

Run ID: A82844

Included Lab Sample IDs: 1974901

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

Reference Method: SM 5310 B-00
Run ID: A82844
Included Lab Sample IDs: 1974901

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	97.8	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82852
Included Lab Sample IDs: 1975063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.2	102	P/P	50 - 150
3-Hydroxycarbofuran	108	104	P/P	60 - 150
Aldicarb	101	117	P/P	60 - 150
Aldicarb Sulfone	110	110	P/P	50 - 150
Aldicarb Sulfoxide	112	111	P/P	50 - 150
Bentazon	104	102	P/P	50 - 150
Carbaryl	110	113	P/P	60 - 150
Carbofuran	114	116	P/P	50 - 150
MCP	101	101	P/P	50 - 150
Methiocarb	110	114	P/P	50 - 150
Methomyl	109	105	P/P	50 - 150
Oxamyl	104	104	P/P	50 - 150
Propoxur	107	112	P/P	50 - 150
Triclopyr	107	93.0	P/P	50 - 150

Reference Method: EPA 8270D
Run ID: A82859
Included Lab Sample IDs: 1974937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	98.0		P	80 - 120
Atrazine	92.0		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	98.1		P	80 - 120
Bromacil	97.8		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	97.2		P	80 - 120
Chlorpyrifos Methyl	96.2		P	80 - 120
Cyanazine	90.7		P	80 - 120
Demeton	94.8		P	80 - 120
Diazinon	99.4		P	80 - 120
Disulfoton	92.3		P	80 - 120
EPTC	101		P	80 - 120
Ethion	95.7		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	96.2		P	80 - 120
Fipronil	98.4		P	80 - 120
Fipronil Sulfide	95.3		P	80 - 120
Fipronil Sulfone	92.1		P	80 - 120
Fonofos	93.0		P	80 - 120
Hexazinone	99.4		P	80 - 120
Malathion	98.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A82859

Included Lab Sample IDs: 1974937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Metalaxyl	106		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	111		P	80 - 120
Mevinphos	96.6		P	80 - 120
Molinate	99.9		P	80 - 120
Norflurazon	102		P	80 - 120
Parathion Ethyl	93.4		P	80 - 120
Parathion Methyl	93.6		P	80 - 120
Pendimethalin	102		P	80 - 120
Phorate	91.5		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	104		P	80 - 120
Simazine	97.2		P	80 - 120
Terbufos	92.9		P	80 - 120
Terbuthylazine	97.8		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82987

Included Lab Sample IDs: 1974926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	101	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	98.1	97.8	P/P	90 - 110
Copper	99.2	99.9	P/P	90 - 110
Lead	101	100	P/P	90 - 110
Nickel	97.6	98.4	P/P	90 - 110
Silver	103	103	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A83100

Included Lab Sample IDs: 1974925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.2		P	80 - 120
Alpha-BHC	97.3		P	80 - 120
Alpha-Chlordane	98.4		P	80 - 120
Beta-BHC	98.0		P	80 - 120
Carbophenothion	94.4		P	80 - 120
Chlorothalonil	112		P	80 - 120
Cypermethrin	90.1		P	80 - 120
DDD-p,p'	97.6		P	80 - 120
DDE-p,p'	99.7		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	92.6		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	97.0		P	80 - 120
Endosulfan I	91.9		P	80 - 120
Endosulfan II	96.3		P	80 - 120
Endosulfan Sulfate	99.7		P	80 - 120
Endrin	93.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A83100
Included Lab Sample IDs: 1974925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	94.9		P	80 - 120
Gamma-BHC	111		P	80 - 120
Gamma-Chlordane	97.9		P	80 - 120
Heptachlor	96.3		P	80 - 120
Heptachlor Epoxide	98.4		P	80 - 120
Methoxychlor	105		P	80 - 120
Mirex	99.4		P	80 - 120
Permethrin	85.0		P	80 - 120
Trifluralin	98.1		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.67	
EPA 200.7 Rev. 4.4	Calcium	104		104					3.25
	Iron	112		106	107	112			0.134
	Magnesium	104		114					3.01
	Potassium	99.1		106					2.66
	Sodium	101		104					4.00
	Zinc	108		110	105	104			5.04
EPA 200.8 Rev. 5.4	Arsenic	104		109	109	102			0.0524
	Cadmium	107		103	101	105			2.26
	Chromium	104		97.0	97.2	99.0			0.156
	Copper	103		95.0	95.3	94.3			0.399
	Lead	103		108	107	103			0.718
	Nickel	102		90.1	89.6	95.6			0.555
	Silver	102		96.2	96.4	101			0.145
EPA 300.0 Rev. 2.1	Chloride	103		103	103			0.267	
	Sulfate	105		106	106			0.0839	
EPA 350.1 Rev. 2.0	Ammonia-N	93.0		97.6	94.9				1.59
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		90.4	95.8				4.98
EPA 353.2 Rev. 2.0	NO2NO3-N	103		104	104				0.0
EPA 365.1 Rev. 2.0	Total-P	100		103	100				2.33
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104		97.5	98.4				0.538
EPA 8270D	Acetochlor	85.5	86.0	86.6	90.0	0.509			3.93
	Alachlor	86.9	86.2	90.9	86.8	0.837			4.68
	Aldrin	65.2	69.5	61.1	62.9	6.45			2.90
	Alpha-BHC	81.5	75.2	81.8	92.3	8.06			12.1
	Alpha-Chlordane	87.3	90.2	73.9	80.2	3.31			8.23
	Ametryn	78.0	65.3	69.5	66.5	17.7			4.49
	Atrazine	98.7	98.6	102	105	0.122			2.30
	Atrazine Desethyl	110	124	103	117	11.5			12.7
	Azinphos Methyl	114	105	108	118	8.63			9.48

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Beta-BHC	104	125	119	116	19.0	1.90
	Bromacil	47.8	42.3	78.2	78.0	12.1	0.0645
	Butylate	49.3	57.0	46.9	51.8	14.5	9.89
	Carbophenothion	66.8	90.7	108	96.8	30.4	11.3
	Chlorothalonil	77.3	88.8	171	138	13.8	20.9
	Chlorpyrifos Ethyl	87.8	89.8	91.3	93.5	2.18	2.35
	Chlorpyrifos Methyl	95.5	97.4	94.0	98.2	2.06	4.39
	Cyanazine	200	207	189	213	3.19	11.9
	Cypermethrin	83.7	87.6	92.8	99.5	4.55	6.90
	DDD-p,p'	101	108	81.3	95.2	6.99	15.8
	DDE-p,p'	87.9	91.3	69.3	76.6	3.83	10.0
	DDT-p,p'	85.1	88.7	67.7	75.0	4.15	10.3
	Delta-BHC	108	116	114	122	6.69	6.71
	Demeton	80.4	84.4	75.0	68.9	4.80	8.44
	Diazinon	93.9	93.6	102	99.3	0.331	2.48
	Dicofol	89.8	83.5	67.1	74.9	7.29	11.0
	Dieldrin	91.1	90.8	78.0	85.4	0.371	9.11
	Disulfoton	86.1	86.0	88.7	89.2	0.0465	0.594
	Endosulfan I	87.6	85.2	92.8	96.6	2.77	4.06
	Endosulfan II	102	109	127	119	7.12	6.30
	Endosulfan Sulfate	101	108	115	116	6.63	0.141
	Endrin	86.3	83.3	78.4	80.8	3.61	3.03
	Endrin Aldehyde	91.6	100	78.4	90.7	9.03	14.5
	Endrin Ketone	93.2	97.4	99.6	108	4.40	8.29
	EPTC	46.2	54.6	47.9	47.3	16.7	1.28
	Ethion	77.0	64.3	83.5	73.8	17.9	12.3
	Ethoprop	93.0	96.3	104	97.8	3.48	6.27
	Fenamiphos	93.7	95.1	99.4	101	1.48	1.20
	Fipronil	87.2	85.4	90.1	87.4	2.07	3.06
	Fipronil Sulfide	86.8	86.8	87.2	81.7	0.0259	6.53
	Fipronil Sulfone	80.2	80.6	83.2	76.6	0.549	8.17
	Fonofos	86.0	92.5	92.4	98.3	7.28	6.23
	Gamma-BHC	84.7	99.7	117	123	16.3	4.96
	Gamma-Chlordane	84.3	88.7	73.8	78.7	5.02	6.48
	Heptachlor	69.7	67.8	64.2	66.5	2.80	3.63
	Heptachlor Epoxide	84.7	88.9	79.7	88.5	4.84	10.5
	Hexazinone	93.8	94.2	122	108	0.470	12.3
	Malathion	90.3	94.4	96.8	89.1	4.44	8.36
	Metalaxyl	92.7	90.5	92.2	100	2.34	8.20
	Methoxychlor	93.7	95.4	83.4	87.4	1.81	4.70
	Metolachlor	84.5	85.0	81.5	84.4	0.626	3.27
	Metribuzin	165	201	207	185	19.3	11.4
	Mevinphos	78.9	82.9	90.6	82.3	4.92	9.54
	Mirex	73.9	76.6	66.1	67.8	3.62	2.59
	Molinate	53.6	57.2	58.5	53.4	6.45	9.16
	Norflurazon	85.7	80.4	88.6	85.3	6.43	3.81
	Parathion Ethyl	94.1	92.1	91.7	99.3	2.14	7.99
	Parathion Methyl	102	105	103	111	3.43	7.28
	Pendimethalin	109	112	118	112	3.31	5.04
	Permethrin	80.5	82.2	79.6	84.8	2.01	6.30
	Phorate	73.9	73.9	81.4	66.4	0.0440	20.3
	Prometon	81.2	75.8	85.3	83.9	6.88	1.69
	Prometryn	89.1	85.2	87.8	85.1	4.49	3.20
	Simazine	97.1	104	106	100	7.22	5.86

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8270D	Terbufos	88.1	91.7	93.8	99.7	4.00	6.13
	Terbutylazine	95.6	94.0	97.1	102	1.71	5.18
	Trifluralin	77.8	80.8	67.1	70.9	3.75	5.52
EPA 8276	Chlordane	82.1	62.5	69.3	64.8	27.1	6.72
	Toxaphene	104	97.9	96.6	89.0	5.58	8.20
EPA 8321B	2,4-D	79.8		56.1	48.2		15.1
	3-Hydroxycarbofuran	103		79.3	102		25.3
	Acetaminophen	113		128	118		8.26
	Aldicarb	79.1		62.4	79.3		23.8
	Aldicarb Sulfone	114		114	110		3.24
	Aldicarb Sulfoxide	123		108	109		1.26
	AMPA	96.0		86.8	89.6		3.23
	Bentazon	77.1		31.5	28.3		10.7
	Carbamazepine	94.6		85.2	106		22.1
	Carbaryl	65.4		55.9	63.3		12.5
	Carbofuran	69.1		54.3	73.0		29.4
	Diuron	69.0		66.4	72.7		9.14
	Fenuron	107		98.8	108		8.63
	Fluridone	69.1		58.0	65.4		12.0
	Glyphosate	106		98.8	100		1.41
	Imazapyr	74.4		68.7	70.3		2.35
	Imidacloprid	98.7		135	114		16.2
	Linuron	84.6		87.3	84.3		3.52
	MCPP	79.4		44.6	40.0		10.8
	Methiocarb	66.5		64.4	70.3		8.76
	Methomyl	99.7		92.1	103		11.3
	Oxamyl	100		95.6	97.8		2.31
	Primidone	99.9		100	101		0.686
	Propoxur	75.2		51.7	75.1		36.9
	Pyraclostrobin	65.0		73.5	75.5		2.70
	Sucralose	99.4		118	112		3.50
	Triclopyr	79.1		44.8	43.6		2.60
SM 2120 B	Color (true)					1.52	
SM 2320 B-97	Total Alkalinity	100				2.13	
SM 2540 C-97	TDS					1.12	
SM 4500 F-C-97	Fluoride	97.3		95.0	96.5		1.42
SM 5310 B-00	Organic Carbon	98.6		98.6	100		1.55

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1974900
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1974926
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1974926
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1974900
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1974900
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1974901

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1974901
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1974901
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1974901
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1974902
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1974925
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1974937
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1974925
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1974918
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1975063
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1975063
SM 2120 B / E31780	True Color measured at 450 nm	1974900
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1974900
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1974900
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1974900
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1974900
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1974901

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	03/15/2018			03/15/2018 15:57	DeAsia Armster	1974900
EPA 200.7 Rev. 4.4	03/15/2018	03/16/2018 13:00	Vijayalakshmi Reddy	03/19/2018 19:08	Betina Topolski	1974926
EPA 200.8 Rev. 5.4	03/15/2018	03/16/2018 13:00	Vijayalakshmi Reddy	03/30/2018 16:21	Robert K Palmer	1974926
EPA 300.0 Rev. 2.1	03/15/2018			03/21/2018 15:07	Julia Storbeck	1974900
EPA 350.1 Rev. 2.0	03/15/2018			03/23/2018 14:09	Ping Hua	1974901
EPA 351.2 Rev. 2.0	03/15/2018	03/20/2018 11:50	Adrian Shelby	03/21/2018 12:44	Joseph Suarez	1974901
EPA 353.2 Rev. 2.0	03/15/2018			03/19/2018 11:59	Beverly Y. Sanders	1974901
EPA 365.1 Rev. 2.0	03/15/2018	03/19/2018 12:20	Sima Feizi	03/21/2018 15:10	Lipi Saha	1974901
EPA 365.1 Rev. 2.0 dissolved	03/15/2018			03/15/2018 20:00	Julia Storbeck	1974902
EPA 8270D	03/15/2018	03/16/2018 09:35	Rasheda Ghaffari	03/21/2018 14:08	Vandana T. Nagar	1974937
	03/15/2018	03/30/2018 12:30	Rasheda Ghaffari	04/04/2018 17:09	Vandana T. Nagar	1974925
EPA 8276	03/15/2018	03/16/2018 10:13	John Kaba	03/23/2018 09:01	John P. Burgos	1974925
EPA 8321B	03/15/2018	03/15/2018 11:45	Julie Michelle Frank	03/15/2018 12:31	Julie Michelle Frank	1975063
	03/15/2018	03/15/2018 15:00	Julie Michelle Frank	03/17/2018 07:40	Juyoung Kim	1975063
	03/15/2018	03/16/2018 11:00	Hoor Shaik	03/17/2018 15:16	Julie Michelle Frank	1975063
	03/15/2018	03/16/2018 11:00	Hoor Shaik	03/20/2018 02:10	Julie Michelle Frank	1974918
	03/15/2018	03/16/2018 11:00	Hoor Shaik	03/20/2018 07:56	Julie Michelle Frank	1975063
SM 2120 B	03/15/2018			03/15/2018 15:21	Tanya Welborn	1974900
SM 2320 B-97	03/15/2018			03/21/2018 06:14	Dale L. Simmons	1974900
SM 2540 C-97	03/15/2018			03/16/2018 12:00	DeAsia Armster	1974900
SM 2540 D-97	03/15/2018			03/16/2018 12:00	DeAsia Armster	1974900
SM 4500 F-C-97	03/15/2018			03/24/2018 06:30	Dale L. Simmons	1974900
SM 5310 B-00	03/15/2018			03/24/2018 02:05	Julia Storbeck	1974901