Chemical Analysis Report

TLH-ROC-2018-03-29-03

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

Event Description: **kit C-b/M_pesticides (WBID 512 Wilson Mill Creek)**
Request ID: **RQ-2018-03-12-48**
Customer: **TLH-ROC**
Project ID: **SMP**

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

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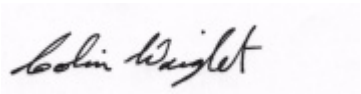
Certified by: Colin Wright, Program Administrator

Date Certified: 30-APR-2018 16:24



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: Wilson Mill Creek @ CR 274 **Collection Date/Time: 03/29/2018 13:00**

Field ID: G2TLHR0032 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979316	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P342515	
	EPA 300.0 Rev. 2.1	Chloride	7.9		mg Cl/L	P342597	
		Sulfate	1.1		mg SO4/L	P342600	
	SM 2120 B	Color (true)	54		PCU	P342459	
	SM 2320 B-97	Total Alkalinity	15		mg CaCO3/L	P343026	RPD
	SM 2540 C-97	TDS	54	AQ	mg/L	P343662	
	SM 2540 D-97	TSS	2	U	mg/L	P342612	
	SM 4500 F-C-97	Fluoride	0.037	I	mg F/L	P343647	
1979317	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P343071	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P342606	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.3		mg N/L	P342848	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P342650	
	SM 5310 B-00	Organic Carbon	6.7		mg C/L	P343082	
1979318	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P342543	
1979322	EPA 8321B	Aldicarb	0.020	U	ug/L	P342408	
		Aldicarb Sulfone	0.0020	U	ug/L	P342408	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P342408	
		Carbaryl	0.0020	U	ug/L	P342408	
		Carbofuran	0.0020	U	ug/L	P342408	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P342408	
		Methiocarb	0.0020	U	ug/L	P342408	
		Methomyl	0.0020	U	ug/L	P342408	
		Oxamyl	0.0020	U	ug/L	P342408	
		Propoxur	0.0020	U	ug/L	P342408	
1979323		2,4-D	0.0059	I	ug/L	P342408	
		Sucralose**	0.019	I	ug/L	P342469	
		Bentazon	8.0E-04	U	ug/L	P342408	
		MCPP	0.0020	U	ug/L	P342408	
		Triclopyr**	0.0040	U	ug/L	P342408	
		Imidacloprid	0.011		ug/L	P342408	
		Diuron	0.0030	I	ug/L	P342408	
		Pyraclostrobin**	0.0020	U	ug/L	P342408	
		Primidone**	0.0040	U	ug/L	P342408	
		Linuron	0.0040	U	ug/L	P342408	
		Acetaminophen**	0.0080	U	ug/L	P342408	
		Fenuron	0.016	U	ug/L	P342408	
		Imazapyr**	0.0040	U	ug/L	P342408	
		Carbamazepine**	4.0E-04	U	ug/L	P342408	
		Fluridone**	8.0E-04	U	ug/L	P342408	
		Glyphosate**	0.10	U	ug/L	P342352	
		AMPA**	0.10	U	ug/L	P342352	
1979324	EPA 8270D	Aldrin	4.8	U	ng/L	P342726	
		Alpha-BHC	2.4	U	ng/L	P342726	

Field ID: G2TLHR0032 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979324	EPA 8270D	Beta-BHC	4.8	U	ng/L	P342726	
		Delta-BHC	4.8	U	ng/L	P342726	
		Gamma-BHC	4.8	U	ng/L	P342726	
		Carbophenothion	4.8	U	ng/L	P342726	
		Chlorothalonil	2.4	U	ng/L	P342726	MS
		Cypermethrin	24	U	ng/L	P342726	
		DDD-p,p'	3.6	U	ng/L	P342726	
		DDE-p,p'	3.6	U	ng/L	P342726	
		DDT-p,p'	3.6	U	ng/L	P342726	
		Dieldrin	4.8	U	ng/L	P342726	
		Endosulfan I	4.8	U	ng/L	P342726	
		Endosulfan II	4.8	U	ng/L	P342726	
		Endosulfan Sulfate	2.4	U	ng/L	P342726	MS
		Endrin	2.4	U	ng/L	P342726	
		Endrin Aldehyde	2.4	U	ng/L	P342726	
		Heptachlor	1.8	U	ng/L	P342726	
		Heptachlor Epoxide	2.4	U	ng/L	P342726	
		Methoxychlor	4.8	U	ng/L	P342726	
		Mirex	2.4	U	ng/L	P342726	
		Permethrin	12	U	ng/L	P342726	
		Trifluralin	1.2	U	ng/L	P342726	
		Alpha-Chlordane	1.2	U	ng/L	P342726	
		Gamma-Chlordane	1.2	U	ng/L	P342726	
		Endrin Ketone	2.4	U	ng/L	P342726	
		Dicofol	36	U	ng/L	P342726	
	EPA 8276	Chlordane**	3.0	U	ng/L	P342726	
		Toxaphene**	36	U	ng/L	P342726	
1979325	EPA 8270D	Alachlor	14		ng/L	P342934	
		Ametryn	0.40	U	ng/L	P342934	
		Atrazine	0.33	I	ng/L	P342934	
		Atrazine Desethyl	1.9	U	ng/L	P342934	
		Azinphos Methyl	2.8	U	ng/L	P342934	
		Bromacil	0.62	U	ng/L	P342934	
		Butylate	0.50	U	ng/L	P342934	
		Chlorpyrifos Ethyl	0.31	UJ	ng/L	P342934	LCS
		Chlorpyrifos Methyl	0.12	U	ng/L	P342934	
		Demeton	2.5	U	ng/L	P342934	
		Diazinon	0.16	U	ng/L	P342934	
		Disulfoton	0.62	U	ng/L	P342934	
		EPTC	1.6	U	ng/L	P342934	
		Ethion	0.19	U	ng/L	P342934	
		Ethoprop	0.12	U	ng/L	P342934	
		Fenamiphos	0.31	U	ng/L	P342934	
		Fipronil	0.31	U	ng/L	P342934	
		Fipronil Sulfide	0.19	U	ng/L	P342934	

Field ID: G2TLHR0032 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1979325	EPA 8270D	Fipronil Sulfone	0.19	U	ng/L	P342934	
		Hexazinone	0.62	U	ng/L	P342934	
		Malathion	0.43	U	ng/L	P342934	
		Metribuzin	2.3		ng/L	P342934	
		Mevinphos	0.62	U	ng/L	P342934	
		Molinate	0.37	U	ng/L	P342934	
		Norflurazon	0.62	U	ng/L	P342934	
		Pendimethalin	1.2	U	ng/L	P342934	
		Phorate	0.31	U	ng/L	P342934	
		Prometon	1.1	U	ng/L	P342934	
		Prometryn	0.25	U	ng/L	P342934	
		Simazine	0.62	U	ng/L	P342934	
		Terbufos	0.12	U	ng/L	P342934	
		Terbuthylazine	0.53	U	ng/L	P342934	
		Fonofos	0.25	U	ng/L	P342934	
		Metalaxyl	0.31	U	ng/L	P342934	
		Metolachlor	18		ng/L	P342934	
		Acetochlor	0.31	U	ng/L	P342934	
		Cyanazine	0.62	U	ng/L	P342934	
		Parathion Ethyl	0.31	U	ng/L	P342934	
		Parathion Methyl	0.31	U	ng/L	P342934	
1979326	EPA 200.7 Rev. 4.4	Calcium	6.71		mg/L	P342557	
		Iron	500		ug/L	P342557	
		Magnesium	3.58		mg/L	P342557	
		Potassium	1.5		mg/L	P342557	
		Sodium	2.3		mg/L	P342557	
		Zinc	5.0	U	ug/L	P342557	
	EPA 200.8 Rev. 5.4	Arsenic	0.33		ug/L	P342557	
		Cadmium	0.020	U	ug/L	P342557	
		Chromium	0.43	I	ug/L	P342557	
		Copper	0.64	I	ug/L	P342557	
		Lead	0.16	I	ug/L	P342557	
		Nickel	0.25	I	ug/L	P342557	
		Silver	0.010	U	ug/L	P342557	

Ref. Method and Comment:
SM 2540 C-97: Sample reanalyzed out of holding time due to analytical difficulties.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270D: Matrix spikes precision for Chlorothalonil not reported due to very low recoveries.
EPA 8270D: MS accuracy for Atrazine, Metalaxyl and Metribuzin not assessed due to high content of these parameters in the sample spiked. 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: P342515

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P342515

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P342557

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: P342557

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: P342597

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342600

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343071

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342606

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342848

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342650

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342543

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

Reference Method: EPA 8270D
Batch ID: P342726

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 8270D
Batch ID: P342934

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P342934

Component	Result	Code	Units
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	1.0		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
Metalaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
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 8276
Batch ID: P342726

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

Reference Method: EPA 8321B
Batch ID: P342352

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P342408

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	0.016	U	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: P342469

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P342459

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P343026

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

Reference Method: SM 2540 C-97
Batch ID: P343662

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P342612

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P343647

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P343082

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: P342557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	106		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	102		P	85 - 115
Sodium	104		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.8		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	104		P	85 - 115
Copper	97.3		P	85 - 115
Lead	101		P	85 - 115
Nickel	96.4		P	85 - 115
Silver	97.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342597

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342600

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.9		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342848

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342650

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342543

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

Reference Method: EPA 8270D
Batch ID: P342726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	68.0	65.2	P/P	24 - 89.0
Alpha-BHC	85.0	80.2	P/P	58 - 117
Alpha-Chlordane	88.0	83.5	P/P	56 - 115
Beta-BHC	123	121	P/P	55 - 137
Carbophenothion	98.6	95.4	P/P	37 - 145
Chlorothalonil	79.8	93.6	P/P	26 - 163
Cypermethrin	99.0	90.2	P/P	42 - 156
DDD-p,p'	103	101	P/P	59 - 129
DDE-p,p'	89.7	84.2	P/P	52 - 117
DDT-p,p'	88.8	87.3	P/P	48 - 128
Delta-BHC	109	113	P/P	59 - 158
Dicofol	75.2	84.5	P/P	19 - 124
Dieldrin	91.2	106	P/P	57 - 126
Endosulfan I	85.2	81.7	P/P	59 - 133
Endosulfan II	96.5	93.8	P/P	58 - 148
Endosulfan Sulfate	109	113	P/P	56 - 135
Endrin	90.5	94.7	P/P	50 - 140
Endrin Aldehyde	109	107	P/P	47 - 141
Endrin Ketone	106	110	P/P	63 - 123
Gamma-BHC	112	107	P/P	59 - 132
Gamma-Chlordane	85.4	81.8	P/P	55 - 112
Heptachlor	71.1	67.9	P/P	45 - 102

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P342726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Heptachlor Epoxide	88.9	86.2	P/P	61 - 116
Methoxychlor	103	100	P/P	60 - 133
Mirex	74.4	73.5	P/P	40 - 98.0
Permethrin	85.6	89.1	P/P	45 - 131
Trifluralin	81.2	77.5	P/P	38 - 179

Reference Method: EPA 8270D
Batch ID: P342934

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	99.1	104	P/P	74 - 119
Alachlor	94.0	99.5	P/P	75 - 118
Ametryn	93.5	95.5	P/P	59 - 137
Atrazine	103	109	P/P	73 - 120
Atrazine Desethyl	93.2	101	P/P	19 - 129
Azinphos Methyl	122	128	P/P	65 - 181
Bromacil	87.9	85.5	P/P	43 - 123
Butylate	51.3	58.9	P/P	28 - 85.0
Chlorpyrifos Ethyl	112	113	F/F	55 - 112
Chlorpyrifos Methyl	96.4	91.7	P/P	35 - 124
Cyanazine	145	147	P/P	26 - 262
Demeton	58.1	56.2	P/P	43 - 122
Diazinon	103	110	P/P	72 - 120
Disulfoton	69.5	72.5	P/P	45 - 137
EPTC	50.2	60.0	P/P	28 - 95.0
Ethion	81.5	81.4	P/P	63 - 127
Ethoprop	88.8	87.2	P/P	63 - 109
Fenamiphos	90.3	81.0	P/P	66 - 136
Fipronil	99.7	102	P/P	63 - 126
Fipronil Sulfide	94.7	83.9	P/P	59 - 123
Fipronil Sulfone	87.0	79.5	P/P	56 - 122
Fonofos	88.5	89.0	P/P	64 - 114
Hexazinone	107	106	P/P	49 - 144
Malathion	98.5	95.4	P/P	68 - 131
Metalaxyl	94.4	97.5	P/P	57 - 126
Metolachlor	90.8	96.7	P/P	75 - 118
Metribuzin	151	150	P/P	46 - 169
Mevinphos	77.4	77.4	P/P	34 - 126
Molinate	58.3	64.6	P/P	37 - 101
Norflurazon	95.5	102	P/P	63 - 127
Parathion Ethyl	92.9	90.5	P/P	78 - 109
Parathion Methyl	111	109	P/P	74 - 123
Pendimethalin	115	117	P/P	51 - 130
Phorate	64.8	66.8	P/P	53 - 116
Prometon	88.5	89.9	P/P	66 - 124
Prometryn	91.5	88.6	P/P	66 - 124
Simazine	104	108	P/P	62 - 134
Terbufos	83.6	84.0	P/P	59 - 115
Terbuthylazine	92.0	95.5	P/P	76 - 113

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P342726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	70.6	67.7	P/P	47 - 125
Toxaphene	85.5	76.7	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P342352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	96.2		P	40 - 150
Glyphosate	91.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	60.6		P	40 - 150
3-Hydroxycarbofuran	85.4		P	40 - 150
Acetaminophen	104		P	30 - 150
Aldicarb	84.4		P	30 - 150
Aldicarb Sulfone	104		P	40 - 150
Aldicarb Sulfoxide	101		P	40 - 150
Bentazon	66.5		P	30 - 150
Carbamazepine	72.6		P	40 - 150
Carbaryl	60.6		P	40 - 150
Carbofuran	58.7		P	40 - 150
Diuron	63.1		P	40 - 150
Fenuron	107		P	40 - 150
Fluridone	56.1		P	40 - 150
Imazapyr	67.4		P	40 - 150
Imidacloprid	93.7		P	40 - 160
Linuron	75.5		P	40 - 150
MCPP	51.7		P	40 - 150
Methiocarb	71.0		P	40 - 150
Methomyl	101		P	40 - 150
Oxamyl	96.6		P	40 - 150
Primidone	108		P	40 - 150
Propoxur	66.0		P	40 - 150
Pyraclostrobin	75.0		P	40 - 150
Triclopyr	50.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	83.8		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P343026

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.3		P	98 - 107

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P343647

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.2		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P342557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979326	Calcium	106		P	80 - 120
1979326	Iron	109		P	80 - 120
1979326	Magnesium	108		P	80 - 120
1979326	Potassium	102		P	80 - 120
1979326	Sodium	107		P	80 - 120
1979326	Zinc	104		P	80 - 120
1979402	Calcium	102		P	80 - 120
1979402	Iron	106	107	P/P	80 - 120
1979402	Magnesium	106	107	P/P	80 - 120
1979402	Potassium	99.0	98.2	P/P	80 - 120
1979402	Sodium	102		P	80 - 120
1979402	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979326	Arsenic	96.7		P	80 - 120
1979326	Cadmium	105		P	80 - 120
1979326	Chromium	100		P	80 - 120
1979326	Copper	93.4		P	80 - 120
1979326	Lead	98.9		P	80 - 120
1979326	Nickel	92.3		P	80 - 120
1979326	Silver	95.6		P	80 - 120
1979402	Arsenic	97.9	96.1	P/P	80 - 120
1979402	Cadmium	103	99.5	P/P	80 - 120
1979402	Chromium	102	99.5	P/P	80 - 120
1979402	Copper	95.4	93.6	P/P	80 - 120
1979402	Lead	99.7	97.8	P/P	80 - 120
1979402	Nickel	94.5	92.1	P/P	80 - 120
1979402	Silver	95.1	93.5	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342597

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342597

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979316	Chloride	101	98.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342600

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979316	Sulfate	101	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979295	Ammonia-N	97.7	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979317	Kjeldahl Nitrogen	94.4	92.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979374	NO2NO3-N	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979293	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979350	O-Phosphate-P	95.3	96.9	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P342726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979533	Aldrin	57.3	55.3	P/P	26 - 96.0
1979533	Alpha-BHC	84.4	90.0	P/P	51 - 123
1979533	Alpha-Chlordane	85.4	86.8	P/P	45 - 120
1979533	Beta-BHC	116	119	P/P	43 - 146
1979533	Carbophenothion	119	123	P/P	26 - 179
1979533	Chlorothalonil	2.10	3.30	F/F	10 - 215
1979533	Cypermethrin	126	134	P/P	35 - 169
1979533	DDD-p,p'	88.6	95.4	P/P	49 - 131
1979533	DDE-p,p'	83.5	83.6	P/P	39 - 127
1979533	DDT-p,p'	84.7	83.9	P/P	49 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P342726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979533	Delta-BHC	124	99.3	P/P	49 - 187
1979533	Dicofol	86.6	85.8	P/P	10 - 129
1979533	Dieldrin	81.4	84.1	P/P	46 - 132
1979533	Endosulfan I	101	101	P/P	57 - 130
1979533	Endosulfan II	100	114	P/P	52 - 148
1979533	Endosulfan Sulfate	129	124	F/P	55 - 129
1979533	Endrin	87.8	95.3	P/P	45 - 133
1979533	Endrin Aldehyde	56.5	59.4	P/P	26 - 140
1979533	Endrin Ketone	111	116	P/P	60 - 125
1979533	Gamma-BHC	106	111	P/P	50 - 145
1979533	Gamma-Chlordane	84.9	86.7	P/P	44 - 118
1979533	Heptachlor	83.1	72.7	P/P	35 - 106
1979533	Heptachlor Epoxide	90.2	89.6	P/P	52 - 123
1979533	Methoxychlor	96.1	96.9	P/P	54 - 132
1979533	Mirex	92.9	92.8	P/P	36 - 107
1979533	Permethrin	104	103	P/P	47 - 135
1979533	Trifluralin	83.8	81.9	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P342934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979894	Acetochlor	104	96.5	P/P	67 - 125
1979894	Alachlor	99.6	91.2	P/P	69 - 123
1979894	Ametryn	105	92.3	P/P	52 - 151
1979894	Atrazine Desethyl	76.8	68.9	P/P	10 - 129
1979894	Azinphos Methyl	120	108	P/P	48 - 200
1979894	Bromacil	90.7	73.9	P/P	46 - 130
1979894	Butylate	44.0	37.1	P/P	10 - 85.0
1979894	Chlorpyrifos Ethyl	72.6	76.2	P/P	54 - 115
1979894	Chlorpyrifos Methyl	84.1	81.6	P/P	44 - 117
1979894	Cyanazine	138	116	P/P	10 - 262
1979894	Demeton	58.4	65.9	P/P	24 - 145
1979894	Diazinon	104	96.2	P/P	66 - 129
1979894	Disulfoton	74.0	70.9	P/P	45 - 139
1979894	EPTC	41.5	39.1	P/P	10 - 86.0
1979894	Ethion	90.3	87.4	P/P	59 - 133
1979894	Ethoprop	85.3	80.0	P/P	54 - 116
1979894	Fenamiphos	87.5	83.8	P/P	55 - 140
1979894	Fipronil	107	94.7	P/P	37 - 142
1979894	Fipronil Sulfide	90.5	78.1	P/P	37 - 130
1979894	Fipronil Sulfone	90.1	68.7	P/P	18 - 143
1979894	Fonofos	77.1	71.8	P/P	55 - 118
1979894	Hexazinone	110	94.8	P/P	62 - 140
1979894	Malathion	95.1	94.3	P/P	64 - 132
1979894	Metolachlor	93.7	88.6	P/P	56 - 137
1979894	Mevinphos	73.0	64.4	P/P	34 - 129
1979894	Molinate	55.3	48.4	P/P	16 - 99.0
1979894	Norflurazon	100	89.9	P/P	43 - 135
1979894	Parathion Ethyl	96.9	89.3	P/P	71 - 112
1979894	Parathion Methyl	100	94.9	P/P	65 - 127
1979894	Pendimethalin	112	104	P/P	35 - 159

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P342934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979894	Phorate	65.3	62.1	P/P	41 - 129
1979894	Prometon	104	96.4	P/P	56 - 140
1979894	Prometryn	95.0	88.1	P/P	65 - 130
1979894	Simazine	121	114	P/P	54 - 148
1979894	Terbufos	76.9	74.4	P/P	53 - 126
1979894	Terbuthylazine	93.1	86.0	P/P	73 - 114

Reference Method: EPA 8276
Batch ID: P342726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979125	Chlordane	58.5	61.2	P/P	41 - 134
1979125	Toxaphene	69.2	67.5	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P342352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978526	AMPA	94.0	103	P/P	40 - 150
1978526	Glyphosate	93.8	93.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978945	2,4-D	50.1	48.4	P/P	40 - 150
1978945	3-Hydroxycarbofuran	110	108	P/P	40 - 150
1978945	Acetaminophen	120	121	P/P	30 - 150
1978945	Aldicarb	79.2	85.7	P/P	30 - 150
1978945	Aldicarb Sulfone	118	117	P/P	40 - 150
1978945	Aldicarb Sulfoxide	97.4	97.3	P/P	40 - 150
1978945	Bentazon	51.1	50.5	P/P	30 - 150
1978945	Carbamazepine	83.0	84.3	P/P	40 - 150
1978945	Carbaryl	56.2	57.5	P/P	40 - 150
1978945	Carbofuran	62.0	65.6	P/P	40 - 150
1978945	Diuron	65.4	63.9	P/P	40 - 150
1978945	Fenuron	96.0	87.5	P/P	40 - 150
1978945	Fluridone	53.5	63.3	P/P	40 - 150
1978945	Imazapyr	63.2	61.3	P/P	40 - 150
1978945	Imidacloprid	134	138	P/P	40 - 160
1978945	Linuron	78.4	79.9	P/P	40 - 150
1978945	MCPP	54.0	47.4	P/P	40 - 150
1978945	Methiocarb	74.1	73.3	P/P	40 - 150
1978945	Methomyl	94.4	96.4	P/P	40 - 150
1978945	Oxamyl	92.7	94.7	P/P	40 - 150
1978945	Primidone	122	109	P/P	40 - 150
1978945	Propoxur	68.5	71.2	P/P	40 - 150
1978945	Pyraclostrobin	80.8	72.9	P/P	40 - 150
1978945	Triclopyr	55.3	51.7	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P342469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979267	Sucralose	93.4	91.1	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P343647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979292	Fluoride	96.9	97.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P343082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1979043	Organic Carbon	94.4	97.0	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P342515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979358	Turbidity	0.927	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P342557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979402	Calcium	1.16	Spike	P	0 - 20
1979402	Iron	0.502	Spike	P	0 - 20
1979402	Magnesium	0.459	Spike	P	0 - 20
1979402	Potassium	0.464	Spike	P	0 - 20
1979402	Sodium	0.317	Spike	P	0 - 20
1979402	Zinc	0.681	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979402	Arsenic	1.70	Spike	P	0 - 20
1979402	Cadmium	3.05	Spike	P	0 - 20
1979402	Chromium	2.21	Spike	P	0 - 20
1979402	Copper	1.86	Spike	P	0 - 20
1979402	Lead	1.99	Spike	P	0 - 20
1979402	Nickel	2.51	Spike	P	0 - 20
1979402	Silver	1.71	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979316	Chloride	1.82	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342600

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979316	Sulfate	0.742	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979295	Ammonia-N	1.23	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979317	Kjeldahl Nitrogen	1.58	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979374	NO2NO3-N	0.926	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979293	Total-P	2.01	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979350	O-Phosphate-P	1.16	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P342726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979533	Aldrin	3.53	Spike	P	0 - 30
1979533	Alpha-BHC	6.33	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P342726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979533	Alpha-Chlordane	1.60	Spike	P	0 - 30
1979533	Beta-BHC	2.90	Spike	P	0 - 30
1979533	Carbophenothion	3.72	Spike	P	0 - 30
1979533	Cypermethrin	5.94	Spike	P	0 - 30
1979533	DDD-p,p'	7.37	Spike	P	0 - 30
1979533	DDE-p,p'	0.115	Spike	P	0 - 30
1979533	DDT-p,p'	1.01	Spike	P	0 - 30
1979533	Delta-BHC	21.7	Spike	P	0 - 30
1979533	Dicofol	0.890	Spike	P	0 - 30
1979533	Dieldrin	3.30	Spike	P	0 - 30
1979533	Endosulfan I	0.703	Spike	P	0 - 30
1979533	Endosulfan II	13.4	Spike	P	0 - 30
1979533	Endosulfan Sulfate	4.38	Spike	P	0 - 30
1979533	Endrin	8.25	Spike	P	0 - 30
1979533	Endrin Aldehyde	5.06	Spike	P	0 - 30
1979533	Endrin Ketone	3.98	Spike	P	0 - 30
1979533	Gamma-BHC	4.38	Spike	P	0 - 30
1979533	Gamma-Chlordane	2.10	Spike	P	0 - 30
1979533	Heptachlor	13.3	Spike	P	0 - 30
1979533	Heptachlor Epoxide	0.646	Spike	P	0 - 30
1979533	Methoxychlor	0.826	Spike	P	0 - 30
1979533	Mirex	0.0689	Spike	P	0 - 30
1979533	Permethrin	0.851	Spike	P	0 - 30
1979533	Trifluralin	2.28	Spike	P	0 - 30
LFB	Aldrin	4.10	LCS	P	0 - 30
LFB	Alpha-BHC	5.72	LCS	P	0 - 30
LFB	Alpha-Chlordane	5.24	LCS	P	0 - 30
LFB	Beta-BHC	1.47	LCS	P	0 - 30
LFB	Carbophenothion	3.35	LCS	P	0 - 30
LFB	Chlorothalonil	15.9	LCS	P	0 - 30
LFB	Cypermethrin	9.33	LCS	P	0 - 30
LFB	DDD-p,p'	1.95	LCS	P	0 - 30
LFB	DDE-p,p'	6.26	LCS	P	0 - 30
LFB	DDT-p,p'	1.72	LCS	P	0 - 30
LFB	Delta-BHC	3.08	LCS	P	0 - 30
LFB	Dicofol	11.7	LCS	P	0 - 30
LFB	Dieldrin	14.7	LCS	P	0 - 30
LFB	Endosulfan I	4.12	LCS	P	0 - 30
LFB	Endosulfan II	2.92	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.75	LCS	P	0 - 30
LFB	Endrin	4.49	LCS	P	0 - 30
LFB	Endrin Aldehyde	2.42	LCS	P	0 - 30
LFB	Endrin Ketone	3.73	LCS	P	0 - 30
LFB	Gamma-BHC	4.35	LCS	P	0 - 30
LFB	Gamma-Chlordane	4.27	LCS	P	0 - 30
LFB	Heptachlor	4.62	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.10	LCS	P	0 - 30
LFB	Methoxychlor	2.77	LCS	P	0 - 30
LFB	Mirex	1.11	LCS	P	0 - 30
LFB	Permethrin	3.93	LCS	P	0 - 30
LFB	Trifluralin	4.59	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P342934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979894	Acetochlor	7.95	Spike	P	0 - 30
1979894	Alachlor	8.81	Spike	P	0 - 30
1979894	Ametryn	12.7	Spike	P	0 - 30
1979894	Atrazine	9.39	Spike	P	0 - 30
1979894	Atrazine Desethyl	8.71	Spike	P	0 - 30
1979894	Azinphos Methyl	10.4	Spike	P	0 - 30
1979894	Bromacil	10.0	Spike	P	0 - 30
1979894	Butylate	16.9	Spike	P	0 - 30
1979894	Chlorpyrifos Ethyl	4.26	Spike	P	0 - 30
1979894	Chlorpyrifos Methyl	3.01	Spike	P	0 - 30
1979894	Cyanazine	17.2	Spike	P	0 - 30
1979894	Demeton	12.1	Spike	P	0 - 30
1979894	Diazinon	7.39	Spike	P	0 - 30
1979894	Disulfoton	4.40	Spike	P	0 - 30
1979894	EPTC	5.87	Spike	P	0 - 30
1979894	Ethion	3.21	Spike	P	0 - 30
1979894	Ethoprop	6.41	Spike	P	0 - 30
1979894	Fenamiphos	4.30	Spike	P	0 - 30
1979894	Fipronil	10.6	Spike	P	0 - 30
1979894	Fipronil Sulfide	9.39	Spike	P	0 - 30
1979894	Fipronil Sulfone	11.2	Spike	P	0 - 30
1979894	Fonofos	7.19	Spike	P	0 - 30
1979894	Hexazinone	8.74	Spike	P	0 - 30
1979894	Malathion	0.851	Spike	P	0 - 30
1979894	Metalaxyl	9.03	Spike	P	0 - 30
1979894	Metolachlor	5.32	Spike	P	0 - 30
1979894	Metribuzin	10.0	Spike	P	0 - 30
1979894	Mevinphos	12.5	Spike	P	0 - 30
1979894	Molinate	13.3	Spike	P	0 - 30
1979894	Norflurazon	11.1	Spike	P	0 - 30
1979894	Parathion Ethyl	8.20	Spike	P	0 - 30
1979894	Parathion Methyl	5.24	Spike	P	0 - 30
1979894	Pendimethalin	4.40	Spike	P	0 - 30
1979894	Phorate	5.03	Spike	P	0 - 30
1979894	Prometon	7.51	Spike	P	0 - 30
1979894	Prometryn	7.63	Spike	P	0 - 30
1979894	Simazine	6.68	Spike	P	0 - 30
1979894	Terbufos	3.30	Spike	P	0 - 30
1979894	Terbuthylazine	7.93	Spike	P	0 - 30
LFB	Acetochlor	4.62	LCS	P	0 - 30
LFB	Alachlor	5.75	LCS	P	0 - 30
LFB	Ametryn	2.12	LCS	P	0 - 30
LFB	Atrazine	5.87	LCS	P	0 - 30
LFB	Atrazine Desethyl	7.82	LCS	P	0 - 30
LFB	Azinphos Methyl	4.37	LCS	P	0 - 30
LFB	Bromacil	2.79	LCS	P	0 - 30
LFB	Butylate	13.8	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	0.878	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.99	LCS	P	0 - 30
LFB	Cyanazine	1.10	LCS	P	0 - 30
LFB	Demeton	3.40	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P342934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	6.40	LCS	P	0 - 30
LFB	Disulfoton	4.28	LCS	P	0 - 30
LFB	EPTC	17.9	LCS	P	0 - 30
LFB	Ethion	0.0645	LCS	P	0 - 30
LFB	Ethoprop	1.81	LCS	P	0 - 30
LFB	Fenamiphos	10.8	LCS	P	0 - 30
LFB	Fipronil	2.07	LCS	P	0 - 30
LFB	Fipronil Sulfide	12.1	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.06	LCS	P	0 - 30
LFB	Fonofos	0.490	LCS	P	0 - 30
LFB	Hexazinone	1.08	LCS	P	0 - 30
LFB	Malathion	3.24	LCS	P	0 - 30
LFB	Metalaxyl	3.23	LCS	P	0 - 30
LFB	Metolachlor	6.31	LCS	P	0 - 30
LFB	Metribuzin	0.446	LCS	P	0 - 30
LFB	Mevinphos	0.0186	LCS	P	0 - 30
LFB	Molinate	10.3	LCS	P	0 - 30
LFB	Norflurazon	6.29	LCS	P	0 - 30
LFB	Parathion Ethyl	2.59	LCS	P	0 - 30
LFB	Parathion Methyl	1.57	LCS	P	0 - 30
LFB	Pendimethalin	2.16	LCS	P	0 - 30
LFB	Phorate	3.00	LCS	P	0 - 30
LFB	Prometon	1.60	LCS	P	0 - 30
LFB	Prometryn	3.20	LCS	P	0 - 30
LFB	Simazine	3.36	LCS	P	0 - 30
LFB	Terbufos	0.470	LCS	P	0 - 30
LFB	Terbuthylazine	3.74	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P342726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979125	Chlordane	4.43	Spike	P	0 - 30
1979125	Toxaphene	2.39	Spike	P	0 - 30
LFB	Chlordane	4.15	LCS	P	0 - 30
LFB	Toxaphene	10.8	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978526	AMPA	9.08	Spike	P	0 - 30
1978526	Glyphosate	0.588	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342408

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

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P342408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978945	2,4-D	3.36	Spike	P	0 - 30
1978945	3-Hydroxycarbofuran	2.05	Spike	P	0 - 30
1978945	Acetaminophen	0.963	Spike	P	0 - 30
1978945	Aldicarb	7.95	Spike	P	0 - 30
1978945	Aldicarb Sulfone	0.961	Spike	P	0 - 30
1978945	Aldicarb Sulfoxide	0.121	Spike	P	0 - 30
1978945	Bentazon	0.864	Spike	P	0 - 30
1978945	Carbamazepine	1.60	Spike	P	0 - 30
1978945	Carbaryl	2.26	Spike	P	0 - 30
1978945	Carbofuran	5.69	Spike	P	0 - 30
1978945	Diuron	2.40	Spike	P	0 - 30
1978945	Fenuron	9.27	Spike	P	0 - 30
1978945	Fluridone	16.4	Spike	P	0 - 30
1978945	Imazapyr	1.88	Spike	P	0 - 30
1978945	Imidacloprid	2.47	Spike	P	0 - 30
1978945	Linuron	1.94	Spike	P	0 - 30
1978945	MCPP	13.1	Spike	P	0 - 30
1978945	Methiocarb	1.08	Spike	P	0 - 30
1978945	Methomyl	2.14	Spike	P	0 - 30
1978945	Oxamyl	2.10	Spike	P	0 - 30
1978945	Primidone	11.6	Spike	P	0 - 30
1978945	Propoxur	3.91	Spike	P	0 - 30
1978945	Pyraclostrobin	10.3	Spike	P	0 - 30
1978945	Triclopyr	6.63	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979267	Sucralose	2.50	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P342459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979232	Color (true)	1.47	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P343026

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979292	Total Alkalinity	2.33	Sample	F	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P343662

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

Quality Assurance Report
Precision

Reference Method: SM 2540 C-97
Batch ID: P343662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979316	TDS	5.50	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P343647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979292	Fluoride	0.477	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P343082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1979043	Organic Carbon	1.61	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: 1979322
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	38.0	P	30 - 160

Lab Sample ID: 1979323
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	72.7	P	30 - 160
EPA 8321B	2,4-D-d3	72.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.1	P	30 - 160
EPA 8321B	Diuron-d6	75.2	P	30 - 160
EPA 8321B	Diuron-d6	75.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.7	P	40 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	90.7	P	40 - 160

Lab Sample ID: 1979324
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits

Quality Assurance Report
Surrogates

Lab Sample ID: 1979324
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	72.2	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	46.1	P	34 - 101
EPA 8276	Decachlorobiphenyl	76.5	P	31 - 108
EPA 8276	PCNB	89.4	P	62 - 142

Lab Sample ID: 1979325
Field Sample ID: G2TLHR0032

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	99.2	P	71 - 126
EPA 8270D	Terbufos-d10	71.4	P	59 - 149

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82892
Included Lab Sample IDs: 1979316

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

Reference Method: SM 2120 B
Run ID: A82944
Included Lab Sample IDs: 1979316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.6	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82962
Included Lab Sample IDs: 1979316

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82970
Included Lab Sample IDs: 1979318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.4	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82991
Included Lab Sample IDs: 1979323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.2	102	P/P	70 - 130
Glyphosate	96.3	92.5	P/P	70 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A83016
Included Lab Sample IDs: 1979326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Iron	99.3	100	P/P	90 - 110
Magnesium	99.3	101	P/P	90 - 110
Potassium	98.8	98.3	P/P	90 - 110
Sodium	103	103	P/P	90 - 110
Zinc	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A83030
Included Lab Sample IDs: 1979317

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

Reference Method: EPA 8321B
Run ID: A83031
Included Lab Sample IDs: 1979323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	84.3	94.4	P/P	60 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A83040
Included Lab Sample IDs: 1979326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	96.1	96.2	P/P	90 - 110
Cadmium	98.9	99.6	P/P	90 - 110
Chromium	97.9	98.1	P/P	90 - 110
Copper	94.6	91.8	P/P	90 - 110
Lead	97.2	97.4	P/P	90 - 110
Nickel	94.3	91.2	P/P	90 - 110
Silver	99.7	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A83043
Included Lab Sample IDs: 1979317

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.9	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A83062
Included Lab Sample IDs: 1979317

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	106	106	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A83110
Included Lab Sample IDs: 1979323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.9	94.8	P/P	50 - 150
3-Hydroxycarbofuran	111	118	P/P	60 - 150
Acetaminophen	106	111	P/P	60 - 150
Aldicarb	94.5	113	P/P	60 - 150
Aldicarb Sulfone	103	109	P/P	50 - 150
Aldicarb Sulfoxide	118	112	P/P	50 - 150
Bentazon	95.1	106	P/P	50 - 150
Carbamazepine	107	107	P/P	60 - 150
Carbaryl	106	107	P/P	60 - 150
Carbofuran	121	114	P/P	50 - 150
Diuron	105	111	P/P	60 - 150
Fenuron	106	109	P/P	60 - 150
Fluridone	113	116	P/P	60 - 160
Imazapyr	91.2	87.5	P/P	50 - 150
Imidacloprid	112	112	P/P	60 - 150
Linuron	118	122	P/P	60 - 150
MCPP	95.7	102	P/P	50 - 150
Methiocarb	120	130	P/P	50 - 150
Methomyl	111	115	P/P	50 - 150
Oxamyl	105	110	P/P	50 - 150
Primidone	102	121	P/P	60 - 150
Propoxur	119	124	P/P	50 - 150
Pyraclostrobin	114	118	P/P	60 - 150
Triclopyr	83.3	94.9	P/P	50 - 150

Reference Method: SM 2320 B-97
Run ID: A83116
Included Lab Sample IDs: 1979316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.3	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A83131
Included Lab Sample IDs: 1979317

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	99.0	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A83136
Included Lab Sample IDs: 1979317

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	97.7	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A83193
Included Lab Sample IDs: 1979324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A83193
Included Lab Sample IDs: 1979324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.0		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	94.6		P	80 - 120
Beta-BHC	96.9		P	80 - 120
Carbophenothion	95.1		P	80 - 120
Chlorothalonil	90.5		P	80 - 120
Cypermethrin	90.8		P	80 - 120
DDD-p,p'	99.0		P	80 - 120
DDE-p,p'	97.3		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	104		P	80 - 120
Dicofol	111		P	80 - 120
Dieldrin	94.1		P	80 - 120
Endosulfan I	90.9		P	80 - 120
Endosulfan II	90.5		P	80 - 120
Endosulfan Sulfate	95.9		P	80 - 120
Endrin	91.1		P	80 - 120
Endrin Aldehyde	90.0		P	80 - 120
Endrin Ketone	95.1		P	80 - 120
Gamma-BHC	100		P	80 - 120
Gamma-Chlordane	92.8		P	80 - 120
Heptachlor	92.2		P	80 - 120
Heptachlor Epoxide	94.5		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	97.8		P	80 - 120
Permethrin	93.9		P	80 - 120
Trifluralin	96.9		P	80 - 120

Reference Method: EPA 8276
Run ID: A83205
Included Lab Sample IDs: 1979324

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.4		P	80 - 120
Toxaphene	98.3		P	80 - 120

Reference Method: EPA 8270D
Run ID: A83257
Included Lab Sample IDs: 1979325

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.9		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine	96.6		P	80 - 120
Atrazine Desethyl	91.1		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Bromacil	99.5		P	80 - 120
Butylate	97.5		P	80 - 120
Chlorpyrifos Ethyl	95.3		P	80 - 120
Chlorpyrifos Methyl	96.5		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A83257
Included Lab Sample IDs: 1979325

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cyanazine	103		P	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	96.2		P	80 - 120
Disulfoton	93.5		P	80 - 120
EPTC	99.8		P	80 - 120
Ethion	93.8		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	98.1		P	80 - 120
Fipronil	95.9		P	80 - 120
Fipronil Sulfide	96.4		P	80 - 120
Fipronil Sulfone	94.6		P	80 - 120
Fonofos	94.7		P	80 - 120
Hexazinone	97.1		P	80 - 120
Malathion	102		P	80 - 120
Metalaxyl	98.2		P	80 - 120
Metolachlor	99.7		P	80 - 120
Metribuzin	94.6		P	80 - 120
Mevinphos	97.4		P	80 - 120
Molinate	99.1		P	80 - 120
Norflurazon	96.2		P	80 - 120
Parathion Ethyl	95.8		P	80 - 120
Parathion Methyl	94.3		P	80 - 120
Pendimethalin	103		P	80 - 120
Phorate	95.3		P	80 - 120
Prometon	98.5		P	80 - 120
Prometryn	99.6		P	80 - 120
Simazine	91.3		P	80 - 120
Terbufos	93.9		P	80 - 120
Terbuthylazine	96.8		P	80 - 120

Reference Method: SM 4500 F-C-97
Run ID: A83315
Included Lab Sample IDs: 1979316

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	99.5	P/P	90 - 110

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision		
						LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.927	
EPA 200.7 Rev. 4.4	Calcium	105	106	102				1.16
	Iron	106	109	106	107			0.502
	Magnesium	109	108	106	107			0.459

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
EPA 200.7 Rev. 4.4	Potassium	102		102	99.0	98.2			0.464
	Sodium	104		107	102				0.317
	Zinc	101		104	101	102			0.681
EPA 200.8 Rev. 5.4	Arsenic	98.8		97.9	96.1	96.7			1.70
	Cadmium	104		103	99.5	105			3.05
	Chromium	104		102	99.5	100			2.21
	Copper	97.3		95.4	93.6	93.4			1.86
	Lead	101		99.7	97.8	98.9			1.99
	Nickel	96.4		94.5	92.1	92.3			2.51
	Silver	97.8		95.1	93.5	95.6			1.71
EPA 300.0 Rev. 2.1	Chloride	98.4		101	98.7				1.82
	Sulfate	99.9		101	100				0.742
EPA 350.1 Rev. 2.0	Ammonia-N	98.6		97.7	99.1				1.23
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.9		94.4	92.3				1.58
EPA 353.2 Rev. 2.0	NO2NO3-N	106		108	108				0.926
EPA 365.1 Rev. 2.0	Total-P	102		102	104				2.01
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.0		95.3	96.9				1.16
EPA 8270D	Acetochlor	99.1	104	104	96.5		4.62		7.95
	Alachlor	94.0	99.5	99.6	91.2		5.75		8.81
	Aldrin	68.0	65.2	57.3	55.3		4.10		3.53
	Alpha-BHC	85.0	80.2	84.4	90.0		5.72		6.33
	Alpha-Chlordane	88.0	83.5	85.4	86.8		5.24		1.60
	Ametryn	93.5	95.5	105	92.3		2.12		12.7
	Atrazine	103	109				5.87		9.39
	Atrazine Desethyl	93.2	101	76.8	68.9		7.82		8.71
	Azinphos Methyl	122	128	120	108		4.37		10.4
	Beta-BHC	123	121	116	119		1.47		2.90
	Bromacil	87.9	85.5	90.7	73.9		2.79		10.0
	Butylate	51.3	58.9	44.0	37.1		13.8		16.9
	Carbophenothion	98.6	95.4	119	123		3.35		3.72
	Chlorothalonil	79.8	93.6	2.10	3.30		15.9		
	Chlorpyrifos Ethyl	112	113	72.6	76.2		0.878		4.26
	Chlorpyrifos Methyl	96.4	91.7	84.1	81.6		4.99		3.01
	Cyanazine	145	147	138	116		1.10		17.2
	Cypermethrin	99.0	90.2	126	134		9.33		5.94
	DDD-p,p'	103	101	88.6	95.4		1.95		7.37
	DDE-p,p'	89.7	84.2	83.5	83.6		6.26		0.115
	DDT-p,p'	88.8	87.3	84.7	83.9		1.72		1.01
	Delta-BHC	109	113	124	99.3		3.08		21.7
	Demeton	58.1	56.2	58.4	65.9		3.40		12.1
	Diazinon	103	110	104	96.2		6.40		7.39
	Dicofol	75.2	84.5	86.6	85.8		11.7		0.890
	Dieldrin	91.2	106	81.4	84.1		14.7		3.30
	Disulfoton	69.5	72.5	74.0	70.9		4.28		4.40
	Endosulfan I	85.2	81.7	101	101		4.12		0.703
	Endosulfan II	96.5	93.8	100	114		2.92		13.4
	Endosulfan Sulfate	109	113	129	124		2.75		4.38
	Endrin	90.5	94.7	87.8	95.3		4.49		8.25
	Endrin Aldehyde	109	107	56.5	59.4		2.42		5.06
	Endrin Ketone	106	110	111	116		3.73		3.98
	EPTC	50.2	60.0	41.5	39.1		17.9		5.87
	Ethion	81.5	81.4	90.3	87.4		0.0645		3.21
	Ethoprop	88.8	87.2	85.3	80.0		1.81		6.41
	Fenamiphos	90.3	81.0	87.5	83.8		10.8		4.30

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Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Fipronil	99.7	102	107	94.7	2.07		10.6
	Fipronil Sulfide	94.7	83.9	90.5	78.1	12.1		9.39
	Fipronil Sulfone	87.0	79.5	90.1	68.7	9.06		11.2
	Fonofos	88.5	89.0	77.1	71.8	0.490		7.19
	Gamma-BHC	112	107	106	111	4.35		4.38
	Gamma-Chlordane	85.4	81.8	84.9	86.7	4.27		2.10
	Heptachlor	71.1	67.9	83.1	72.7	4.62		13.3
	Heptachlor Epoxide	88.9	86.2	90.2	89.6	3.10		0.646
	Hexazinone	107	106	110	94.8	1.08		8.74
	Malathion	98.5	95.4	95.1	94.3	3.24		0.851
	Metalaxyl	94.4	97.5			3.23		9.03
	Methoxychlor	103	100	96.1	96.9	2.77		0.826
	Metolachlor	90.8	96.7	93.7	88.6	6.31		5.32
	Metribuzin	151	150			0.446		10.0
	Mevinphos	77.4	77.4	73.0	64.4	0.0186		12.5
	Mirex	74.4	73.5	92.9	92.8	1.11		0.0689
	Molinate	58.3	64.6	55.3	48.4	10.3		13.3
	Norflurazon	95.5	102	100	89.9	6.29		11.1
	Parathion Ethyl	92.9	90.5	96.9	89.3	2.59		8.20
	Parathion Methyl	111	109	100	94.9	1.57		5.24
	Pendimethalin	115	117	112	104	2.16		4.40
	Permethrin	85.6	89.1	104	103	3.93		0.851
	Phorate	64.8	66.8	65.3	62.1	3.00		5.03
	Prometon	88.5	89.9	104	96.4	1.60		7.51
	Prometryn	91.5	88.6	95.0	88.1	3.20		7.63
	Simazine	104	108	121	114	3.36		6.68
	Terbufos	83.6	84.0	76.9	74.4	0.470		3.30
	Terbuthylazine	92.0	95.5	93.1	86.0	3.74		7.93
	Trifluralin	81.2	77.5	83.8	81.9	4.59		2.28
EPA 8276	Chlordane	70.6	67.7	58.5	61.2	4.15		4.43
	Toxaphene	85.5	76.7	69.2	67.5	10.8		2.39
EPA 8321B	2,4-D	60.6		50.1	48.4			3.36
	3-Hydroxycarbofuran	85.4		110	108			2.05
	Acetaminophen	104		120	121			0.963
	Aldicarb	84.4		79.2	85.7			7.95
	Aldicarb Sulfone	104		118	117			0.961
	Aldicarb Sulfoxide	101		97.4	97.3			0.121
	AMPA	96.2		94.0	103			9.08
	Bentazon	66.5		51.1	50.5			0.864
	Carbamazepine	72.6		83.0	84.3			1.60
	Carbaryl	60.6		56.2	57.5			2.26
	Carbofuran	58.7		62.0	65.6			5.69
	Diuron	63.1		65.4	63.9			2.40
	Fenuron	107		96.0	87.5			9.27
	Fluridone	56.1		53.5	63.3			16.4
	Glyphosate	91.8		93.8	93.3			0.588
	Imazapyr	67.4		61.3	63.2			1.88
	Imidacloprid	93.7		134	138			2.47
	Linuron	75.5		78.4	79.9			1.94
	MCPP	51.7		54.0	47.4			13.1
	Methiocarb	71.0		74.1	73.3			1.08
	Methomyl	101		94.4	96.4			2.14
	Oxamyl	96.6		92.7	94.7			2.10
	Primidone	108		122	109			11.6

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Propoxur	66.0	68.5	71.2			3.91
	Pyraclostrobin	75.0	80.8	72.9			10.3
	Sucralose	83.8	93.4	91.1			2.50
	Triclopyr	50.4	55.3	51.7			6.63
SM 2120 B	Color (true)					1.47	
SM 2320 B-97	Total Alkalinity	98.3				2.33	
SM 2540 C-97	TDS					5.50	
SM 4500 F-C-97	Fluoride	96.2	96.9	97.5			0.477
SM 5310 B-00	Organic Carbon	96.0	94.4	97.0			1.61

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1979316
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1979326
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1979326
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1979316
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1979316
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1979317
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1979317
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1979317
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1979317
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1979318
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1979324
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1979325
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1979324
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1979322
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1979323
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1979323
SM 2120 B / E31780	True Color measured at 450 nm	1979316
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1979316
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1979316
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1979316
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1979316
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1979317

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	03/29/2018			03/30/2018 15:46	Tanya Welborn	1979316
EPA 200.7 Rev. 4.4	03/29/2018	04/02/2018 13:15	Elliott D. Healy	04/03/2018 18:56	Betina Topolski	1979326
EPA 200.8 Rev. 5.4	03/29/2018	04/02/2018 13:15	Elliott D. Healy	04/04/2018 22:33	Nadine Brooks	1979326
EPA 300.0 Rev. 2.1	03/29/2018			03/31/2018 04:54	Lipi Saha	1979316
EPA 350.1 Rev. 2.0	03/29/2018			04/09/2018 13:33	Ping Hua	1979317
EPA 351.2 Rev. 2.0	03/29/2018	04/03/2018 09:50	Adrian Shelby	04/04/2018 14:34	Joseph Suarez	1979317
EPA 353.2 Rev. 2.0	03/29/2018			04/05/2018 14:52	Lauren Bottorf	1979317
EPA 365.1 Rev. 2.0	03/29/2018	04/03/2018 13:07	Sima Feizi	04/04/2018 11:44	Beverly Y. Sanders	1979317
EPA 365.1 Rev. 2.0 dissolved	03/29/2018			03/30/2018 16:19	Megan Treadwell	1979318
EPA 8270D	03/29/2018	04/03/2018 08:30	Rasheda Ghaffari	04/06/2018 18:56	Vandana T. Nagar	1979324
	03/29/2018	04/03/2018 12:51	John Kaba	04/09/2018 16:19	Vandana T. Nagar	1979325
EPA 8276	03/29/2018	04/03/2018 08:30	Rasheda Ghaffari	04/11/2018 04:00	Vandana T. Nagar	1979324
EPA 8321B	03/29/2018	04/02/2018 09:00	Julie Michelle Frank	04/02/2018 13:25	Julie Michelle Frank	1979323
	03/29/2018	04/02/2018 11:00	Hoor Shaik	04/03/2018 22:23	Julie Michelle Frank	1979322
	03/29/2018	04/02/2018 11:00	Hoor Shaik	04/04/2018 07:36	Julie Michelle Frank	1979323
	03/29/2018	04/02/2018 11:00	Hoor Shaik	04/04/2018 20:18	Julie Michelle Frank	1979323
	03/29/2018	04/03/2018 09:00	Julie Michelle Frank	04/03/2018 15:25	Mohammad Ghaffari	1979323
SM 2120 B	03/29/2018			03/29/2018 17:16	Tanya Welborn	1979316
SM 2320 B-97	03/29/2018			04/07/2018 03:46	Dale L. Simmons	1979316
SM 2540 C-97	03/29/2018			04/10/2018 17:00	DeAsia Armster	1979316
SM 2540 D-97	03/29/2018			03/30/2018 11:35	DeAsia Armster	1979316
SM 4500 F-C-97	03/29/2018			04/17/2018 18:15	Dale L. Simmons	1979316
SM 5310 B-00	03/29/2018			04/06/2018 22:13	Julia Storbeck	1979317