

Chemical Analysis Report

NE-DIST-2018-06-01-02

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

Event Description: **Gainesville**
Request ID: **RQ-2018-05-21-10**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 27-JUN-2018 16:59



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: LAKE ALICE CENTER

Collection Date/Time: 05/31/2018 14:00

Field ID: 20020052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996565	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P346282	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P346443	
		Sulfate	13		mg SO4/L	P346445	
	SM 2120 B	Color (true)	47	A	PCU	P346278	
	SM 2320 B-97	Total Alkalinity	59		mg CaCO3/L	P346613	
	SM 2540 C-97	TDS	101	A	mg/L	P346791	
	SM 2540 D-97	TSS	8	IA	mg/L	P346730	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P346617	
1996566	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P346692	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P346538	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P346322	
	EPA 365.1 Rev. 2.0	Total-P	0.49		mg P/L	P346387	
	SM 5310 B-00	Organic Carbon	7.3		mg C/L	P346675	
1996567	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.34		mg P/L	P346286	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE ALICE OUTLET @ GALE LEMERAND DR. Collection Date/Time: 05/31/2018 13:00

Field ID: G3NE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996562	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P346282	
	EPA 300.0 Rev. 2.1	Chloride	5.5	A	mg Cl/L	P346443	
		Sulfate	9.0	A	mg SO4/L	P346445	
	SM 2120 B	Color (true)	33		PCU	P346278	
	SM 2320 B-97	Total Alkalinity	57		mg CaCO3/L	P346613	
	SM 2540 C-97	TDS	90	A	mg/L	P346790	
	SM 2540 D-97	TSS	6	IA	mg/L	P346729	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P346617	
1996563	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P346692	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P346538	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.080		mg N/L	P346322	
	EPA 365.1 Rev. 2.0	Total-P	0.49		mg P/L	P346387	
	SM 5310 B-00	Organic Carbon	4.3		mg C/L	P346675	
1996564	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.37		mg P/L	P346286	
1996577	EPA 8321B	Aldicarb	0.020	U	ug/L	P346244	
		Aldicarb Sulfone	0.0020	U	ug/L	P346244	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P346244	MS
		Carbaryl	0.0020	U	ug/L	P346244	
		Carbofuran	0.0020	U	ug/L	P346244	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P346244	
		Methiocarb	0.0020	U	ug/L	P346244	
		Methomyl	0.0020	U	ug/L	P346244	
		Oxamyl	0.0020	U	ug/L	P346244	RPD
		Propoxur	0.0020	U	ug/L	P346244	
1996578		2,4-D	0.024		ug/L	P346244	
		Bentazon	8.0E-04	U	ug/L	P346244	
		MCP	0.0020	U	ug/L	P346244	
		Triclopyr**	0.0040	U	ug/L	P346244	
		Imidacloprid	0.027	J	ug/L	P346244	MS
		Diuron	0.073		ug/L	P346244	
		Pyraclostrobin**	0.0020	U	ug/L	P346244	
		Primidone**	0.0040	U	ug/L	P346244	
		Linuron	0.0040	U	ug/L	P346244	
		Acetaminophen**	0.017	I	ug/L	P346244	
		Fenuron	0.016	U	ug/L	P346244	
		Imazapyr**	0.036		ug/L	P346244	
		Carbamazepine**	9.6E-04	I	ug/L	P346244	
		Fluridone**	4.0E-04	U	ug/L	P346244	
		Hydrocodone**	8.0E-04	U	ug/L	P346244	
		Sucralose**	0.31		ug/L	P346245	
		Glyphosate**	0.69		ug/L	P346245	
		AMPA**	0.17	I	ug/L	P346245	
		Endothall**	0.10	U	ug/L	P346245	

Field ID: G3NE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996578	EPA 8321B	Glufosinate**	0.10	U	ug/L	P346245	
1996581	EPA 8270D	Aldrin	4.1	U	ng/L	P346349	
		Alpha-BHC	2.0	U	ng/L	P346349	
		Beta-BHC	4.1	U	ng/L	P346349	
		Delta-BHC	4.1	U	ng/L	P346349	RPD
		Gamma-BHC	4.1	U	ng/L	P346349	
		Carbophenothion	4.1	U	ng/L	P346349	
		Chlorothalonil	2.0	U	ng/L	P346349	
		Cypermethrin	20	U	ng/L	P346349	
		DDD-p,p'	3.0	U	ng/L	P346349	
		DDE-p,p'	3.0	U	ng/L	P346349	
		DDT-p,p'	3.0	U	ng/L	P346349	
		Dieldrin	4.1	U	ng/L	P346349	
		Endosulfan I	4.1	U	ng/L	P346349	
		Endosulfan II	4.1	U	ng/L	P346349	RPD
		Endosulfan Sulfate	2.0	U	ng/L	P346349	
		Endrin	2.0	U	ng/L	P346349	
		Endrin Aldehyde	2.0	U	ng/L	P346349	
		Heptachlor	1.5	U	ng/L	P346349	
		Heptachlor Epoxide	2.0	U	ng/L	P346349	
		Methoxychlor	4.1	U	ng/L	P346349	
		Mirex	2.0	U	ng/L	P346349	
		Permethrin	10	U	ng/L	P346349	
		Trifluralin	1.0	U	ng/L	P346349	
		Alpha-Chlordane	1.0	U	ng/L	P346349	
		Gamma-Chlordane	1.0	U	ng/L	P346349	
		Endrin Ketone	2.0	U	ng/L	P346349	
		Dicofol	30	U	ng/L	P346349	
	EPA 8276	Chlordane	4.2	I	ng/L	P346349	
		Toxaphene	30	U	ng/L	P346349	
1996582	EPA 8270D	Alachlor	0.28	U	ng/L	P346180	
		Ametryn	0.37	U	ng/L	P346180	
		Atrazine	4.1		ng/L	P346180	
		Atrazine Desethyl	5.7	IJ	ng/L	P346180	RPD
		Azinphos Methyl	2.6	U	ng/L	P346180	
		Bromacil	99		ng/L	P346180	
		Butylate	0.46	U	ng/L	P346180	RPD
		Chlorpyrifos Ethyl	0.28	U	ng/L	P346180	
		Chlorpyrifos Methyl	0.11	U	ng/L	P346180	
		Demeton	2.3	U	ng/L	P346180	
		Diazinon	0.14	U	ng/L	P346180	
		Disulfoton	0.57	U	ng/L	P346180	
		EPTC	1.4	U	ng/L	P346180	RPD
		Ethion	0.17	U	ng/L	P346180	RPD
		Ethoprop	0.11	U	ng/L	P346180	

Field ID: G3NE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996582	EPA 8270D	Fenamiphos	0.28	U	ng/L	P346180	
		Fipronil	5.3		ng/L	P346180	
		Fipronil Sulfide	2.3		ng/L	P346180	
		Fipronil Sulfone	4.0		ng/L	P346180	
		Hexazinone	0.57	U	ng/L	P346180	
		Malathion	0.40	U	ng/L	P346180	
		Metribuzin	0.23	UJ	ng/L	P346180	RPD
		Mevinphos	0.57	U	ng/L	P346180	
		Molinate	0.34	U	ng/L	P346180	
		Norflurazon	0.57	U	ng/L	P346180	
		Pendimethalin	1.1	U	ng/L	P346180	
		Phorate	0.28	U	ng/L	P346180	
		Prometon	1.0	U	ng/L	P346180	
		Prometryn	0.23	U	ng/L	P346180	
		Simazine	0.57	U	ng/L	P346180	
		Terbufos	0.11	U	ng/L	P346180	
		Terbutylazine	0.48	U	ng/L	P346180	
		Fonofos	0.23	U	ng/L	P346180	
		Metaxyl	0.28	U	ng/L	P346180	
		Metolachlor	0.66	I	ng/L	P346180	
		Acetochlor	0.28	U	ng/L	P346180	
		Cyanazine	0.57	UJ	ng/L	P346180	RPD
		Parathion Ethyl	0.28	U	ng/L	P346180	
		Parathion Methyl	0.28	U	ng/L	P346180	
1996583	EPA 200.7 Rev. 4.4	Calcium	23.3		mg/L	P346388	
		Iron	240		ug/L	P346388	
		Magnesium	2.95		mg/L	P346388	
		Potassium	1.3		mg/L	P346388	
		Sodium	4.2		mg/L	P346388	
		Zinc	7.6	I	ug/L	P346388	
	EPA 200.8 Rev. 5.4	Arsenic	0.84		ug/L	P346388	
		Cadmium	0.151		ug/L	P346388	
		Chromium	0.83	I	ug/L	P346388	
		Copper	4.01		ug/L	P346388	
		Lead	1.05		ug/L	P346388	
		Nickel	0.45	I	ug/L	P346388	
		Silver	0.019	I	ug/L	P346388	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Atrazine and Bromacil 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: P346282

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346388

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: P346388

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: P346443

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346445

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346692

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346538

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: P346322

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P346387

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346286

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

Reference Method: EPA 8270D
Batch ID: P346180

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P346180

Component	Result	Code	Units
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P346349

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	3.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8276
Batch ID: P346349

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

Reference Method: EPA 8321B
Batch ID: P346244

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P346244

Component	Result	Code	Units
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: P346245

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	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P346278

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P346613

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

Reference Method: SM 2540 C-97
Batch ID: P346790

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P346791

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P346729

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P346730

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P346617

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P346675

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: P346388

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	102		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	99.2		P	85 - 115
Sodium	103		P	85 - 115
Zinc	99.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346388

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	101		P	85 - 115
Copper	98.1		P	85 - 115
Lead	101		P	85 - 115
Nickel	101		P	85 - 115
Silver	94.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346443

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346445

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346692

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P346322

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P346387

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P346286

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.5		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P346180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	102	104	P/P	74 - 119
Alachlor	94.1	100	P/P	75 - 118
Ametryn	92.1	106	P/P	59 - 137
Atrazine	103	97.9	P/P	73 - 120
Atrazine Desethyl	90.1	56.4	P/P	19 - 129
Azinphos Methyl	105	98.7	P/P	65 - 181
Bromacil	98.1	83.9	P/P	43 - 123
Butylate	63.2	67.6	P/P	28 - 85.0
Chlorpyrifos Ethyl	89.9	87.5	P/P	55 - 112
Chlorpyrifos Methyl	89.2	83.3	P/P	35 - 124
Cyanazine	165	93.5	P/P	26 - 262
Demeton	78.2	77.2	P/P	43 - 122
Diazinon	97.9	95.9	P/P	72 - 120
Disulfoton	87.7	81.0	P/P	45 - 137
EPTC	61.8	64.6	P/P	28 - 95.0
Ethion	87.0	93.0	P/P	63 - 127
Ethoprop	67.8	64.0	P/P	63 - 109
Fenamiphos	101	93.5	P/P	66 - 136
Fipronil	102	106	P/P	63 - 126
Fipronil Sulfide	93.3	93.9	P/P	59 - 123
Fipronil Sulfone	87.8	93.9	P/P	56 - 122
Fonofos	89.4	79.2	P/P	64 - 114
Hexazinone	95.4	94.9	P/P	49 - 144
Malathion	91.4	93.8	P/P	68 - 131
Metaxyl	104	91.7	P/P	57 - 126
Metolachlor	96.1	101	P/P	75 - 118
Metribuzin	139	95.2	P/P	46 - 169
Mevinphos	95.6	72.7	P/P	34 - 126
Molinate	69.5	68.9	P/P	37 - 101
Norflurazon	99.9	103	P/P	63 - 127
Parathion Ethyl	89.3	91.6	P/P	78 - 109
Parathion Methyl	99.5	89.8	P/P	74 - 123
Pendimethalin	112	110	P/P	51 - 130
Phorate	81.2	74.2	P/P	53 - 116
Prometon	96.5	98.6	P/P	66 - 124
Prometryn	96.7	103	P/P	66 - 124
Simazine	105	94.3	P/P	62 - 134
Terbufos	91.7	80.7	P/P	59 - 115
Terbutylazine	99.2	97.3	P/P	76 - 113

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P346349

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	36.1	32.1	P/P	24 - 89.0
Alpha-BHC	84.0	83.7	P/P	58 - 117
Alpha-Chlordane	77.1	73.9	P/P	56 - 115
Beta-BHC	91.3	93.7	P/P	55 - 137
Carbophenothion	80.0	78.4	P/P	37 - 145
Chlorothalonil	76.3	72.7	P/P	26 - 163
Cypermethrin	83.0	82.4	P/P	42 - 156
DDD-p,p'	94.1	92.1	P/P	59 - 129
DDE-p,p'	80.6	77.9	P/P	52 - 117
DDT-p,p'	86.1	81.5	P/P	48 - 128
Delta-BHC	107	125	P/P	59 - 158
Dicofol	79.1	75.1	P/P	19 - 124
Dieldrin	86.9	83.8	P/P	57 - 126
Endosulfan I	84.0	78.5	P/P	59 - 133
Endosulfan II	86.0	95.1	P/P	58 - 148
Endosulfan Sulfate	85.9	88.5	P/P	56 - 135
Endrin	80.9	78.9	P/P	50 - 140
Endrin Aldehyde	79.5	78.3	P/P	47 - 141
Endrin Ketone	88.7	87.1	P/P	63 - 123
Gamma-BHC	93.6	83.9	P/P	59 - 132
Gamma-Chlordane	75.2	71.7	P/P	55 - 112
Heptachlor	65.7	60.8	P/P	45 - 102
Heptachlor Epoxide	79.4	75.4	P/P	61 - 116
Methoxychlor	90.9	88.2	P/P	60 - 133
Mirex	72.1	68.9	P/P	40 - 98.0
Permethrin	75.3	73.7	P/P	45 - 131
Trifluralin	80.8	76.4	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P346349

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	87.4	82.8	P/P	47 - 125
Toxaphene	72.2	74.2	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P346244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	65.9		P	40 - 150
3-Hydroxycarbofuran	105		P	40 - 150
Acetaminophen	117		P	30 - 150
Aldicarb	100		P	30 - 150
Aldicarb Sulfone	109		P	40 - 150
Aldicarb Sulfoxide	98.8		P	40 - 150
Bentazon	77.3		P	30 - 150
Carbamazepine	105		P	40 - 150
Carbaryl	75.0		P	40 - 150
Carbofuran	88.7		P	40 - 150
Diuron	95.1		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	101		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P346244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hydrocodone	94.7		P	40 - 150
Imazapyr	86.4		P	40 - 150
Imidacloprid	125		P	40 - 160
Linuron	92.1		P	40 - 150
MCPP	117		P	40 - 150
Methiocarb	105		P	40 - 150
Methomyl	108		P	40 - 150
Oxamyl	109		P	40 - 150
Primidone	120		P	40 - 150
Propoxur	107		P	40 - 150
Pyraclostrobin	101		P	40 - 150
Triclopyr	109		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P346245

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	103		P	40 - 140
Endothall	91.8		P	40 - 140
Glufosinate	105		P	40 - 140
Glyphosate	119		P	40 - 140
Sucralose	116		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P346613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P346617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.7		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P346675

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346388

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996718	Calcium	103	103	P/P	80 - 120
1996718	Iron	103	103	P/P	80 - 120
1996718	Magnesium	105	106	P/P	80 - 120
1996718	Potassium	101	102	P/P	80 - 120
1996718	Sodium	99.2	99.8	P/P	80 - 120
1996718	Zinc	100	99.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346388

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996718	Arsenic	102	99.7	P/P	80 - 120
1996718	Cadmium	102	100	P/P	80 - 120
1996718	Chromium	96.3	93.4	P/P	80 - 120
1996718	Copper	98.0	96.2	P/P	80 - 120
1996718	Lead	101	98.3	P/P	80 - 120
1996718	Nickel	101	97.9	P/P	80 - 120
1996718	Silver	93.9	91.8	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996399	Chloride	99.8		P	90 - 110
1996562	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996399	Sulfate	101		P	90 - 110
1996562	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996463	Ammonia-N	94.3	96.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P346538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996569	Kjeldahl Nitrogen	102	92.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P346322

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996463	NO2NO3-N	101		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P346286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996521	O-Phosphate-P	97.5	98.1	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P346180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996365	Acetochlor	108	92.1	P/P	67 - 125
1996365	Alachlor	99.2	87.8	P/P	69 - 123
1996365	Ametryn	111	96.3	P/P	52 - 151
1996365	Atrazine Desethyl	80.2	86.7	P/P	10 - 129
1996365	Azinphos Methyl	96.5	99.1	P/P	48 - 200
1996365	Butylate	34.0	50.4	P/P	10 - 85.0
1996365	Chlorpyrifos Ethyl	90.1	78.7	P/P	54 - 115
1996365	Chlorpyrifos Methyl	91.1	85.1	P/P	44 - 117
1996365	Cyanazine	167	182	P/P	10 - 262
1996365	Demeton	68.9	88.1	P/P	24 - 145
1996365	Diazinon	108	101	P/P	66 - 129
1996365	Disulfoton	92.3	98.1	P/P	45 - 139
1996365	EPTC	31.3	50.1	P/P	10 - 86.0
1996365	Ethion	90.4	64.9	P/P	59 - 133
1996365	Ethoprop	82.7	77.8	P/P	54 - 116
1996365	Fenamiphos	91.7	79.6	P/P	55 - 140
1996365	Fipronil	112	86.1	P/P	37 - 142
1996365	Fipronil Sulfide	110	77.1	P/P	37 - 130
1996365	Fipronil Sulfone	93.8	66.8	P/P	18 - 143
1996365	Fonofos	91.9	96.3	P/P	55 - 118
1996365	Hexazinone	103	91.1	P/P	62 - 140
1996365	Malathion	86.4	76.0	P/P	64 - 132
1996365	Metalaxyl	99.1	86.0	P/P	55 - 129
1996365	Metolachlor	97.5	87.9	P/P	56 - 137
1996365	Metribuzin	170	169	P/P	16 - 218
1996365	Mevinphos	82.1	94.1	P/P	34 - 129
1996365	Molinate	47.6	55.8	P/P	16 - 99.0
1996365	Norflurazon	102	82.6	P/P	43 - 135
1996365	Parathion Ethyl	97.5	87.0	P/P	71 - 112
1996365	Parathion Methyl	105	97.2	P/P	65 - 127
1996365	Pendimethalin	125	111	P/P	35 - 159
1996365	Phorate	77.7	101	P/P	41 - 129
1996365	Prometon	114	102	P/P	56 - 140
1996365	Prometryn	87.1	76.4	P/P	65 - 130
1996365	Simazine	106	82.5	P/P	54 - 148
1996365	Terbufos	95.2	101	P/P	53 - 126
1996365	Terbuthylazine	104	90.1	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P346349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1997563	Aldrin	34.1	45.3	P/P	26 - 96.0
1997563	Alpha-BHC	79.8	80.4	P/P	51 - 123
1997563	Alpha-Chlordane	68.4	70.3	P/P	45 - 120
1997563	Beta-BHC	99.7	84.1	P/P	43 - 146

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P346349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1997563	Carbophenothion	77.0	74.1	P/P	26 - 179
1997563	Chlorothalonil	54.3	46.0	P/P	10 - 215
1997563	Cypermethrin	74.5	71.0	P/P	35 - 169
1997563	DDD-p,p'	85.9	83.5	P/P	49 - 131
1997563	DDE-p,p'	72.3	72.7	P/P	39 - 127
1997563	DDT-p,p'	74.1	78.5	P/P	49 - 120
1997563	Delta-BHC	129	95.0	P/P	49 - 187
1997563	Dicofol	71.9	68.6	P/P	10 - 129
1997563	Dieldrin	78.8	77.5	P/P	46 - 132
1997563	Endosulfan I	83.9	77.6	P/P	57 - 130
1997563	Endosulfan II	95.3	68.5	P/P	52 - 148
1997563	Endosulfan Sulfate	80.2	71.5	P/P	55 - 129
1997563	Endrin	76.5	72.6	P/P	45 - 133
1997563	Endrin Aldehyde	55.5	57.3	P/P	26 - 140
1997563	Endrin Ketone	91.0	85.0	P/P	60 - 125
1997563	Gamma-BHC	86.9	74.5	P/P	50 - 145
1997563	Gamma-Chlordane	65.0	66.5	P/P	44 - 118
1997563	Heptachlor	53.8	57.4	P/P	35 - 106
1997563	Heptachlor Epoxide	72.9	72.2	P/P	52 - 123
1997563	Methoxychlor	80.6	82.0	P/P	54 - 132
1997563	Mirex	59.6	65.4	P/P	36 - 107
1997563	Permethrin	68.0	67.5	P/P	47 - 135
1997563	Trifluralin	67.8	73.9	P/P	32 - 228

Reference Method: EPA 8276

Batch ID: P346349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1997357	Chlordane	84.8	78.2	P/P	41 - 134
1997357	Toxaphene	74.6	73.2	P/P	39 - 158

Reference Method: EPA 8321B

Batch ID: P346244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996578	2,4-D	59.0	45.5	P/P	40 - 150
1996578	Acetaminophen	113	117	P/P	30 - 150
1996578	Bentazon	65.3	60.6	P/P	30 - 150
1996578	Carbamazepine	99.4	98.2	P/P	40 - 150
1996578	Diuron	70.0	70.9	P/P	40 - 150
1996578	Fenuron	84.3	83.8	P/P	40 - 150
1996578	Fluridone	80.7	82.0	P/P	40 - 150
1996578	Hydrocodone	73.0	82.1	P/P	40 - 150
1996578	Imazapyr	58.8	61.4	P/P	40 - 150
1996578	Imidacloprid	199	189	F/F	40 - 160
1996578	Linuron	73.5	79.9	P/P	40 - 150
1996578	MCPP	141	138	P/P	40 - 150
1996578	Primidone	102	98.4	P/P	40 - 150
1996578	Pyraclostrobin	94.2	90.2	P/P	40 - 150
1996578	Triclopyr	129	135	P/P	40 - 150
1996703	3-Hydroxycarbofuran	77.2	65.4	P/P	40 - 150
1996703	Aldicarb	41.5	44.4	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P346244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996703	Aldicarb Sulfone	83.5	69.8	P/P	40 - 150
1996703	Aldicarb Sulfoxide	34.1	29.7	F/F	40 - 150
1996703	Carbaryl	49.3	41.4	P/P	40 - 150
1996703	Carbofuran	58.6	47.7	P/P	40 - 150
1996703	Methiocarb	85.3	77.1	P/P	40 - 150
1996703	Methomyl	66.3	54.0	P/P	40 - 150
1996703	Oxamyl	63.9	45.1	P/P	40 - 150
1996703	Propoxur	54.7	47.1	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P346245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996311	AMPA	61.2	55.1	P/P	40 - 140
1996311	Endothall	122	121	P/P	40 - 140
1996311	Glufosinate	96.2	95.3	P/P	40 - 140
1996311	Glyphosate	115	105	P/P	40 - 140
1996311	Sucralose	123	116	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P346617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1997172	Fluoride	97.0	99.0	P/P	91 - 105

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P346282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996501	Turbidity	1.76	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996718	Calcium	0.0578	Spike	P	0 - 20
1996718	Iron	0.0342	Spike	P	0 - 20
1996718	Magnesium	0.448	Spike	P	0 - 20
1996718	Potassium	0.389	Spike	P	0 - 20
1996718	Sodium	0.384	Spike	P	0 - 20
1996718	Zinc	0.547	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996718	Arsenic	2.47	Spike	P	0 - 20
1996718	Cadmium	2.20	Spike	P	0 - 20
1996718	Chromium	3.13	Spike	P	0 - 20
1996718	Copper	1.90	Spike	P	0 - 20
1996718	Lead	3.11	Spike	P	0 - 20
1996718	Nickel	2.72	Spike	P	0 - 20
1996718	Silver	2.23	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996562	Chloride	0.752	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P346445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996562	Sulfate	0.357	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996463	Ammonia-N	2.06	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P346538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996569	Kjeldahl Nitrogen	7.04	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P346322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996463	NO2NO3-N	0.425	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P346387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996563	Total-P	3.47	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P346286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996521	O-Phosphate-P	0.583	Spike	P	0 - 20

Reference Method: EPA 8270D
 Batch ID: P346180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996365	Acetochlor	16.0	Spike	P	0 - 30
1996365	Alachlor	12.1	Spike	P	0 - 30
1996365	Ametryn	14.3	Spike	P	0 - 30
1996365	Atrazine	6.91	Spike	P	0 - 30
1996365	Atrazine Desethyl	5.23	Spike	P	0 - 30
1996365	Azinphos Methyl	2.66	Spike	P	0 - 30
1996365	Bromacil	14.4	Spike	P	0 - 30
1996365	Butylate	38.9	Spike	F	0 - 30
1996365	Chlorpyrifos Ethyl	13.5	Spike	P	0 - 30
1996365	Chlorpyrifos Methyl	6.86	Spike	P	0 - 30
1996365	Cyanazine	8.36	Spike	P	0 - 30
1996365	Demeton	24.5	Spike	P	0 - 30
1996365	Diazinon	6.20	Spike	P	0 - 30
1996365	Disulfoton	6.02	Spike	P	0 - 30
1996365	EPTC	46.1	Spike	F	0 - 30
1996365	Ethion	32.8	Spike	F	0 - 30
1996365	Ethoprop	6.09	Spike	P	0 - 30
1996365	Fenamiphos	14.0	Spike	P	0 - 30
1996365	Fipronil	19.6	Spike	P	0 - 30
1996365	Fipronil Sulfide	28.7	Spike	P	0 - 30
1996365	Fipronil Sulfone	22.9	Spike	P	0 - 30
1996365	Fonofos	4.68	Spike	P	0 - 30
1996365	Hexazinone	6.47	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P346180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996365	Malathion	10.5	Spike	P	0 - 30
1996365	Metalaxyl	10.3	Spike	P	0 - 30
1996365	Metolachlor	8.27	Spike	P	0 - 30
1996365	Metribuzin	0.839	Spike	P	0 - 30
1996365	Mevinphos	13.6	Spike	P	0 - 30
1996365	Molinate	16.0	Spike	P	0 - 30
1996365	Norflurazon	13.7	Spike	P	0 - 30
1996365	Parathion Ethyl	11.3	Spike	P	0 - 30
1996365	Parathion Methyl	7.87	Spike	P	0 - 30
1996365	Pendimethalin	11.9	Spike	P	0 - 30
1996365	Phorate	25.8	Spike	P	0 - 30
1996365	Prometon	11.0	Spike	P	0 - 30
1996365	Prometryn	13.1	Spike	P	0 - 30
1996365	Simazine	14.6	Spike	P	0 - 30
1996365	Terbufos	6.29	Spike	P	0 - 30
1996365	Terbutylazine	14.1	Spike	P	0 - 30
LFB	Acetochlor	2.12	LCS	P	0 - 30
LFB	Alachlor	6.42	LCS	P	0 - 30
LFB	Ametryn	13.9	LCS	P	0 - 30
LFB	Atrazine	4.70	LCS	P	0 - 30
LFB	Atrazine Desethyl	46.0	LCS	F	0 - 30
LFB	Azinphos Methyl	6.03	LCS	P	0 - 30
LFB	Bromacil	15.6	LCS	P	0 - 30
LFB	Butylate	6.78	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.65	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.90	LCS	P	0 - 30
LFB	Cyanazine	55.2	LCS	F	0 - 30
LFB	Demeton	1.38	LCS	P	0 - 30
LFB	Diazinon	2.05	LCS	P	0 - 30
LFB	Disulfoton	7.89	LCS	P	0 - 30
LFB	EPTC	4.47	LCS	P	0 - 30
LFB	Ethion	6.66	LCS	P	0 - 30
LFB	Ethoprop	5.87	LCS	P	0 - 30
LFB	Fenamiphos	7.52	LCS	P	0 - 30
LFB	Fipronil	3.47	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.582	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.67	LCS	P	0 - 30
LFB	Fonofos	12.1	LCS	P	0 - 30
LFB	Hexazinone	0.541	LCS	P	0 - 30
LFB	Malathion	2.52	LCS	P	0 - 30
LFB	Metalaxyl	12.6	LCS	P	0 - 30
LFB	Metolachlor	4.99	LCS	P	0 - 30
LFB	Metribuzin	37.1	LCS	F	0 - 30
LFB	Mevinphos	27.2	LCS	P	0 - 30
LFB	Molinate	0.856	LCS	P	0 - 30
LFB	Norflurazon	2.65	LCS	P	0 - 30
LFB	Parathion Ethyl	2.62	LCS	P	0 - 30
LFB	Parathion Methyl	10.2	LCS	P	0 - 30
LFB	Pendimethalin	2.23	LCS	P	0 - 30
LFB	Phorate	9.06	LCS	P	0 - 30
LFB	Prometon	2.16	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P346180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometryn	5.89	LCS	P	0 - 30
LFB	Simazine	10.5	LCS	P	0 - 30
LFB	Terbufos	12.8	LCS	P	0 - 30
LFB	Terbutylazine	1.90	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P346349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1997563	Aldrin	28.0	Spike	P	0 - 30
1997563	Alpha-BHC	0.695	Spike	P	0 - 30
1997563	Alpha-Chlordane	2.81	Spike	P	0 - 30
1997563	Beta-BHC	17.0	Spike	P	0 - 30
1997563	Carbophenothion	3.87	Spike	P	0 - 30
1997563	Chlorothalonil	16.6	Spike	P	0 - 30
1997563	Cypermethrin	4.75	Spike	P	0 - 30
1997563	DDD-p,p'	2.83	Spike	P	0 - 30
1997563	DDE-p,p'	0.664	Spike	P	0 - 30
1997563	DDT-p,p'	5.80	Spike	P	0 - 30
1997563	Delta-BHC	30.2	Spike	F	0 - 30
1997563	Dicofol	4.74	Spike	P	0 - 30
1997563	Dieldrin	1.69	Spike	P	0 - 30
1997563	Endosulfan I	7.75	Spike	P	0 - 30
1997563	Endosulfan II	32.8	Spike	F	0 - 30
1997563	Endosulfan Sulfate	11.5	Spike	P	0 - 30
1997563	Endrin	5.29	Spike	P	0 - 30
1997563	Endrin Aldehyde	3.19	Spike	P	0 - 30
1997563	Endrin Ketone	6.86	Spike	P	0 - 30
1997563	Gamma-BHC	15.3	Spike	P	0 - 30
1997563	Gamma-Chlordane	2.38	Spike	P	0 - 30
1997563	Heptachlor	6.47	Spike	P	0 - 30
1997563	Heptachlor Epoxide	0.998	Spike	P	0 - 30
1997563	Methoxychlor	1.80	Spike	P	0 - 30
1997563	Mirex	9.16	Spike	P	0 - 30
1997563	Permethrin	0.742	Spike	P	0 - 30
1997563	Trifluralin	8.67	Spike	P	0 - 30
LFB	Aldrin	11.8	LCS	P	0 - 30
LFB	Alpha-BHC	0.301	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.19	LCS	P	0 - 30
LFB	Beta-BHC	2.58	LCS	P	0 - 30
LFB	Carbophenothion	2.00	LCS	P	0 - 30
LFB	Chlorothalonil	4.79	LCS	P	0 - 30
LFB	Cypermethrin	0.767	LCS	P	0 - 30
LFB	DDD-p,p'	2.09	LCS	P	0 - 30
LFB	DDE-p,p'	3.48	LCS	P	0 - 30
LFB	DDT-p,p'	5.48	LCS	P	0 - 30
LFB	Delta-BHC	15.0	LCS	P	0 - 30
LFB	Dicofol	5.26	LCS	P	0 - 30
LFB	Dieldrin	3.62	LCS	P	0 - 30
LFB	Endosulfan I	6.77	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P346349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endosulfan II	9.98	LCS	P	0 - 30
LFB	Endosulfan Sulfate	3.01	LCS	P	0 - 30
LFB	Endrin	2.48	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.50	LCS	P	0 - 30
LFB	Endrin Ketone	1.87	LCS	P	0 - 30
LFB	Gamma-BHC	10.9	LCS	P	0 - 30
LFB	Gamma-Chlordane	4.72	LCS	P	0 - 30
LFB	Heptachlor	7.77	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.24	LCS	P	0 - 30
LFB	Methoxychlor	2.92	LCS	P	0 - 30
LFB	Mirex	4.50	LCS	P	0 - 30
LFB	Permethrin	2.16	LCS	P	0 - 30
LFB	Trifluralin	5.61	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P346349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1997357	Chlordane	8.08	Spike	P	0 - 30
1997357	Toxaphene	1.91	Spike	P	0 - 30
LFB	Chlordane	5.38	LCS	P	0 - 30
LFB	Toxaphene	2.61	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P346244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996578	2,4-D	16.3	Spike	P	0 - 30
1996578	Acetaminophen	3.00	Spike	P	0 - 30
1996578	Bentazon	7.47	Spike	P	0 - 30
1996578	Carbamazepine	1.20	Spike	P	0 - 30
1996578	Diuron	0.523	Spike	P	0 - 30
1996578	Fenuron	0.572	Spike	P	0 - 30
1996578	Fluridone	1.66	Spike	P	0 - 30
1996578	Hydrocodone	11.8	Spike	P	0 - 30
1996578	Imazapyr	2.50	Spike	P	0 - 30
1996578	Imidacloprid	4.68	Spike	P	0 - 30
1996578	Linuron	8.33	Spike	P	0 - 30
1996578	MCPP	2.29	Spike	P	0 - 30
1996578	Primidone	4.04	Spike	P	0 - 30
1996578	Pyraclostrobin	4.38	Spike	P	0 - 30
1996578	Triclopyr	4.50	Spike	P	0 - 30
1996703	3-Hydroxycarbofuran	16.5	Spike	P	0 - 30
1996703	Aldicarb	6.72	Spike	P	0 - 30
1996703	Aldicarb Sulfone	17.8	Spike	P	0 - 30
1996703	Aldicarb Sulfoxide	13.8	Spike	P	0 - 30
1996703	Carbaryl	17.4	Spike	P	0 - 30
1996703	Carbofuran	20.4	Spike	P	0 - 30
1996703	Methiocarb	10.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P346244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996703	Methomyl	20.5	Spike	P	0 - 30
1996703	Oxamyl	34.5	Spike	F	0 - 30
1996703	Propoxur	14.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P346245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996311	AMPA	5.49	Spike	P	0 - 30
1996311	Endothall	1.43	Spike	P	0 - 30
1996311	Glufosinate	0.871	Spike	P	0 - 30
1996311	Glyphosate	4.07	Spike	P	0 - 30
1996311	Sucralose	5.54	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P346278

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996565	Color (true)	0.546	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P346613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1997172	Total Alkalinity	1.46	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P346790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996562	TDS	3.31	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P346791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996565	TDS	1.98	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P346617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1997172	Fluoride	1.43	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P346675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996382	Organic Carbon	0.158	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: 1996577
Field Sample ID: G3NE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	51.2	P	30 - 160

Lab Sample ID: 1996578
Field Sample ID: G3NE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	128	P	30 - 160
EPA 8321B	Acetaminophen-d4	120	P	30 - 160
EPA 8321B	Carbamazepine-d10	116	P	30 - 160
EPA 8321B	Diuron-d6	66.7	P	30 - 160
EPA 8321B	Endothall-d6	70.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	89.6	P	40 - 160
EPA 8321B	Primidone-d5	130	P	30 - 160
EPA 8321B	Sucralose-d6	94.6	P	40 - 160

Lab Sample ID: 1996581
Field Sample ID: G3NE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	67.1	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	52.9	P	34 - 101
EPA 8276	Decachlorobiphenyl	67.0	P	31 - 108
EPA 8276	PCNB	76.6	P	62 - 142

Lab Sample ID: 1996582
Field Sample ID: G3NE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	95.2	P	71 - 126
EPA 8270D	Terbufos-d10	105	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A84304

Included Lab Sample IDs: 1996562, 1996565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.5	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A84305

Included Lab Sample IDs: 1996562, 1996565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84307

Included Lab Sample IDs: 1996564, 1996567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.6	95.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84329

Included Lab Sample IDs: 1996563, 1996566

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84339

Included Lab Sample IDs: 1996562, 1996565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Chloride	102	99.8	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	98.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84402

Included Lab Sample IDs: 1996578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	109	89.0	P/P	60 - 150
Endothall	128	115	P/P	60 - 150
Glufosinate	95.4	87.3	P/P	60 - 150
Glyphosate	108	89.6	P/P	60 - 150
Sucralose	93.5	83.4	P/P	60 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84403

Included Lab Sample IDs: 1996583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	99.3	P/P	90 - 110
Iron	98.7	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84403

Included Lab Sample IDs: 1996583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	99.9	99.4	P/P	90 - 110
Potassium	97.8	97.4	P/P	90 - 110
Sodium	98.0	97.7	P/P	90 - 110
Zinc	98.4	98.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84440

Included Lab Sample IDs: 1996583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	99.5	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Chromium	96.3	96.2	P/P	90 - 110
Copper	98.8	98.3	P/P	90 - 110
Lead	99.4	100	P/P	90 - 110
Nickel	98.7	98.1	P/P	90 - 110
Silver	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84445

Included Lab Sample IDs: 1996563, 1996566

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

Reference Method: EPA 8321B

Run ID: A84454

Included Lab Sample IDs: 1996578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.5	88.1	P/P	50 - 150
Bentazon	116	109	P/P	50 - 150
MCP	88.7	112	P/P	50 - 150
Triclopyr	95.7	108	P/P	50 - 160

Reference Method: EPA 8270D

Run ID: A84455

Included Lab Sample IDs: 1996581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.1		P	80 - 120
Alpha-BHC	99.6		P	80 - 120
Alpha-Chlordane	93.8		P	80 - 120
Beta-BHC	99.0		P	80 - 120
Carbophenothion	94.7		P	80 - 120
Chlorothalonil	84.5		P	80 - 120
Cypermethrin	91.6		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	92.9		P	80 - 120
DDT-p,p'	108		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84455

Included Lab Sample IDs: 1996581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Delta-BHC	97.1		P	80 - 120
Dicofol	99.0		P	80 - 120
Dieldrin	99.7		P	80 - 120
Endosulfan I	85.4		P	80 - 120
Endosulfan II	92.0		P	80 - 120
Endosulfan Sulfate	97.8		P	80 - 120
Endrin	90.6		P	80 - 120
Endrin Aldehyde	93.2		P	80 - 120
Endrin Ketone	104		P	80 - 120
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	95.2		P	80 - 120
Heptachlor	90.6		P	80 - 120
Heptachlor Epoxide	96.0		P	80 - 120
Methoxychlor	107		P	80 - 120
Mirex	96.3		P	80 - 120
Permethrin	93.0		P	80 - 120
Trifluralin	98.0		P	80 - 120

Reference Method: SM 2320 B-97

Run ID: A84458

Included Lab Sample IDs: 1996562, 1996565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.4	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84458

Included Lab Sample IDs: 1996562, 1996565

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84488

Included Lab Sample IDs: 1996577

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	115	125	P/P	50 - 150
Acetaminophen	155	146	P/P	60 - 160
Aldicarb	82.5	101	P/P	60 - 150
Aldicarb Sulfone	103	112	P/P	50 - 150
Aldicarb Sulfoxide	105	98.2	P/P	50 - 150
Carbamazepine	148	139	P/P	60 - 150
Carbaryl	103	108	P/P	60 - 150
Carbofuran	122	121	P/P	50 - 150
Diuron	125	136	P/P	60 - 150
Fenuron	101	102	P/P	60 - 150
Fluridone	138	134	P/P	60 - 160
Hydrocodone	111	109	P/P	60 - 150
Imazapyr	103	97.9	P/P	50 - 150
Imidacloprid	121	106	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84488

Included Lab Sample IDs: 1996578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	143	147	P/P	60 - 150
Methiocarb	143	143	P/P	50 - 150
Methomyl	108	102	P/P	50 - 150
Oxamyl	111	103	P/P	50 - 150
Primidone	122	138	P/P	60 - 150
Propoxur	124	107	P/P	50 - 150
Pyraclostrobin	133	144	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A84491

Included Lab Sample IDs: 1996563, 1996566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84494

Included Lab Sample IDs: 1996563, 1996566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	93.8	101	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84506

Included Lab Sample IDs: 1996582

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	96.8		P	80 - 120
Atrazine Desethyl	85.5		P	80 - 120
Azinphos Methyl	97.6		P	80 - 120
Butylate	102		P	80 - 120
Chlorpyrifos Ethyl	97.5		P	80 - 120
Chlorpyrifos Methyl	98.0		P	80 - 120
Cyanazine	85.1		P	80 - 120
Demeton	102		P	80 - 120
Diazinon	100		P	80 - 120
Disulfoton	96.6		P	80 - 120
EPTC	101		P	80 - 120
Ethion	96.7		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	95.8		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Sulfide	96.0		P	80 - 120
Fipronil Sulfone	94.7		P	80 - 120
Fonofos	97.7		P	80 - 120
Hexazinone	97.0		P	80 - 120
Malathion	96.0		P	80 - 120
Metalaxyl	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84506

Included Lab Sample IDs: 1996582

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Metolachlor	108		P	80 - 120
Metribuzin	87.5		P	80 - 120
Mevinphos	98.3		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	97.9		P	80 - 120
Parathion Ethyl	89.5		P	80 - 120
Parathion Methyl	94.9		P	80 - 120
Pendimethalin	99.4		P	80 - 120
Phorate	95.9		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	97.2		P	80 - 120
Simazine	97.7		P	80 - 120
Terbufos	96.0		P	80 - 120
Terbuthylazine	98.2		P	80 - 120

Reference Method: EPA 8270D

Run ID: A84513

Included Lab Sample IDs: 1996582

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	98.4		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84533

Included Lab Sample IDs: 1996563, 1996566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	104	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A84606

Included Lab Sample IDs: 1996581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.4		P	80 - 120
Toxaphene	107		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						1.76	
EPA 200.7 Rev. 4.4	Calcium	105		103	103			0.0578
	Iron	102		103	103			0.0342
	Magnesium	106		105	106			0.448
	Potassium	99.2		101	102			0.389
	Sodium	103		99.2	99.8			0.384
	Zinc	99.8		100	99.8			0.547
EPA 200.8 Rev. 5.4	Arsenic	102		102	99.7			2.47
	Cadmium	101		102	100			2.20
	Chromium	101		96.3	93.4			3.13
	Copper	98.1		98.0	96.2			1.90
	Lead	101		101	98.3			3.11
	Nickel	101		101	97.9			2.72
	Silver	94.0		93.9	91.8			2.23
EPA 300.0 Rev. 2.1	Chloride	103		102	99.8		0.752	
	Sulfate	103		102	101		0.357	
EPA 350.1 Rev. 2.0	Ammonia-N	99.5		94.3	96.5			2.06
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.2		102	92.6			7.04
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		101				0.425
EPA 365.1 Rev. 2.0	Total-P	106						3.47
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5		97.5	98.1			0.583
EPA 8270D	Acetochlor	102	104	108	92.1	2.12		16.0
	Alachlor	94.1	100	99.2	87.8	6.42		12.1
	Aldrin	36.1	32.1	34.1	45.3	11.8		28.0
	Alpha-BHC	84.0	83.7	79.8	80.4	0.301		0.695
	Alpha-Chlordane	77.1	73.9	68.4	70.3	4.19		2.81
	Ametryn	92.1	106	111	96.3	13.9		14.3
	Atrazine	103	97.9			4.70		6.91
	Atrazine Desethyl	90.1	56.4	80.2	86.7	46.0		5.23
	Azinphos Methyl	105	98.7	96.5	99.1	6.03		2.66
	Beta-BHC	91.3	93.7	99.7	84.1	2.58		17.0
	Bromacil	98.1	83.9			15.6		14.4
	Butylate	63.2	67.6	34.0	50.4	6.78		38.9
	Carbophenothion	80.0	78.4	77.0	74.1	2.00		3.87
	Chlorothalonil	76.3	72.7	54.3	46.0	4.79		16.6
	Chlorpyrifos Ethyl	89.9	87.5	90.1	78.7	2.65		13.5
	Chlorpyrifos Methyl	89.2	83.3	91.1	85.1	6.90		6.86
	Cyanazine	165	93.5	167	182	55.2		8.36
	Cypermethrin	83.0	82.4	74.5	71.0	0.767		4.75
	DDD-p,p'	94.1	92.1	85.9	83.5	2.09		2.83
	DDE-p,p'	80.6	77.9	72.3	72.7	3.48		0.664
	DDT-p,p'	86.1	81.5	74.1	78.5	5.48		5.80
	Delta-BHC	107	125	129	95.0	15.0		30.2
	Demeton	78.2	77.2	68.9	88.1	1.38		24.5
	Diazinon	97.9	95.9	108	101	2.05		6.20
	Dicofol	79.1	75.1	71.9	68.6	5.26		4.74
	Dieldrin	86.9	83.8	78.8	77.5	3.62		1.69
	Disulfoton	87.7	81.0	92.3	98.1	7.89		6.02
	Endosulfan I	84.0	78.5	83.9	77.6	6.77		7.75
	Endosulfan II	86.0	95.1	95.3	68.5	9.98		32.8
	Endosulfan Sulfate	85.9	88.5	80.2	71.5	3.01		11.5
	Endrin	80.9	78.9	76.5	72.6	2.48		5.29
	Endrin Aldehyde	79.5	78.3	55.5	57.3	1.50		3.19
	Endrin Ketone	88.7	87.1	91.0	85.0	1.87		6.86

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	EPTC	61.8	64.6	31.3	50.1	4.47	46.1
	Ethion	87.0	93.0	90.4	64.9	6.66	32.8
	Ethoprop	67.8	64.0	82.7	77.8	5.87	6.09
	Fenamiphos	101	93.5	91.7	79.6	7.52	14.0
	Fipronil	102	106	112	86.1	3.47	19.6
	Fipronil Sulfide	93.3	93.9	110	77.1	0.582	28.7
	Fipronil Sulfone	87.8	93.9	93.8	66.8	6.67	22.9
	Fonofos	89.4	79.2	91.9	96.3	12.1	4.68
	Gamma-BHC	93.6	83.9	86.9	74.5	10.9	15.3
	Gamma-Chlordane	75.2	71.7	65.0	66.5	4.72	2.38
	Heptachlor	65.7	60.8	53.8	57.4	7.77	6.47
	Heptachlor Epoxide	79.4	75.4	72.9	72.2	5.24	0.998
	Hexazinone	95.4	94.9	103	91.1	0.541	6.47
	Malathion	91.4	93.8	86.4	76.0	2.52	10.5
	Metalaxyl	104	91.7	99.1	86.0	12.6	10.3
	Methoxychlor	90.9	88.2	80.6	82.0	2.92	1.80
	Metolachlor	96.1	101	97.5	87.9	4.99	8.27
	Metribuzin	139	95.2	170	169	37.1	0.839
	Mevinphos	95.6	72.7	82.1	94.1	27.2	13.6
	Mirex	72.1	68.9	59.6	65.4	4.50	9.16
	Molinate	69.5	68.9	47.6	55.8	0.856	16.0
	Norflurazon	99.9	103	102	82.6	2.65	13.7
	Parathion Ethyl	89.3	91.6	97.5	87.0	2.62	11.3
	Parathion Methyl	99.5	89.8	105	97.2	10.2	7.87
	Pendimethalin	112	110	125	111	2.23	11.9
	Permethrin	75.3	73.7	68.0	67.5	2.16	0.742
	Phorate	81.2	74.2	77.7	101	9.06	25.8
	Prometon	96.5	98.6	114	102	2.16	11.0
	Prometryn	96.7	103	87.1	76.4	5.89	13.1
	Simazine	105	94.3	106	82.5	10.5	14.6
	Terbufos	91.7	80.7	95.2	101	12.8	6.29
	Terbuthylazine	99.2	97.3	104	90.1	1.90	14.1
	Trifluralin	80.8	76.4	67.8	73.9	5.61	8.67
EPA 8276	Chlordane	87.4	82.8	84.8	78.2	5.38	8.08
	Toxaphene	72.2	74.2	74.6	73.2	2.61	1.91
EPA 8321B	2,4-D	65.9		59.0	45.5		16.3
	3-Hydroxycarbofuran	105		77.2	65.4		16.5
	Acetaminophen	117		113	117		3.00
	Aldicarb	100		41.5	44.4		6.72
	Aldicarb Sulfone	109		83.5	69.8		17.8
	Aldicarb Sulfoxide	98.8		34.1	29.7		13.8
	AMPA	103		55.1	61.2		5.49
	Bentazon	77.3		65.3	60.6		7.47
	Carbamazepine	105		99.4	98.2		1.20
	Carbaryl	75.0		49.3	41.4		17.4
	Carbofuran	88.7		58.6	47.7		20.4
	Diuron	95.1		70.0	70.9		0.523
	Endothall	91.8		122	121		1.43
	Fenuron	101		84.3	83.8		0.572
	Fluridone	101		80.7	82.0		1.66
	Glufosinate	105		95.3	96.2		0.871
	Glyphosate	119		105	115		4.07
	Hydrocodone	94.7		73.0	82.1		11.8
	Imazapyr	86.4		58.8	61.4		2.50

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imidacloprid	125	199	189		4.68
	Linuron	92.1	73.5	79.9		8.33
	MCPP	117	141	138		2.29
	Methiocarb	105	85.3	77.1		10.0
	Methomyl	108	66.3	54.0		20.5
	Oxamyl	109	63.9	45.1		34.5
	Primidone	120	102	98.4		4.04
	Propoxur	107	54.7	47.1		14.9
	Pyraclostrobin	101	94.2	90.2		4.38
	Sucralose	116	123	116		5.54
	Triclopyr	109	129	135		4.50
SM 2120 B	Color (true)				0.546	
SM 2320 B-97	Total Alkalinity	102			1.46	
SM 2540 C-97	TDS				3.31	
	TDS				1.98	
SM 4500 F-C-97	Fluoride	94.7	97.0	99.0		1.43
SM 5310 B-00	Organic Carbon	99.6				0.158

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1996562, 1996565
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1996583
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1996583
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1996562, 1996565
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1996562, 1996565
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1996563, 1996566
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1996563, 1996566
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1996563, 1996566
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1996563, 1996566
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1996564, 1996567
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1996581
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1996582
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1996581
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1996577
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1996578
SM 2120 B / E31780	True Color measured at 450 nm	1996562, 1996565
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1996562, 1996565
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1996562, 1996565
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1996562, 1996565
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1996562, 1996565
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1996563, 1996566

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	06/01/2018			06/01/2018 16:16	Julia Storbeck	1996562, 1996565
EPA 200.7 Rev. 4.4	06/01/2018	06/05/2018 13:45	Elliott D. Healy	06/06/2018 18:17	Betina Topolski	1996583
EPA 200.8 Rev. 5.4	06/01/2018	06/05/2018 13:45	Elliott D. Healy	06/07/2018 15:47	Nadine Brooks	1996583
EPA 300.0 Rev. 2.1	06/01/2018			06/05/2018 13:23	Lipi Saha	1996562
	06/01/2018			06/05/2018 16:23	Lipi Saha	1996565
EPA 350.1 Rev. 2.0	06/01/2018			06/11/2018 13:29	Julia Storbeck	1996563
	06/01/2018			06/11/2018 13:31	Julia Storbeck	1996566
EPA 351.2 Rev. 2.0	06/01/2018	06/07/2018 11:15	Adrian Shelby	06/12/2018 16:51	Joseph Suarez	1996563
	06/01/2018	06/07/2018 11:15	Adrian Shelby	06/12/2018 16:52	Joseph Suarez	1996566
EPA 353.2 Rev. 2.0	06/01/2018			06/04/2018 11:33	Lauren Bottorf	1996563
	06/01/2018			06/04/2018 11:35	Lauren Bottorf	1996566
EPA 365.1 Rev. 2.0	06/01/2018	06/05/2018 11:00	Sima Feizi	06/07/2018 16:20	Beverly Y. Sanders	1996563
	06/01/2018	06/05/2018 11:00	Sima Feizi	06/07/2018 16:32	Beverly Y. Sanders	1996566
EPA 365.1 Rev. 2.0 dissolved	06/01/2018			06/01/2018 17:56	Megan Treadwell	1996564
	06/01/2018			06/01/2018 17:58	Megan Treadwell	1996567
EPA 8270D	06/01/2018	06/01/2018 13:30	Fe-Val Siddell	06/05/2018 17:26	Vandana T. Nagar	1996582
	06/01/2018	06/01/2018 13:30	Fe-Val Siddell	06/08/2018 13:47	Vandana T. Nagar	1996582
	06/01/2018	06/06/2018 09:00	Fe-Val Siddell	06/07/2018 20:13	Dinesh Mishra	1996581
EPA 8276	06/01/2018	06/06/2018 09:00	Fe-Val Siddell	06/14/2018 16:24	Dinesh Mishra	1996581
EPA 8321B	06/01/2018	06/01/2018 16:00	Hoor Shaik	06/05/2018 15:03	Mohammad Ghaffari	1996578
	06/01/2018	06/05/2018 12:00	Hoor Shaik	06/07/2018 03:17	Juyoung Kim	1996578
	06/01/2018	06/05/2018 12:00	Hoor Shaik	06/09/2018 05:22	Juyoung Kim	1996578
	06/01/2018	06/05/2018 12:00	Hoor Shaik	06/09/2018 10:34	Juyoung Kim	1996577
SM 2120 B	06/01/2018			06/01/2018 15:18	Tanya Welborn	1996562
	06/01/2018			06/01/2018 15:19	Tanya Welborn	1996565
SM 2320 B-97	06/01/2018			06/07/2018 04:11	Dale L. Simmons	1996562
	06/01/2018			06/07/2018 04:21	Dale L. Simmons	1996565
SM 2540 C-97	06/01/2018			06/06/2018 15:03	Yijie Li	1996562, 1996565
SM 2540 D-97	06/01/2018			06/06/2018 15:03	Yijie Li	1996562, 1996565
SM 4500 F-C-97	06/01/2018			06/07/2018 04:11	Dale L. Simmons	1996562
	06/01/2018			06/07/2018 04:21	Dale L. Simmons	1996565
SM 5310 B-00	06/01/2018			06/08/2018 18:22	Megan Treadwell	1996563
	06/01/2018			06/08/2018 18:36	Megan Treadwell	1996566