

Chemical Analysis Report

CEN-DIST-2018-05-23-01

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

Event Description: **Chain / Marie / Gleason**

Request ID: **RQ-2018-04-23-55**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

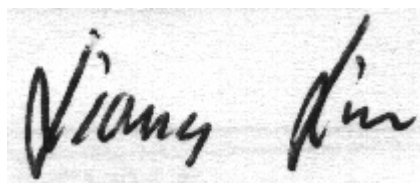
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Attn: Michael Linger

For additional information please contact

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 18-JUN-2018 11:13

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

Case Narrative

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

Results for the following analytical groups are included in this report: 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: Three Island Lake @ Center of S Lobe (2938) Collection Date/Time: 05/22/2018 12:15

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994760	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P345830	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P346220	
		Sulfate	8.3		mg SO4/L	P346224	
	SM 2120 B	Color (true)	160		PCU	P345847	
	SM 2320 B-97	Total Alkalinity	4.8		mg CaCO3/L	P346083	
	SM 2540 C-97	TDS	123		mg/L	P346318	
	SM 2540 D-97	TSS	2	I	mg/L	P346364	
	SM 4500 F-C-97	Fluoride	0.040	I	mg F/L	P346087	
1994761	EPA 350.1 Rev. 2.0	Ammonia-N	0.045		mg N/L	P346259	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P346214	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P345900	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P345893	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P346312	
1994762	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345825	
1994769	EPA 200.7 Rev. 4.4	Calcium	6.13		mg/L	P345876	
		Iron	180		ug/L	P345876	
		Magnesium	1.69		mg/L	P345876	
		Potassium	2.5		mg/L	P345876	
		Sodium	13.6		mg/L	P345876	
		Zinc	5.0	U	ug/L	P345876	
	EPA 200.8 Rev. 5.4	Arsenic	1.18		ug/L	P345876	
		Cadmium	0.020	U	ug/L	P345876	
		Chromium	0.58	I	ug/L	P345876	
		Copper	0.62	I	ug/L	P345876	
		Lead	0.21		ug/L	P345876	
		Nickel	0.37	I	ug/L	P345876	
		Silver	0.010	U	ug/L	P345876	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Three Island Lake @ Center of S Lobe (2938) Collection Date/Time: 05/22/2018 12:15

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994765	EPA 8321B	Aldicarb	0.020	U	ug/L	P345505	
		Aldicarb Sulfone	0.0020	U	ug/L	P345505	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P345505	
		Carbaryl	0.0020	U	ug/L	P345505	MS
		Carbofuran	0.0020	U	ug/L	P345505	MS
		3-Hydroxycarbofuran	0.0020	U	ug/L	P345505	
		Methiocarb	0.0020	U	ug/L	P345505	
		Methomyl	0.0020	U	ug/L	P345505	
		Oxamyl	0.0020	U	ug/L	P345505	

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994765	EPA 8321B	Propoxur	0.0020	U	ug/L	P345505	MS
1994766		2,4-D	0.0020	U	ug/L	P345505	
		Bentazon	0.0034		ug/L	P345505	
		MCPP	0.0020	U	ug/L	P345505	
		Triclopyr**	0.0040	U	ug/L	P345505	MS
		Imidacloprid	0.0020	U	ug/L	P345505	
		Diuron	0.057		ug/L	P345505	
		Pyraclostrobin**	0.0020	U	ug/L	P345505	
		Primidone**	0.0040	U	ug/L	P345505	
		Linuron	0.0040	U	ug/L	P345505	
		Acetaminophen**	0.0080	U	ug/L	P345505	
		Fenuron	0.016	U	ug/L	P345505	
		Imazapyr**	0.0060	I	ug/L	P345505	
		Carbamazepine**	4.0E-04	U	ug/L	P345505	
		Fluridone**	4.0E-04	U	ug/L	P345505	
		Hydrocodone**	8.0E-04	U	ug/L	P345505	
		Sucralose**	1.5		ug/L	P345837	
		Glyphosate**	0.10	U	ug/L	P345837	MS
		AMPA**	0.10	U	ug/L	P345837	MS
		Endothall**	0.10	U	ug/L	P345837	
		Glufosinate**	0.10	U	ug/L	P345837	MS
1994767	EPA 8270D	Aldrin	4.4	U	ng/L	P345935	
		Alpha-BHC	2.2	U	ng/L	P345935	
		Beta-BHC	4.4	U	ng/L	P345935	
		Delta-BHC	4.4	U	ng/L	P345935	
		Gamma-BHC	4.4	U	ng/L	P345935	
		Carbophenothion	4.4	U	ng/L	P345935	
		Chlorothalonil	2.2	U	ng/L	P345935	
		Cypermethrin	22	U	ng/L	P345935	
		DDD-p,p'	3.3	U	ng/L	P345935	
		DDE-p,p'	3.3	U	ng/L	P345935	
		DDT-p,p'	3.3	U	ng/L	P345935	
		Dieldrin	4.4	U	ng/L	P345935	
		Endosulfan I	4.4	U	ng/L	P345935	
		Endosulfan II	4.4	U	ng/L	P345935	
		Endosulfan Sulfate	2.2	U	ng/L	P345935	
		Endrin	2.2	U	ng/L	P345935	
		Endrin Aldehyde	2.2	U	ng/L	P345935	
		Heptachlor	1.6	U	ng/L	P345935	
		Heptachlor Epoxide	2.2	U	ng/L	P345935	
		Methoxychlor	4.4	U	ng/L	P345935	
		Mirex	2.2	U	ng/L	P345935	
		Permethrin	11	U	ng/L	P345935	
		Trifluralin	1.1	U	ng/L	P345935	
		Alpha-Chlordane	1.1	U	ng/L	P345935	

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994767	EPA 8270D	Gamma-Chlordane	1.1	U	ng/L	P345935	
		Endrin Ketone	2.2	U	ng/L	P345935	
		Dicofol	33	U	ng/L	P345935	
		Chlordane**	4.5	I	ng/L	P345935	
		Toxaphene**	33	U	ng/L	P345935	
	EPA 8276						
1994768	EPA 8270D	Alachlor	0.25	U	ng/L	P345944	
		Ametryn	0.32	U	ng/L	P345944	
		Atrazine	5.4		ng/L	P345944	
		Atrazine Desethyl	2.3	IJ	ng/L	P345944	RPD
		Azinphos Methyl	2.2	U	ng/L	P345944	
		Bromacil	0.50	U	ng/L	P345944	
		Butylate	0.40	U	ng/L	P345944	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P345944	
		Chlorpyrifos Methyl	0.10	U	ng/L	P345944	
		Demeton	2.0	U	ng/L	P345944	
		Diazinon	0.12	U	ng/L	P345944	
		Disulfoton	0.50	U	ng/L	P345944	
		EPTC	1.2	U	ng/L	P345944	
		Ethion	0.15	U	ng/L	P345944	
		Ethoprop	0.10	U	ng/L	P345944	
		Fenamiphos	0.25	U	ng/L	P345944	
		Fipronil	0.25	U	ng/L	P345944	
		Fipronil Sulfide	0.15	U	ng/L	P345944	
		Fipronil Sulfone	0.15	UJ	ng/L	P345944	RPD
		Hexazinone	0.50	U	ng/L	P345944	
		Malathion	0.35	U	ng/L	P345944	
		Metribuzin	0.20	UJ	ng/L	P345944	MS
		Mevinphos	0.50	U	ng/L	P345944	
		Molinate	0.30	U	ng/L	P345944	
		Norflurazon	0.50	UJ	ng/L	P345944	MS, RPD
		Pendimethalin	1.0	U	ng/L	P345944	
		Phorate	0.25	U	ng/L	P345944	
		Prometon	0.90	U	ng/L	P345944	
		Prometryn	0.20	U	ng/L	P345944	
		Simazine	0.50	U	ng/L	P345944	
		Terbufos	0.10	U	ng/L	P345944	
		Terbuthylazine	0.42	U	ng/L	P345944	
		Fonofos	0.20	U	ng/L	P345944	
		Metalaxyl	0.25	U	ng/L	P345944	
		Metolachlor	0.35	I	ng/L	P345944	
		Acetochlor	0.25	U	ng/L	P345944	
		Cyanazine	0.50	UJ	ng/L	P345944	RPD
		Parathion Ethyl	0.25	U	ng/L	P345944	
		Parathion Methyl	0.25	U	ng/L	P345944	

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: EPA 8270D: 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: P345830

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345876

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: P345876

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: P346220

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346224

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346259

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: P346214

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345900

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: P345893

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345825

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

Reference Method: EPA 8270D
Batch ID: P345935

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P345944

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
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: P345935

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

Reference Method: EPA 8321B
Batch ID: P345505

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P345505

Component	Result	Code	Units
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	4.0E-04	U	ug/L
Hydrocodone	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: P345837

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Endothall	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P345847

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P346083

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

Reference Method: SM 2540 C-97
Batch ID: P346318

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P346364

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P346087

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P346312

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: P345876

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.3		P	85 - 115
Iron	102		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Zinc	94.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345876

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	100		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	96.6		P	85 - 115
Copper	95.2		P	85 - 115
Lead	94.8		P	85 - 115
Nickel	97.9		P	85 - 115
Silver	98.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346220

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346224

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P346259

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P346214

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: P345900

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345893

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P345825

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

Reference Method: EPA 8270D
 Batch ID: P345935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	41.6	36.3	P/P	24 - 89.0
Alpha-BHC	85.5	86.0	P/P	58 - 117
Alpha-Chlordane	84.9	78.0	P/P	56 - 115
Beta-BHC	94.9	108	P/P	55 - 137
Carbophenothion	93.7	97.7	P/P	37 - 145
Chlorothalonil	99.6	97.0	P/P	26 - 163
Cypermethrin	70.0	62.0	P/P	42 - 156
DDD-p,p'	117	114	P/P	59 - 129
DDE-p,p'	86.3	67.5	P/P	52 - 117
DDT-p,p'	78.5	66.7	P/P	48 - 128
Delta-BHC	107	136	P/P	59 - 158
Dicofol	79.3	73.6	P/P	19 - 124
Dieldrin	86.9	79.7	P/P	57 - 126
Endosulfan I	94.0	94.0	P/P	59 - 133
Endosulfan II	84.2	98.9	P/P	58 - 148
Endosulfan Sulfate	84.0	85.0	P/P	56 - 135
Endrin	93.1	90.3	P/P	50 - 140
Endrin Aldehyde	94.0	96.7	P/P	47 - 141
Endrin Ketone	86.3	86.2	P/P	63 - 123
Gamma-BHC	96.8	102	P/P	59 - 132
Gamma-Chlordane	85.8	78.9	P/P	55 - 112
Heptachlor	70.9	66.5	P/P	45 - 102

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P345935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Heptachlor Epoxide	90.9	87.8	P/P	61 - 116
Methoxychlor	91.4	84.2	P/P	60 - 133
Mirex	64.6	53.6	P/P	40 - 98.0
Permethrin	74.1	66.2	P/P	45 - 131
Trifluralin	73.3	67.7	P/P	38 - 179

Reference Method: EPA 8270D

Batch ID: P345944

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	91.3	87.7	P/P	74 - 119
Alachlor	92.4	88.6	P/P	75 - 118
Ametryn	82.2	90.9	P/P	59 - 137
Atrazine	102	99.2	P/P	73 - 120
Atrazine Desethyl	97.2	94.3	P/P	19 - 129
Azinphos Methyl	115	115	P/P	65 - 181
Bromacil	90.0	87.3	P/P	43 - 123
Butylate	51.7	52.8	P/P	28 - 85.0
Chlorpyrifos Ethyl	98.2	90.8	P/P	55 - 112
Chlorpyrifos Methyl	98.6	97.6	P/P	35 - 124
Cyanazine	95.7	110	P/P	26 - 262
Demeton	78.3	82.0	P/P	43 - 122
Diazinon	101	100	P/P	72 - 120
Disulfoton	90.1	95.1	P/P	45 - 137
EPTC	50.1	51.6	P/P	28 - 95.0
Ethion	91.1	71.1	P/P	63 - 127
Ethoprop	90.1	90.7	P/P	63 - 109
Fenamiphos	101	101	P/P	66 - 136
Fipronil	86.8	85.5	P/P	63 - 126
Fipronil Sulfide	83.8	83.1	P/P	59 - 123
Fipronil Sulfone	78.3	73.3	P/P	56 - 122
Fonofos	95.3	97.4	P/P	64 - 114
Hexazinone	98.3	91.7	P/P	49 - 144
Malathion	99.4	94.8	P/P	68 - 131
Metaxyl	90.9	87.2	P/P	57 - 126
Metolachlor	93.5	90.5	P/P	75 - 118
Metribuzin	166	163	P/P	46 - 169
Mevinphos	71.0	72.0	P/P	34 - 126
Molinate	59.9	61.7	P/P	37 - 101
Norflurazon	84.6	78.5	P/P	63 - 127
Parathion Ethyl	95.4	92.3	P/P	78 - 109
Parathion Methyl	98.1	97.2	P/P	74 - 123
Pendimethalin	118	115	P/P	51 - 130
Phorate	85.1	92.6	P/P	53 - 116
Prometon	89.2	83.3	P/P	66 - 124
Prometryn	94.4	91.7	P/P	66 - 124
Simazine	107	98.6	P/P	62 - 134
Terbufos	94.7	100	P/P	59 - 115
Terbuthylazine	96.2	98.4	P/P	76 - 113

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8276

Batch ID: P345935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	84.3	83.8	P/P	47 - 125
Toxaphene	76.7	73.6	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P345505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	65.0		P	40 - 150
3-Hydroxycarbofuran	104		P	40 - 150
Acetaminophen	102		P	30 - 150
Aldicarb	79.8		P	30 - 150
Aldicarb Sulfone	105		P	40 - 150
Aldicarb Sulfoxide	94.8		P	40 - 150
Bentazon	81.7		P	30 - 150
Carbamazepine	87.4		P	40 - 150
Carbaryl	59.7		P	40 - 150
Carbofuran	84.1		P	40 - 150
Diuron	68.7		P	40 - 150
Fenuron	102		P	40 - 150
Fluridone	83.6		P	40 - 150
Hydrocodone	99.5		P	40 - 150
Imazapyr	88.5		P	40 - 150
Imidacloprid	93.1		P	40 - 160
Linuron	72.9		P	40 - 150
MCPP	88.5		P	40 - 150
Methiocarb	63.3		P	40 - 150
Methomyl	93.4		P	40 - 150
Oxamyl	102		P	40 - 150
Primidone	90.3		P	40 - 150
Propoxur	80.8		P	40 - 150
Pyraclostrobin	82.1		P	40 - 150
Triclopyr	85.3		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P345837

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	101		P	40 - 140
Endothall	107		P	40 - 140
Glufosinate	112		P	40 - 140
Glyphosate	98.3		P	40 - 140
Sucralose	97.3		P	40 - 150

Reference Method: SM 2320 B-97

Batch ID: P346083

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 107

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P346087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.0		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P346312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994756	Calcium	99.0		P	80 - 120
1994756	Iron	101	102	P/P	80 - 120
1994756	Magnesium	101	104	P/P	80 - 120
1994756	Potassium	103	105	P/P	80 - 120
1994756	Sodium	103		P	80 - 120
1994756	Zinc	97.7	99.2	P/P	80 - 120
1994870	Calcium	102		P	80 - 120
1994870	Iron	103		P	80 - 120
1994870	Magnesium	105		P	80 - 120
1994870	Potassium	104		P	80 - 120
1994870	Sodium	103		P	80 - 120
1994870	Zinc	97.2		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994756	Arsenic	100	102	P/P	80 - 120
1994756	Cadmium	96.2	101	P/P	80 - 120
1994756	Chromium	92.9	95.7	P/P	80 - 120
1994756	Copper	94.3	96.8	P/P	80 - 120
1994756	Lead	94.3	95.9	P/P	80 - 120
1994756	Nickel	97.2	99.8	P/P	80 - 120
1994756	Silver	96.9	100	P/P	80 - 120
1994870	Arsenic	103		P	80 - 120
1994870	Cadmium	97.9		P	80 - 120
1994870	Chromium	94.6		P	80 - 120
1994870	Copper	95.1		P	80 - 120
1994870	Lead	95.2		P	80 - 120
1994870	Nickel	98.2		P	80 - 120
1994870	Silver	97.8		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994739	Chloride	95.2		P	90 - 110
1994825	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346224

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994739	Sulfate	97.4		P	90 - 110
1994825	Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994734	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346214

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994746	Kjeldahl Nitrogen	99.9	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345900

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994734	NO2NO3-N	99.0	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994772	Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994741	O-Phosphate-P	94.8	95.8	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P345935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1995686	Aldrin	58.5	58.0	P/P	26 - 96.0
1995686	Alpha-BHC	90.1	91.9	P/P	51 - 123
1995686	Alpha-Chlordane	84.7	86.0	P/P	45 - 120
1995686	Beta-BHC	100	110	P/P	43 - 146
1995686	Carbophenothion	84.3	90.9	P/P	26 - 179
1995686	Chlorothalonil	96.6	82.8	P/P	10 - 215
1995686	Cypermethrin	73.3	83.5	P/P	35 - 169
1995686	DDD-p,p'	80.7	87.2	P/P	49 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P345935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1995686	DDE-p,p'	84.8	87.5	P/P	39 - 127
1995686	DDT-p,p'	70.4	79.1	P/P	49 - 120
1995686	Delta-BHC	125	132	P/P	49 - 187
1995686	Dicofol	75.4	79.1	P/P	10 - 129
1995686	Dieldrin	84.6	86.5	P/P	46 - 132
1995686	Endosulfan I	91.7	89.8	P/P	57 - 130
1995686	Endosulfan II	77.6	80.2	P/P	52 - 148
1995686	Endosulfan Sulfate	74.8	77.0	P/P	55 - 129
1995686	Endrin	88.6	88.9	P/P	45 - 133
1995686	Endrin Aldehyde	74.0	71.9	P/P	26 - 140
1995686	Endrin Ketone	88.3	90.4	P/P	60 - 125
1995686	Gamma-BHC	108	113	P/P	50 - 145
1995686	Gamma-Chlordane	85.9	87.8	P/P	44 - 118
1995686	Heptachlor	72.5	65.5	P/P	35 - 106
1995686	Heptachlor Epoxide	87.2	86.2	P/P	52 - 123
1995686	Methoxychlor	84.7	88.8	P/P	54 - 132
1995686	Mirex	64.4	73.1	P/P	36 - 107
1995686	Permethrin	76.7	86.0	P/P	47 - 135
1995686	Trifluralin	70.0	77.6	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P345944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994768	Acetochlor	92.3	87.3	P/P	67 - 125
1994768	Alachlor	85.3	82.7	P/P	69 - 123
1994768	Ametryn	81.0	90.5	P/P	52 - 151
1994768	Atrazine	104	100	P/P	71 - 125
1994768	Atrazine Desethyl	67.5	128	P/P	10 - 129
1994768	Azinphos Methyl	96.1	99.4	P/P	48 - 200
1994768	Bromacil	59.5	75.7	P/P	46 - 130
1994768	Butylate	34.4	35.7	P/P	10 - 85.0
1994768	Chlorpyrifos Ethyl	85.5	77.3	P/P	54 - 115
1994768	Chlorpyrifos Methyl	86.3	88.5	P/P	44 - 117
1994768	Cyanazine	121	224	P/P	10 - 262
1994768	Demeton	66.5	83.6	P/P	24 - 145
1994768	Diazinon	99.8	98.6	P/P	66 - 129
1994768	Disulfoton	78.8	92.8	P/P	45 - 139
1994768	EPTC	30.8	33.3	P/P	10 - 86.0
1994768	Ethion	88.1	77.1	P/P	59 - 133
1994768	Ethoprop	79.3	91.5	P/P	54 - 116
1994768	Fenamiphos	80.5	96.9	P/P	55 - 140
1994768	Fipronil	50.4	65.7	P/P	37 - 142
1994768	Fipronil Sulfide	48.8	60.3	P/P	37 - 130
1994768	Fipronil Sulfone	24.3	45.1	P/P	18 - 143
1994768	Fonofos	87.3	97.8	P/P	55 - 118
1994768	Hexazinone	86.5	86.8	P/P	62 - 140
1994768	Malathion	88.4	85.3	P/P	64 - 132
1994768	Metalaxyl	83.4	81.7	P/P	55 - 129
1994768	Metolachlor	87.1	77.2	P/P	56 - 137
1994768	Metribuzin	220	252	F/F	16 - 218
1994768	Mevinphos	69.7	84.8	P/P	34 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
 Batch ID: P345944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994768	Molinate	47.9	55.1	P/P	16 - 99.0
1994768	Norflurazon	40.6	56.3	F/P	43 - 135
1994768	Parathion Ethyl	89.2	87.4	P/P	71 - 112
1994768	Parathion Methyl	94.3	96.2	P/P	65 - 127
1994768	Pendimethalin	114	108	P/P	35 - 159
1994768	Phorate	69.3	92.3	P/P	41 - 129
1994768	Prometon	101	87.6	P/P	56 - 140
1994768	Prometryn	87.9	87.2	P/P	65 - 130
1994768	Simazine	102	102	P/P	54 - 148
1994768	Terbufos	88.1	100	P/P	53 - 126
1994768	Terbutylazine	96.5	94.1	P/P	73 - 114

Reference Method: EPA 8276
 Batch ID: P345935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1995795	Chlordane	60.5	50.3	P/P	41 - 134
1995795	Toxaphene	66.6	64.2	P/P	39 - 158

Reference Method: EPA 8321B
 Batch ID: P345505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994049	3-Hydroxycarbofuran	62.3	60.1	P/P	40 - 150
1994049	Aldicarb	33.4	31.6	P/P	30 - 150
1994049	Aldicarb Sulfone	67.2	68.3	P/P	40 - 150
1994049	Aldicarb Sulfoxide	55.4	60.9	P/P	40 - 150
1994049	Carbaryl	41.9	38.4	P/F	40 - 150
1994049	Carbofuran	39.6	47.3	F/P	40 - 150
1994049	Methiocarb	52.3	51.1	P/P	40 - 150
1994049	Methomyl	48.2	51.4	P/P	40 - 150
1994049	Oxamyl	58.7	61.5	P/P	40 - 150
1994049	Propoxur	33.1	36.3	F/F	40 - 150
1994050	2,4-D	122	149	P/P	40 - 150
1994050	Acetaminophen	87.5	87.6	P/P	30 - 150
1994050	Bentazon	49.3	45.1	P/P	30 - 150
1994050	Carbamazepine	51.5	58.3	P/P	40 - 150
1994050	Diuron	57.4	55.0	P/P	40 - 150
1994050	Fenuron	53.2	52.8	P/P	40 - 150
1994050	Fluridone	67.4	66.9	P/P	40 - 150
1994050	Hydrocodone	76.2	74.3	P/P	40 - 150
1994050	Imazapyr	69.7	95.3	P/P	40 - 150
1994050	Imidacloprid	122	118	P/P	40 - 160
1994050	Linuron	60.8	65.4	P/P	40 - 150
1994050	MCP	134	130	P/P	40 - 150
1994050	Primidone	69.0	65.5	P/P	40 - 150
1994050	Pyraclostrobin	73.3	89.4	P/P	40 - 150
1994050	Triclopyr	187	171	F/F	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P345837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994753	AMPA	24.7	23.5	F/F	40 - 140
1994753	Endothall	86.0	79.7	P/P	40 - 140
1994753	Glufosinate	14.6	15.7	F/F	40 - 140
1994753	Glyphosate	15.0	9.06	F/F	40 - 140
1994753	Sucralose	121	108	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P346087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994835	Fluoride	101	101	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P346312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994734	Organic Carbon	94.2	92.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994665	Turbidity	2.14	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994756	Calcium	1.22	Spike	P	0 - 20
1994756	Iron	1.13	Spike	P	0 - 20
1994756	Magnesium	1.91	Spike	P	0 - 20
1994756	Potassium	1.12	Spike	P	0 - 20
1994756	Sodium	1.23	Spike	P	0 - 20
1994756	Zinc	1.54	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994756	Arsenic	2.17	Spike	P	0 - 20
1994756	Cadmium	4.42	Spike	P	0 - 20
1994756	Chromium	3.00	Spike	P	0 - 20
1994756	Copper	2.55	Spike	P	0 - 20
1994756	Lead	1.68	Spike	P	0 - 20
1994756	Nickel	2.60	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994756	Silver	3.16	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346220

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994739	Chloride	0.431	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994734	Ammonia-N	1.17	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994746	Kjeldahl Nitrogen	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345900

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994734	NO2NO3-N	1.87	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994772	Total-P	0.440	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994741	O-Phosphate-P	1.05	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P345935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1995686	Aldrin	0.794	Spike	P	0 - 30
1995686	Alpha-BHC	1.95	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P345935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1995686	Alpha-Chlordane	1.53	Spike	P	0 - 30
1995686	Beta-BHC	9.09	Spike	P	0 - 30
1995686	Carbophenothion	7.57	Spike	P	0 - 30
1995686	Chlorothalonil	15.4	Spike	P	0 - 30
1995686	Cypermethrin	13.1	Spike	P	0 - 30
1995686	DDD-p,p'	7.83	Spike	P	0 - 30
1995686	DDE-p,p'	3.14	Spike	P	0 - 30
1995686	DDT-p,p'	11.6	Spike	P	0 - 30
1995686	Delta-BHC	5.92	Spike	P	0 - 30
1995686	Dicofol	4.81	Spike	P	0 - 30
1995686	Dieldrin	2.22	Spike	P	0 - 30
1995686	Endosulfan I	2.10	Spike	P	0 - 30
1995686	Endosulfan II	3.37	Spike	P	0 - 30
1995686	Endosulfan Sulfate	2.94	Spike	P	0 - 30
1995686	Endrin	0.303	Spike	P	0 - 30
1995686	Endrin Aldehyde	2.92	Spike	P	0 - 30
1995686	Endrin Ketone	2.44	Spike	P	0 - 30
1995686	Gamma-BHC	4.42	Spike	P	0 - 30
1995686	Gamma-Chlordane	2.25	Spike	P	0 - 30
1995686	Heptachlor	10.1	Spike	P	0 - 30
1995686	Heptachlor Epoxide	1.24	Spike	P	0 - 30
1995686	Methoxychlor	4.64	Spike	P	0 - 30
1995686	Mirex	12.7	Spike	P	0 - 30
1995686	Permethrin	11.4	Spike	P	0 - 30
1995686	Trifluralin	10.3	Spike	P	0 - 30
LFB	Aldrin	13.6	LCS	P	0 - 30
LFB	Alpha-BHC	0.525	LCS	P	0 - 30
LFB	Alpha-Chlordane	8.45	LCS	P	0 - 30
LFB	Beta-BHC	12.5	LCS	P	0 - 30
LFB	Carbophenothion	4.15	LCS	P	0 - 30
LFB	Chlorothalonil	2.65	LCS	P	0 - 30
LFB	Cypermethrin	12.1	LCS	P	0 - 30
LFB	DDD-p,p'	2.72	LCS	P	0 - 30
LFB	DDE-p,p'	24.4	LCS	P	0 - 30
LFB	DDT-p,p'	16.3	LCS	P	0 - 30
LFB	Delta-BHC	23.7	LCS	P	0 - 30
LFB	Dicofol	7.42	LCS	P	0 - 30
LFB	Dieldrin	8.65	LCS	P	0 - 30
LFB	Endosulfan I	0.0479	LCS	P	0 - 30
LFB	Endosulfan II	16.2	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.16	LCS	P	0 - 30
LFB	Endrin	3.01	LCS	P	0 - 30
LFB	Endrin Aldehyde	2.86	LCS	P	0 - 30
LFB	Endrin Ketone	0.116	LCS	P	0 - 30
LFB	Gamma-BHC	4.82	LCS	P	0 - 30
LFB	Gamma-Chlordane	8.37	LCS	P	0 - 30
LFB	Heptachlor	6.37	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.42	LCS	P	0 - 30
LFB	Methoxychlor	8.25	LCS	P	0 - 30
LFB	Mirex	18.6	LCS	P	0 - 30
LFB	Permethrin	11.3	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P345935

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Trifluralin	7.96	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P345944

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994768	Acetochlor	5.56	Spike	P	0 - 30
1994768	Alachlor	3.16	Spike	P	0 - 30
1994768	Ametryn	11.1	Spike	P	0 - 30
1994768	Atrazine	1.48	Spike	P	0 - 30
1994768	Atrazine Desethyl	53.8	Spike	F	0 - 30
1994768	Azinphos Methyl	3.37	Spike	P	0 - 30
1994768	Bromacil	24.0	Spike	P	0 - 30
1994768	Butylate	3.87	Spike	P	0 - 30
1994768	Chlorpyrifos Ethyl	10.0	Spike	P	0 - 30
1994768	Chlorpyrifos Methyl	2.40	Spike	P	0 - 30
1994768	Cyanazine	59.5	Spike	F	0 - 30
1994768	Demeton	22.8	Spike	P	0 - 30
1994768	Diazinon	1.12	Spike	P	0 - 30
1994768	Disulfoton	16.2	Spike	P	0 - 30
1994768	EPTC	7.64	Spike	P	0 - 30
1994768	Ethion	13.3	Spike	P	0 - 30
1994768	Ethoprop	14.4	Spike	P	0 - 30
1994768	Fenamiphos	18.5	Spike	P	0 - 30
1994768	Fipronil	26.5	Spike	P	0 - 30
1994768	Fipronil Sulfide	21.0	Spike	P	0 - 30
1994768	Fipronil Sulfone	59.8	Spike	F	0 - 30
1994768	Fonofos	11.3	Spike	P	0 - 30
1994768	Hexazinone	0.334	Spike	P	0 - 30
1994768	Malathion	3.51	Spike	P	0 - 30
1994768	Metalaxyl	2.09	Spike	P	0 - 30
1994768	Metolachlor	11.6	Spike	P	0 - 30
1994768	Metribuzin	13.5	Spike	P	0 - 30
1994768	Mevinphos	19.5	Spike	P	0 - 30
1994768	Molinate	13.9	Spike	P	0 - 30
1994768	Norflurazon	32.4	Spike	F	0 - 30
1994768	Parathion Ethyl	2.01	Spike	P	0 - 30
1994768	Parathion Methyl	1.99	Spike	P	0 - 30
1994768	Pendimethalin	4.96	Spike	P	0 - 30
1994768	Phorate	28.5	Spike	P	0 - 30
1994768	Prometon	14.2	Spike	P	0 - 30
1994768	Prometryn	0.747	Spike	P	0 - 30
1994768	Simazine	0.0820	Spike	P	0 - 30
1994768	Terbufos	13.1	Spike	P	0 - 30
1994768	Terbutylazine	2.49	Spike	P	0 - 30
LFB	Acetochlor	3.97	LCS	P	0 - 30
LFB	Alachlor	4.22	LCS	P	0 - 30
LFB	Ametryn	9.97	LCS	P	0 - 30
LFB	Atrazine	2.81	LCS	P	0 - 30
LFB	Atrazine Desethyl	3.10	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P345944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Azinphos Methyl	0.242	LCS	P	0 - 30
LFB	Bromacil	3.06	LCS	P	0 - 30
LFB	Butylate	2.24	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	7.83	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.999	LCS	P	0 - 30
LFB	Cyanazine	14.0	LCS	P	0 - 30
LFB	Demeton	4.68	LCS	P	0 - 30
LFB	Diazinon	0.549	LCS	P	0 - 30
LFB	Disulfoton	5.42	LCS	P	0 - 30
LFB	EPTC	2.79	LCS	P	0 - 30
LFB	Ethion	24.7	LCS	P	0 - 30
LFB	Ethoprop	0.657	LCS	P	0 - 30
LFB	Fenamiphos	0.410	LCS	P	0 - 30
LFB	Fipronil	1.53	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.902	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.55	LCS	P	0 - 30
LFB	Fonofos	2.16	LCS	P	0 - 30
LFB	Hexazinone	7.03	LCS	P	0 - 30
LFB	Malathion	4.76	LCS	P	0 - 30
LFB	Metalaxyl	4.19	LCS	P	0 - 30
LFB	Metolachlor	3.26	LCS	P	0 - 30
LFB	Metribuzin	1.90	LCS	P	0 - 30
LFB	Mevinphos	1.32	LCS	P	0 - 30
LFB	Molinate	2.96	LCS	P	0 - 30
LFB	Norflurazon	7.48	LCS	P	0 - 30
LFB	Parathion Ethyl	3.28	LCS	P	0 - 30
LFB	Parathion Methyl	0.874	LCS	P	0 - 30
LFB	Pendimethalin	2.40	LCS	P	0 - 30
LFB	Phorate	8.47	LCS	P	0 - 30
LFB	Prometon	6.88	LCS	P	0 - 30
LFB	Prometryn	2.90	LCS	P	0 - 30
LFB	Simazine	8.10	LCS	P	0 - 30
LFB	Terbufos	5.60	LCS	P	0 - 30
LFB	Terbuthylazine	2.28	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P345935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1995795	Chlordane	9.93	Spike	P	0 - 30
1995795	Toxaphene	3.62	Spike	P	0 - 30
LFB	Chlordane	0.600	LCS	P	0 - 30
LFB	Toxaphene	4.08	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P345505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994049	3-Hydroxycarbofuran	3.70	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P345505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994049	Aldicarb	5.55	Spike	P	0 - 30
1994049	Aldicarb Sulfone	1.64	Spike	P	0 - 30
1994049	Aldicarb Sulfoxide	9.45	Spike	P	0 - 30
1994049	Carbaryl	8.72	Spike	P	0 - 30
1994049	Carbofuran	17.8	Spike	P	0 - 30
1994049	Methiocarb	2.26	Spike	P	0 - 30
1994049	Methomyl	6.37	Spike	P	0 - 30
1994049	Oxamyl	4.56	Spike	P	0 - 30
1994049	Propoxur	9.03	Spike	P	0 - 30
1994050	2,4-D	12.1	Spike	P	0 - 30
1994050	Acetaminophen	0.153	Spike	P	0 - 30
1994050	Bentazon	8.90	Spike	P	0 - 30
1994050	Carbamazepine	12.4	Spike	P	0 - 30
1994050	Diuron	4.31	Spike	P	0 - 30
1994050	Fenuron	0.887	Spike	P	0 - 30
1994050	Fluridone	0.658	Spike	P	0 - 30
1994050	Hydrocodone	2.55	Spike	P	0 - 30
1994050	Imazapyr	5.75	Spike	P	0 - 30
1994050	Imidacloprid	3.32	Spike	P	0 - 30
1994050	Linuron	7.36	Spike	P	0 - 30
1994050	MCCP	3.40	Spike	P	0 - 30
1994050	Primidone	5.24	Spike	P	0 - 30
1994050	Pyraclostrobin	19.7	Spike	P	0 - 30
1994050	Triclopyr	8.55	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P345837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994753	AMPA	3.23	Spike	P	0 - 30
1994753	Endothall	7.56	Spike	P	0 - 30
1994753	Glufosinate	7.16	Spike	P	0 - 30
1994753	Glyphosate	22.5	Spike	P	0 - 30
1994753	Sucralose	9.03	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P345847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994742	Color (true)	0.222	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P346083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994835	Total Alkalinity	0.226	Sample	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P346318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994708	TDS	6.58	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P346087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994835	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P346312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994734	Organic Carbon	1.18	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: 1994765
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	39.7	P	30 - 160

Lab Sample ID: 1994766
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	99.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	83.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.8	P	30 - 160
EPA 8321B	Diuron-d6	65.2	P	30 - 160
EPA 8321B	Endothall-d6	104	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	40 - 160
EPA 8321B	Primidone-d5	80.6	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	40 - 160

Lab Sample ID: 1994767
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	78.1	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	57.9	P	34 - 101
EPA 8276	Decachlorobiphenyl	63.9	P	31 - 108
EPA 8276	PCNB	92.5	P	62 - 142

Quality Assurance Report Surrogates

Lab Sample ID: 1994768
 Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	95.4	P	71 - 126
EPA 8270D	Terbufos-d10	97.3	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Run ID: A84113
 Included Lab Sample IDs: 1994762

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

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A84114
 Included Lab Sample IDs: 1994760

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

Reference Method: SM 2120 B
 Run ID: A84124
 Included Lab Sample IDs: 1994760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A84142
 Included Lab Sample IDs: 1994761

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

Reference Method: SM 2320 B-97
 Run ID: A84181
 Included Lab Sample IDs: 1994760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
 Run ID: A84181
 Included Lab Sample IDs: 1994760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.7	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84186

Included Lab Sample IDs: 1994766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	110	112	P/P	60 - 150
Endothall	99.4	119	P/P	60 - 150
Glufosinate	114	118	P/P	60 - 150
Glyphosate	113	107	P/P	60 - 150
Sucralose	91.6	113	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84201

Included Lab Sample IDs: 1994761

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84216

Included Lab Sample IDs: 1994769

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.9	98.1	P/P	90 - 110
Iron	96.1	99.3	P/P	90 - 110
Magnesium	96.6	100	P/P	90 - 110
Potassium	99.3	102	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Zinc	95.7	97.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84230

Included Lab Sample IDs: 1994760

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	105	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84247

Included Lab Sample IDs: 1994769

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.0	98.9	P/P	90 - 110
Cadmium	97.1	97.4	P/P	90 - 110
Chromium	97.1	96.7	P/P	90 - 110
Copper	97.0	97.0	P/P	90 - 110
Lead	94.7	95.9	P/P	90 - 110
Nickel	96.5	96.9	P/P	90 - 110
Silver	97.5	97.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84279

Included Lab Sample IDs: 1994766

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

Reference Method: EPA 8321B

Run ID: A84279

Included Lab Sample IDs: 1994766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.6	85.6	P/P	50 - 150
3-Hydroxycarbofuran	129	133	P/P	50 - 150
Acetaminophen	123	120	P/P	60 - 150
Aldicarb	101	91.9	P/P	60 - 150
Aldicarb Sulfone	118	121	P/P	50 - 150
Aldicarb Sulfoxide	109	113	P/P	50 - 150
Bentazon	99.5	94.8	P/P	50 - 150
Carbamazepine	118	120	P/P	60 - 150
Carbaryl	130	116	P/P	60 - 150
Carbofuran	96.5	121	P/P	50 - 150
Diuron	119	132	P/P	60 - 150
Fenuron	116	112	P/P	60 - 150
Fluridone	123	123	P/P	60 - 160
Hydrocodone	114	119	P/P	60 - 150
Imazapyr	99.1	94.8	P/P	50 - 150
Imidacloprid	97.5	105	P/P	60 - 150
Linuron	117	118	P/P	60 - 150
MCPP	82.2	85.1	P/P	50 - 150
Methiocarb	108	97.1	P/P	50 - 150
Methomyl	108	107	P/P	50 - 150
Oxamyl	112	118	P/P	50 - 150
Primidone	111	102	P/P	60 - 150
Propoxur	94.2	109	P/P	50 - 150
Pyraclostrobin	105	116	P/P	60 - 150
Triclopyr	95.8	97.6	P/P	50 - 160

Reference Method: EPA 8270D

Run ID: A84284

Included Lab Sample IDs: 1994767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.6		P	80 - 120
Alpha-BHC	97.6		P	80 - 120
Alpha-Chlordane	99.9		P	80 - 120
Beta-BHC	102		P	80 - 120
Carbophenothion	118		P	80 - 120
Chlorothalonil	93.0		P	80 - 120
Cypermethrin	96.7		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	111		P	80 - 120
Delta-BHC	95.6		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	96.4		P	80 - 120
Endosulfan I	97.6		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	98.5		P	80 - 120
Endrin	96.6		P	80 - 120
Endrin Aldehyde	98.8		P	80 - 120
Endrin Ketone	97.6		P	80 - 120
Gamma-BHC	106		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84284

Included Lab Sample IDs: 1994767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Gamma-Chlordane	102		P	80 - 120
Heptachlor	97.2		P	80 - 120
Heptachlor Epoxide	99.6		P	80 - 120
Methoxychlor	107		P	80 - 120
Mirex	98.0		P	80 - 120
Permethrin	102		P	80 - 120
Trifluralin	99.0		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84301

Included Lab Sample IDs: 1994761

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

Reference Method: SM 5310 B-00

Run ID: A84324

Included Lab Sample IDs: 1994761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.7	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84332

Included Lab Sample IDs: 1994761

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	90.5	92.9	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A84366

Included Lab Sample IDs: 1994767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.8		P	80 - 120
Toxaphene	88.1		P	80 - 120

Reference Method: EPA 8270D

Run ID: A84379

Included Lab Sample IDs: 1994768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	93.7		P	80 - 120
Alachlor	95.5		P	80 - 120
Ametryn	96.1		P	80 - 120
Atrazine	94.8		P	80 - 120
Atrazine Desethyl	104		P	80 - 120
Azinphos Methyl	98.5		P	80 - 120
Bromacil	93.7		P	80 - 120
Butylate	94.5		P	80 - 120
Chlorpyrifos Ethyl	95.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A84379
 Included Lab Sample IDs: 1994768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorpyrifos Methyl	98.3		P	80 - 120
Cyanazine	94.9		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	93.9		P	80 - 120
Disulfoton	94.8		P	80 - 120
EPTC	98.3		P	80 - 120
Ethion	95.2		P	80 - 120
Ethoprop	97.3		P	80 - 120
Fenamiphos	95.7		P	80 - 120
Fipronil	95.7		P	80 - 120
Fipronil Sulfide	94.8		P	80 - 120
Fipronil Sulfone	96.1		P	80 - 120
Fonofos	97.0		P	80 - 120
Hexazinone	98.3		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	97.7		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	113		P	80 - 120
Mevinphos	96.7		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	94.4		P	80 - 120
Parathion Ethyl	92.3		P	80 - 120
Parathion Methyl	94.9		P	80 - 120
Pendimethalin	99.5		P	80 - 120
Phorate	97.0		P	80 - 120
Prometon	93.7		P	80 - 120
Prometryn	97.5		P	80 - 120
Simazine	92.4		P	80 - 120
Terbufos	95.7		P	80 - 120
Terbutylazine	96.2		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				2.14	
EPA 200.7 Rev. 4.4	Calcium	99.3	99.0	102		1.22
	Iron	102	101	102	103	1.13
	Magnesium	105	101	104	105	1.91
	Potassium	102	103	105	104	1.12
	Sodium	102	103	103		1.23
	Zinc	94.3	97.7	99.2	97.2	1.54
EPA 200.8 Rev. 5.4	Arsenic	100	100	102	103	2.17
	Cadmium	98.6	96.2	101	97.9	4.42
	Chromium	96.6	92.9	95.7	94.6	3.00

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision SMP	MS
EPA 200.8 Rev. 5.4	Copper	95.2		94.3	96.8	95.1		2.55
	Lead	94.8		94.3	95.9	95.2		1.68
	Nickel	97.9		97.2	99.8	98.2		2.60
	Silver	98.9		96.9	100	97.8		3.16
EPA 300.0 Rev. 2.1	Chloride	101		95.2	100		0.431	
	Sulfate	99.6		97.4	98.4			
EPA 350.1 Rev. 2.0	Ammonia-N	100		101	102			1.17
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		99.9	101			0.499
EPA 353.2 Rev. 2.0	NO2NO3-N	100		99.0	101			1.87
EPA 365.1 Rev. 2.0	Total-P	103		102	101			0.440
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.5		94.8	95.8			1.05
EPA 8270D	Acetochlor	91.3	87.7	92.3	87.3	3.97		5.56
	Alachlor	92.4	88.6	85.3	82.7	4.22		3.16
	Aldrin	41.6	36.3	58.5	58.0	13.6		0.794
	Alpha-BHC	85.5	86.0	91.9	90.1	0.525		1.95
	Alpha-Chlordane	84.9	78.0	86.0	84.7	8.45		1.53
	Ametryn	82.2	90.9	81.0	90.5	9.97		11.1
	Atrazine	102	99.2	104	100	2.81		1.48
	Atrazine Desethyl	97.2	94.3	67.5	128	3.10		53.8
	Azinphos Methyl	115	115	96.1	99.4	0.242		3.37
	Beta-BHC	94.9	108	110	100	12.5		9.09
	Bromacil	90.0	87.3	59.5	75.7	3.06		24.0
	Butylate	51.7	52.8	34.4	35.7	2.24		3.87
	Carbophenothion	93.7	97.7	90.9	84.3	4.15		7.57
	Chlorothalonil	99.6	97.0	82.8	96.6	2.65		15.4
	Chlorpyrifos Ethyl	98.2	90.8	85.5	77.3	7.83		10.0
	Chlorpyrifos Methyl	98.6	97.6	86.3	88.5	0.999		2.40
	Cyanazine	95.7	110	121	224	14.0		59.5
	Cypermethrin	70.0	62.0	83.5	73.3	12.1		13.1
	DDD-p,p'	117	114	87.2	80.7	2.72		7.83
	DDE-p,p'	86.3	67.5	84.8	87.5	24.4		3.14
	DDT-p,p'	78.5	66.7	70.4	79.1	16.3		11.6
	Delta-BHC	107	136	132	125	23.7		5.92
	Demeton	78.3	82.0	66.5	83.6	4.68		22.8
	Diazinon	101	100	99.8	98.6	0.549		1.12
	Dicofol	79.3	73.6	79.1	75.4	7.42		4.81
	Dieldrin	86.9	79.7	84.6	86.5	8.65		2.22
	Disulfoton	90.1	95.1	78.8	92.8	5.42		16.2
	Endosulfan I	94.0	94.0	91.7	89.8	0.0479		2.10
	Endosulfan II	84.2	98.9	77.6	80.2	16.2		3.37
	Endosulfan Sulfate	84.0	85.0	74.8	77.0	1.16		2.94
	Endrin	93.1	90.3	88.6	88.9	3.01		0.303
	Endrin Aldehyde	94.0	96.7	74.0	71.9	2.86		2.92
	Endrin Ketone	86.3	86.2	90.4	88.3	0.116		2.44
	EPTC	50.1	51.6	30.8	33.3	2.79		7.64
	Ethion	91.1	71.1	88.1	77.1	24.7		13.3
	Ethoprop	90.1	90.7	79.3	91.5	0.657		14.4
	Fenamiphos	101	101	80.5	96.9	0.410		18.5
	Fipronil	86.8	85.5	50.4	65.7	1.53		26.5
	Fipronil Sulfide	83.8	83.1	48.8	60.3	0.902		21.0
	Fipronil Sulfone	78.3	73.3	24.3	45.1	6.55		59.8
	Fonofos	95.3	97.4	87.3	97.8	2.16		11.3
	Gamma-BHC	96.8	102	113	108	4.82		4.42
	Gamma-Chlordane	85.8	78.9	87.8	85.9	8.37		2.25

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 8270D	Heptachlor	70.9	66.5	72.5	65.5	6.37		10.1
	Heptachlor Epoxide	90.9	87.8	86.2	87.2	3.42		1.24
	Hexazinone	98.3	91.7	86.5	86.8	7.03		0.334
	Malathion	99.4	94.8	88.4	85.3	4.76		3.51
	Metalaxyl	90.9	87.2	83.4	81.7	4.19		2.09
	Methoxychlor	91.4	84.2	88.8	84.7	8.25		4.64
	Metolachlor	93.5	90.5	87.1	77.2	3.26		11.6
	Metribuzin	166	163	220	252	1.90		13.5
	Mevinphos	71.0	72.0	69.7	84.8	1.32		19.5
	Mirex	64.6	53.6	73.1	64.4	18.6		12.7
	Molinate	59.9	61.7	47.9	55.1	2.96		13.9
	Norflurazon	84.6	78.5	40.6	56.3	7.48		32.4
	Parathion Ethyl	95.4	92.3	89.2	87.4	3.28		2.01
	Parathion Methyl	98.1	97.2	94.3	96.2	0.874		1.99
	Pendimethalin	118	115	114	108	2.40		4.96
	Permethrin	74.1	66.2	86.0	76.7	11.3		11.4
	Phorate	85.1	92.6	69.3	92.3	8.47		28.5
	Prometon	89.2	83.3	101	87.6	6.88		14.2
	Prometryn	94.4	91.7	87.9	87.2	2.90		0.747
	Simazine	107	98.6	102	102	8.10		0.0820
	Terbufos	94.7	100	88.1	100	5.60		13.1
	Terbutylazine	96.2	98.4	96.5	94.1	2.28		2.49
	Trifluralin	73.3	67.7	77.6	70.0	7.96		10.3
EPA 8276	Chlordane	84.3	83.8	60.5	50.3	0.600		9.93
	Toxaphene	76.7	73.6	66.6	64.2	4.08		3.62
EPA 8321B	2,4-D	65.0		122	149			12.1
	3-Hydroxycarbofuran	104		62.3	60.1			3.70
	Acetaminophen	102		87.5	87.6			0.153
	Aldicarb	79.8		33.4	31.6			5.55
	Aldicarb Sulfone	105		67.2	68.3			1.64
	Aldicarb Sulfoxide	94.8		55.4	60.9			9.45
	AMPA	101		24.7	23.5			3.23
	Bentazon	81.7		49.3	45.1			8.90
	Carbamazepine	87.4		51.5	58.3			12.4
	Carbaryl	59.7		41.9	38.4			8.72
	Carbofuran	84.1		39.6	47.3			17.8
	Diuron	68.7		57.4	55.0			4.31
	Endothall	107		86.0	79.7			7.56
	Fenuron	102		53.2	52.8			0.887
	Fluridone	83.6		67.4	66.9			0.658
	Glufosinate	112		14.6	15.7			7.16
	Glyphosate	98.3		15.0	9.06			22.5
	Hydrocodone	99.5		76.2	74.3			2.55
	Imazapyr	88.5		69.7	95.3			5.75
	Imidacloprid	93.1		122	118			3.32
	Linuron	72.9		60.8	65.4			7.36
	MCPP	88.5		134	130			3.40
	Methiocarb	63.3		52.3	51.1			2.26
	Methomyl	93.4		48.2	51.4			6.37
	Oxamyl	102		58.7	61.5			4.56
	Primidone	90.3		69.0	65.5			5.24
	Propoxur	80.8		33.1	36.3			9.03
	Pyraclostrobin	82.1		73.3	89.4			19.7
	Sucralose	97.3		121	108			9.03

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 8321B	Triclopyr	85.3	187 171			8.55
SM 2120 B	Color (true)				0.222	
SM 2320 B-97	Total Alkalinity	104			0.226	
SM 2540 C-97	TDS				6.58	
SM 4500 F-C-97	Fluoride	94.0	101 101			0.0
SM 5310 B-00	Organic Carbon	95.4	94.2 92.2			1.18

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1994760
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1994769
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1994769
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1994760
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1994760
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1994761
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1994761
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1994761
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1994761
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1994762
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1994767
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1994768
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1994767
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1994765
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1994766
SM 2120 B / E31780	True Color measured at 450 nm	1994760
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1994760
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1994760
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1994760
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1994760
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1994761

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	05/23/2018			05/23/2018 17:13	William L. Brown IV	1994760
EPA 200.7 Rev. 4.4	05/23/2018	05/24/2018 14:46	Allison Taylor	05/30/2018 05:34	Betina Topolski	1994769
EPA 200.8 Rev. 5.4	05/23/2018	05/24/2018 14:46	Allison Taylor	05/25/2018 22:52	Nadine Brooks	1994769
EPA 300.0 Rev. 2.1	05/23/2018			05/31/2018 21:04	Lipi Saha	1994760
EPA 350.1 Rev. 2.0	05/23/2018			06/01/2018 11:42	Ping Hua	1994761
EPA 351.2 Rev. 2.0	05/23/2018	05/31/2018 18:10	Adrian Shelby	06/04/2018 14:27	Joseph Suarez	1994761
EPA 353.2 Rev. 2.0	05/23/2018			05/24/2018 12:51	Lauren Bottorf	1994761
EPA 365.1 Rev. 2.0	05/23/2018	05/24/2018 13:10	Sima Feizi	05/29/2018 12:17	Lipi Saha	1994761
EPA 365.1 Rev. 2.0 dissolved	05/23/2018			05/23/2018 16:20	Megan Treadwell	1994762
EPA 8270D	05/23/2018	05/25/2018 08:46	Dinesh Mishra	05/31/2018 14:00	Vandana T. Nagar	1994768
	05/23/2018	05/29/2018 09:00	Fe-Val Siddell	05/31/2018 18:09	Dinesh Mishra	1994767
EPA 8276	05/23/2018	05/29/2018 09:00	Fe-Val Siddell	06/04/2018 21:30	John P. Burgos	1994767
EPA 8321B	05/23/2018	05/23/2018 14:00	Hoor Shaik	05/24/2018 01:34	Juyoung Kim	1994766
	05/23/2018	05/23/2018 14:00	Hoor Shaik	05/24/2018 09:39	Juyoung Kim	1994765
	05/23/2018	05/23/2018 14:00	Hoor Shaik	05/24/2018 18:18	Juyoung Kim	1994766
	05/23/2018	05/25/2018 14:00	Juyoung Kim	05/26/2018 00:13	Juyoung Kim	1994766
SM 2120 B	05/23/2018			05/23/2018 16:22	Tanya Welborn	1994760
SM 2320 B-97	05/23/2018			05/25/2018 18:43	Dale L. Simmons	1994760
SM 2540 C-97	05/23/2018			05/25/2018 16:24	Yijie Li	1994760
SM 2540 D-97	05/23/2018			05/25/2018 16:24	Yijie Li	1994760
SM 4500 F-C-97	05/23/2018			05/25/2018 18:43	Dale L. Simmons	1994760
SM 5310 B-00	05/23/2018			06/01/2018 22:46	Megan Treadwell	1994761