

Chemical Analysis Report

TLH-ROC-2018-05-31-03

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

Event Description: **kit C-b_pesticides**
Request ID: **RQ-2018-01-22-51**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
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Date Certified: 27-JUN-2018 17:20



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: GULLY BRACH 80M NORTH OF GULLY
BRANCH RD.**

Collection Date/Time: 05/31/2018 11:45

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996489	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P346211	
	EPA 300.0 Rev. 2.1	Chloride	8.5		mg Cl/L	P346443	
		Sulfate	2.1		mg SO4/L	P346445	
		Color (true)	490		PCU	P346278	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P346613	
	SM 2540 C-97	TDS	94		mg/L	P346476	
	SM 2540 D-97	TSS	2	U	mg/L	P346448	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P346617	
1996490	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P346692	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P346462	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P346322	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P346387	
	SM 5310 B-00	Organic Carbon	53		mg C/L	P346675	
1996491	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P346209	
1996498	EPA 200.7 Rev. 4.4	Calcium	3.77		mg/L	P346311	
		Iron	2.19E+03		ug/L	P346311	
		Magnesium	0.96		mg/L	P346311	
		Potassium	0.38	I	mg/L	P346311	
		Sodium	4.3		mg/L	P346311	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P346311	
		Arsenic	0.47		ug/L	P346311	
		Cadmium	0.040	I	ug/L	P346311	
		Chromium	1.0	I	ug/L	P346311	
		Copper	0.57	I	ug/L	P346311	
		Lead	0.76		ug/L	P346311	
		Nickel	0.65	I	ug/L	P346311	
		Silver	0.010	U	ug/L	P346311	

Ref. Method and Comment:

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 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 06/26/2018.

**Sample Location: GULLY BRACH 80M NORTH OF GULLY
BRANCH RD.**

Collection Date/Time: 05/31/2018 11:45

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996494	EPA 8321B	2,4-D	0.0020	U	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	0.0020	U	ug/L	P346244	MS
		Diuron	0.0020	U	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**	0.0080	U	ug/L	P346244	
		Fenuron	0.016	U	ug/L	P346244	
		Imazapyr**	0.0040	U	ug/L	P346244	
		Carbamazepine**	4.0E-04	U	ug/L	P346244	
		Fluridone**	4.0E-04	U	ug/L	P346244	
		Hydrocodone**	8.0E-04	U	ug/L	P346244	
		Sucralose**	0.010	U	ug/L	P346245	
		Glyphosate**	0.10	U	ug/L	P346245	
		AMPA**	0.10	U	ug/L	P346245	
		Endothall**	0.10	U	ug/L	P346245	
		Glufosinate**	0.10	U	ug/L	P346245	
		Acesulfame K**	0.10	U	ug/L	P346245	
1996495		Aldicarb	0.020	UJ	ug/L	P346244	SUR
		Aldicarb Sulfone	0.0020	UJ	ug/L	P346244	SUR
		Aldicarb Sulfoxide	0.0020	UJ	ug/L	P346244	MS, SUR
		Carbaryl	0.0020	UJ	ug/L	P346244	SUR
		Carbofuran	0.0020	UJ	ug/L	P346244	SUR
		3-Hydroxycarbofuran	0.0020	UJ	ug/L	P346244	SUR
		Methiocarb	0.0020	UJ	ug/L	P346244	SUR
		Methomyl	0.0020	UJ	ug/L	P346244	SUR
		Oxamyl	0.0020	UJ	ug/L	P346244	RPD, SUR
		Propoxur	0.0020	UJ	ug/L	P346244	SUR
1996496	EPA 8270D	Aldrin	4.4	UJ	ng/L	P346310	RPD
		Alpha-BHC	2.2	U	ng/L	P346310	
		Beta-BHC	4.4	U	ng/L	P346310	
		Delta-BHC	4.4	U	ng/L	P346310	
		Gamma-BHC	4.4	U	ng/L	P346310	
		Carbophenothion	4.4	U	ng/L	P346310	
		Chlorothalonil	2.2	U	ng/L	P346310	
		Cypermethrin	22	UJ	ng/L	P346310	LCS, RPD
		DDD-p,p'	3.3	U	ng/L	P346310	
		DDE-p,p'	3.3	U	ng/L	P346310	
		DDT-p,p'	3.3	U	ng/L	P346310	
		Dieldrin	4.4	U	ng/L	P346310	

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996496	EPA 8270D	Endosulfan I	4.4	U	ng/L	P346310	
		Endosulfan II	4.4	U	ng/L	P346310	
		Endosulfan Sulfate	2.2	U	ng/L	P346310	
		Endrin	2.2	U	ng/L	P346310	
		Endrin Aldehyde	2.2	U	ng/L	P346310	
		Heptachlor	1.6	UJ	ng/L	P346310	LCS
		Heptachlor Epoxide	2.2	U	ng/L	P346310	
		Methoxychlor	4.4	U	ng/L	P346310	
		Mirex	2.2	UJ	ng/L	P346310	LCS
		Permethrin	11	UJ	ng/L	P346310	LCS
		Trifluralin	1.1	U	ng/L	P346310	
		Alpha-Chlordane	1.1	U	ng/L	P346310	
		Gamma-Chlordane	1.1	U	ng/L	P346310	
		Endrin Ketone	2.2	U	ng/L	P346310	
		Dicofol	33	U	ng/L	P346310	
		Chlordane	2.7	U	ng/L	P346310	
		Toxaphene	33	UJ	ng/L	P346310	CCV
1996497	EPA 8270D	Alachlor	0.25	U	ng/L	P346180	
		Ametryn	0.33	U	ng/L	P346180	
		Atrazine	0.37	I	ng/L	P346180	
		Atrazine Desethyl	1.5	UJ	ng/L	P346180	RPD
		Azinphos Methyl	2.3	U	ng/L	P346180	
		Bromacil	0.51	U	ng/L	P346180	
		Butylate	0.41	U	ng/L	P346180	RPD
		Chlorpyrifos Ethyl	0.25	U	ng/L	P346180	
		Chlorpyrifos Methyl	0.10	U	ng/L	P346180	
		Demeton	2.0	U	ng/L	P346180	
		Diazinon	0.13	U	ng/L	P346180	
		Disulfoton	0.51	U	ng/L	P346180	
		EPTC	1.3	U	ng/L	P346180	RPD
		Ethion	0.15	U	ng/L	P346180	RPD
		Ethoprop	0.10	U	ng/L	P346180	
		Fenamiphos	0.25	U	ng/L	P346180	
		Fipronil	0.25	U	ng/L	P346180	
		Fipronil Sulfide	0.15	U	ng/L	P346180	
		Fipronil Sulfone	0.15	U	ng/L	P346180	
		Hexazinone	0.51	U	ng/L	P346180	
		Malathion	0.35	U	ng/L	P346180	
		Metribuzin	0.20	UJ	ng/L	P346180	RPD
		Mevinphos	0.51	U	ng/L	P346180	
		Molinate	0.30	U	ng/L	P346180	
		Norflurazon	0.51	U	ng/L	P346180	
		Pendimethalin	1.0	U	ng/L	P346180	
		Phorate	0.25	U	ng/L	P346180	
		Prometon	0.91	U	ng/L	P346180	

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1996497	EPA 8270D	Prometryn	0.20	U	ng/L	P346180	RPD
		Simazine	0.51	U	ng/L	P346180	
		Terbufos	0.10	U	ng/L	P346180	
		Terbuthylazine	0.43	U	ng/L	P346180	
		Fonofos	0.20	U	ng/L	P346180	
		Metalaxyl	0.25	U	ng/L	P346180	
		Metolachlor	0.34	I	ng/L	P346180	
		Acetochlor	0.25	U	ng/L	P346180	
		Cyanazine	0.51	UJ	ng/L	P346180	
		Parathion Ethyl	0.25	U	ng/L	P346180	
		Parathion Methyl	0.25	U	ng/L	P346180	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.

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

EPA 8276: 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: P346211

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346311

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: P346311

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: P346462

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: P346209

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: P346310

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: P346310

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
Acesulfame K	0.10	U	ug/L
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: P346476

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P346448

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: P346311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	103		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	106		P	85 - 115
Cadmium	106		P	85 - 115
Chromium	99.9		P	85 - 115
Copper	100		P	85 - 115
Lead	101		P	85 - 115
Nickel	104		P	85 - 115
Silver	93.4		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: P346462

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: 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: P346209

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.9		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
Terbuthylazine	99.2	97.3	P/P	76 - 113

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P346310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	36.5	25.9	P/P	24 - 89.0
Alpha-BHC	74.6	73.8	P/P	58 - 117
Alpha-Chlordane	71.7	63.5	P/P	56 - 115
Beta-BHC	103	107	P/P	55 - 137
Carbophenothion	66.6	57.5	P/P	37 - 145
Chlorothalonil	92.0	91.3	P/P	26 - 163
Cypermethrin	41.3	57.5	F/P	42 - 156
DDD-p,p'	97.3	97.4	P/P	59 - 129
DDE-p,p'	60.7	56.4	P/P	52 - 117
DDT-p,p'	56.6	69.7	P/P	48 - 128
Delta-BHC	108	107	P/P	59 - 158
Dicofol	82.0	91.1	P/P	19 - 124
Dieldrin	91.8	68.5	P/P	57 - 126
Endosulfan I	87.8	69.2	P/P	59 - 133
Endosulfan II	97.1	84.8	P/P	58 - 148
Endosulfan Sulfate	93.6	94.9	P/P	56 - 135
Endrin	86.7	79.5	P/P	50 - 140
Endrin Aldehyde	96.7	88.3	P/P	47 - 141
Endrin Ketone	93.9	90.1	P/P	63 - 123
Gamma-BHC	104	108	P/P	59 - 132
Gamma-Chlordane	61.4	56.6	P/P	55 - 112
Heptachlor	49.5	38.2	P/F	45 - 102
Heptachlor Epoxide	88.5	72.9	P/P	61 - 116
Methoxychlor	81.3	84.1	P/P	60 - 133
Mirex	24.0	28.0	F/F	40 - 98.0
Permethrin	40.9	48.6	F/P	45 - 131
Trifluralin	52.2	49.2	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P346310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	101	105	P/P	47 - 125
Toxaphene	68.9	70.5	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
Acesulfame K	113		P	40 - 140
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: P346311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996019	Calcium	103		P	80 - 120
1996019	Iron	106		P	80 - 120
1996019	Magnesium	103		P	80 - 120
1996019	Potassium	105		P	80 - 120
1996019	Sodium	107		P	80 - 120
1996019	Zinc	103		P	80 - 120
1996406	Calcium	105	107	P/P	80 - 120
1996406	Iron	103	104	P/P	80 - 120
1996406	Magnesium	106	108	P/P	80 - 120
1996406	Potassium	102	104	P/P	80 - 120
1996406	Sodium	101		P	80 - 120
1996406	Zinc	102	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996019	Arsenic	106		P	80 - 120
1996019	Cadmium	104		P	80 - 120
1996019	Chromium	101		P	80 - 120
1996019	Copper	98.0		P	80 - 120
1996019	Lead	101		P	80 - 120
1996019	Nickel	102		P	80 - 120
1996019	Silver	93.3		P	80 - 120
1996406	Arsenic	104	103	P/P	80 - 120
1996406	Cadmium	104	105	P/P	80 - 120
1996406	Chromium	102	101	P/P	80 - 120
1996406	Copper	101	98.9	P/P	80 - 120
1996406	Lead	102	102	P/P	80 - 120
1996406	Nickel	103	102	P/P	80 - 120
1996406	Silver	93.4	93.0	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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P346462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996518	Kjeldahl Nitrogen	108	104	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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P346209

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996485	O-Phosphate-P	96.4	97.9	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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P346180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996365	Simazine	106	82.5	P/P	54 - 148
1996365	Terbufos	95.2	101	P/P	53 - 126
1996365	Terbutylazine	104	90.1	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P346310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996317	Aldrin	50.2	42.3	P/P	26 - 96.0
1996317	Alpha-BHC	83.7	88.0	P/P	51 - 123
1996317	Alpha-Chlordane	75.7	65.0	P/P	45 - 120
1996317	Beta-BHC	85.5	96.6	P/P	43 - 146
1996317	Carbophenothion	75.4	67.7	P/P	26 - 179
1996317	Chlorothalonil	32.5	27.1	P/P	10 - 215
1996317	Cypermethrin	64.1	58.5	P/P	35 - 169
1996317	DDD-p,p'	90.9	87.2	P/P	49 - 131
1996317	DDE-p,p'	64.3	55.0	P/P	39 - 127
1996317	DDT-p,p'	63.3	65.0	P/P	49 - 120
1996317	Delta-BHC	97.0	107	P/P	49 - 187
1996317	Dicofol	93.3	85.4	P/P	10 - 129
1996317	Dieldrin	84.5	71.7	P/P	46 - 132
1996317	Endosulfan I	92.9	72.4	P/P	57 - 130
1996317	Endosulfan II	94.1	80.9	P/P	52 - 148
1996317	Endosulfan Sulfate	76.7	78.6	P/P	55 - 129
1996317	Endrin	96.4	76.4	P/P	45 - 133
1996317	Endrin Aldehyde	75.2	60.3	P/P	26 - 140
1996317	Endrin Ketone	79.0	83.9	P/P	60 - 125
1996317	Gamma-BHC	128	107	P/P	50 - 145
1996317	Gamma-Chlordane	69.1	59.6	P/P	44 - 118
1996317	Heptachlor	60.4	52.1	P/P	35 - 106
1996317	Heptachlor Epoxide	85.5	73.2	P/P	52 - 123
1996317	Methoxychlor	78.6	79.3	P/P	54 - 132
1996317	Mirex	44.4	45.1	P/P	36 - 107
1996317	Permethrin	61.4	60.9	P/P	47 - 135
1996317	Trifluralin	60.1	61.3	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P346310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1996364	Chlordane	79.2	83.5	P/P	41 - 134
1996364	Toxaphene	57.7	53.9	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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P346244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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
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	Acesulfame K	137	115	P/P	40 - 140
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: P346211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996336	Turbidity	2.92	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P346311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996406	Calcium	1.72	Spike	P	0 - 20
1996406	Iron	0.949	Spike	P	0 - 20
1996406	Magnesium	0.931	Spike	P	0 - 20
1996406	Potassium	1.52	Spike	P	0 - 20
1996406	Sodium	1.13	Spike	P	0 - 20
1996406	Zinc	0.921	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P346311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996406	Arsenic	0.953	Spike	P	0 - 20
1996406	Cadmium	0.878	Spike	P	0 - 20
1996406	Chromium	1.53	Spike	P	0 - 20
1996406	Copper	1.76	Spike	P	0 - 20
1996406	Lead	0.526	Spike	P	0 - 20
1996406	Nickel	0.357	Spike	P	0 - 20
1996406	Silver	0.478	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: P346462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996518	Kjeldahl Nitrogen	2.85	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: P346209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996485	O-Phosphate-P	1.46	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: P346310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996317	Aldrin	17.2	Spike	P	0 - 30
1996317	Alpha-BHC	5.04	Spike	P	0 - 30
1996317	Alpha-Chlordane	15.2	Spike	P	0 - 30
1996317	Beta-BHC	12.3	Spike	P	0 - 30
1996317	Carbophenothion	10.8	Spike	P	0 - 30
1996317	Chlorothalonil	18.1	Spike	P	0 - 30
1996317	Cypermethrin	9.01	Spike	P	0 - 30
1996317	DDD-p,p'	4.13	Spike	P	0 - 30
1996317	DDE-p,p'	15.5	Spike	P	0 - 30
1996317	DDT-p,p'	2.73	Spike	P	0 - 30
1996317	Delta-BHC	9.45	Spike	P	0 - 30
1996317	Dicofol	8.85	Spike	P	0 - 30
1996317	Dieldrin	16.3	Spike	P	0 - 30
1996317	Endosulfan I	24.8	Spike	P	0 - 30
1996317	Endosulfan II	15.1	Spike	P	0 - 30
1996317	Endosulfan Sulfate	2.43	Spike	P	0 - 30
1996317	Endrin	23.2	Spike	P	0 - 30
1996317	Endrin Aldehyde	22.0	Spike	P	0 - 30
1996317	Endrin Ketone	5.94	Spike	P	0 - 30
1996317	Gamma-BHC	17.3	Spike	P	0 - 30
1996317	Gamma-Chlordane	14.8	Spike	P	0 - 30
1996317	Heptachlor	14.7	Spike	P	0 - 30
1996317	Heptachlor Epoxide	15.5	Spike	P	0 - 30
1996317	Methoxychlor	0.882	Spike	P	0 - 30
1996317	Mirex	1.48	Spike	P	0 - 30
1996317	Permethrin	0.835	Spike	P	0 - 30
1996317	Trifluralin	1.94	Spike	P	0 - 30
LFB	Aldrin	34.2	LCS	F	0 - 30
LFB	Alpha-BHC	1.17	LCS	P	0 - 30
LFB	Alpha-Chlordane	12.1	LCS	P	0 - 30
LFB	Beta-BHC	3.75	LCS	P	0 - 30
LFB	Carbophenothion	14.8	LCS	P	0 - 30
LFB	Chlorothalonil	0.822	LCS	P	0 - 30
LFB	Cypermethrin	32.8	LCS	F	0 - 30
LFB	DDD-p,p'	0.0603	LCS	P	0 - 30
LFB	DDE-p,p'	7.34	LCS	P	0 - 30
LFB	DDT-p,p'	20.7	LCS	P	0 - 30
LFB	Delta-BHC	0.690	LCS	P	0 - 30
LFB	Dicofol	10.4	LCS	P	0 - 30
LFB	Dieldrin	29.1	LCS	P	0 - 30
LFB	Endosulfan I	23.7	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P346310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endosulfan II	13.5	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.39	LCS	P	0 - 30
LFB	Endrin	8.63	LCS	P	0 - 30
LFB	Endrin Aldehyde	9.12	LCS	P	0 - 30
LFB	Endrin Ketone	4.13	LCS	P	0 - 30
LFB	Gamma-BHC	3.54	LCS	P	0 - 30
LFB	Gamma-Chlordane	8.07	LCS	P	0 - 30
LFB	Heptachlor	25.8	LCS	P	0 - 30
LFB	Heptachlor Epoxide	19.3	LCS	P	0 - 30
LFB	Methoxychlor	3.45	LCS	P	0 - 30
LFB	Mirex	15.7	LCS	P	0 - 30
LFB	Permethrin	17.1	LCS	P	0 - 30
LFB	Trifluralin	5.91	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P346310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996364	Chlordane	4.88	Spike	P	0 - 30
1996364	Toxaphene	6.84	Spike	P	0 - 30
LFB	Chlordane	4.38	LCS	P	0 - 30
LFB	Toxaphene	2.30	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	MCP	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	Acesulfame K	17.7	Spike	P	0 - 30
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: P346476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996337	TDS	3.70	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P346448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1996337	TSS	4.26	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: 1996494
Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.1	P	30 - 160
EPA 8321B	Diuron-d6	31.5	P	30 - 160
EPA 8321B	Endothall-d6	111	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	60.3	P	40 - 160
EPA 8321B	Primidone-d5	44.3	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	40 - 160

Lab Sample ID: 1996495
Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	21.9	F	30 - 160
EPA 8321B	Carbaryl-d7	34.8	P	30 - 160

Lab Sample ID: 1996496
Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	58.6	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	46.7	P	34 - 101
EPA 8276	Decachlorobiphenyl	61.3	P	31 - 108
EPA 8276	PCNB	86.2	P	62 - 142

Lab Sample ID: 1996497
Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	90.6	P	71 - 126
EPA 8270D	Terbufos-d10	91.6	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84274

Included Lab Sample IDs: 1996491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A84275

Included Lab Sample IDs: 1996489

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A84304

Included Lab Sample IDs: 1996489

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84329

Included Lab Sample IDs: 1996490

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: 1996489

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84368

Included Lab Sample IDs: 1996498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	101	P/P	90 - 110
Iron	101	99.5	P/P	90 - 110
Magnesium	104	101	P/P	90 - 110
Potassium	102	100	P/P	90 - 110
Sodium	103	100	P/P	90 - 110
Zinc	101	99.9	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84391

Included Lab Sample IDs: 1996496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	89.2		P	80 - 120
Alpha-BHC	98.4		P	80 - 120
Alpha-Chlordane	95.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84391

Included Lab Sample IDs: 1996496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beta-BHC	101		P	80 - 120
Carbophenothion	84.3		P	80 - 120
Chlorothalonil	90.4		P	80 - 120
Cypermethrin	92.7		P	80 - 120
DDD-p,p'	109		P	80 - 120
DDE-p,p'	96.2		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	102		P	80 - 120
Dicofol	118		P	80 - 120
Dieldrin	97.4		P	80 - 120
Endosulfan I	88.5		P	80 - 120
Endosulfan II	84.8		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	91.6		P	80 - 120
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	100		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	93.7		P	80 - 120
Heptachlor	93.0		P	80 - 120
Heptachlor Epoxide	93.7		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	95.5		P	80 - 120
Permethrin	94.9		P	80 - 120
Trifluralin	98.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84399

Included Lab Sample IDs: 1996498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	105	P/P	90 - 110
Cadmium	102	105	P/P	90 - 110
Chromium	100	104	P/P	90 - 110
Copper	101	104	P/P	90 - 110
Lead	100	103	P/P	90 - 110
Silver	102	105	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84402

Included Lab Sample IDs: 1996494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	115	88.4	P/P	60 - 150
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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84427

Included Lab Sample IDs: 1996490

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

Reference Method: EPA 8321B

Run ID: A84454

Included Lab Sample IDs: 1996494

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: SM 2320 B-97

Run ID: A84458

Included Lab Sample IDs: 1996489

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: 1996489

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84463

Included Lab Sample IDs: 1996490

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	108	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84470

Included Lab Sample IDs: 1996498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	92.7	95.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84488

Included Lab Sample IDs: 1996495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	115	125	P/P	50 - 150
Acetaminophen	148	139	P/P	60 - 150
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	145	143	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A84488
Included Lab Sample IDs: 1996495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbaryl	103	108	P/P	60 - 150
Carbofuran	122	121	P/P	50 - 150
Hydrocodone	111	109	P/P	60 - 150
Imazapyr	106	103	P/P	50 - 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: 1996490

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	97.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A84494
Included Lab Sample IDs: 1996490

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	93.8	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A84506
Included Lab Sample IDs: 1996497

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
Bromacil	95.1		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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84506

Included Lab Sample IDs: 1996497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fonofos	97.7		P	80 - 120
Hexazinone	97.0		P	80 - 120
Malathion	96.0		P	80 - 120
Metalaxyl	102		P	80 - 120
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
Terbutylazine	98.2		P	80 - 120

Reference Method: EPA 8321B

Run ID: A84524

Included Lab Sample IDs: 1996494

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Diuron	106	108	P/P	60 - 150
Fenuron	103	104	P/P	60 - 150
Fluridone	120	124	P/P	60 - 160
Imidacloprid	97.2	96.6	P/P	60 - 150
Linuron	105	106	P/P	60 - 150

Reference Method: EPA 8276

Run ID: A84580

Included Lab Sample IDs: 1996496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	103		P	80 - 120
Toxaphene	76.3*		F	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							2.92	
EPA 200.7 Rev. 4.4	Calcium	107		103	105	107			1.72
	Iron	103		106	103	104			0.949
	Magnesium	108		103	106	108			0.931
	Potassium	102		105	102	104			1.52
	Sodium	102		107	101				1.13
	Zinc	102		103	102	103			0.921
EPA 200.8 Rev. 5.4	Arsenic	106		106	104	103			0.953
	Cadmium	106		104	104	105			0.878
	Chromium	99.9		101	102	101			1.53
	Copper	100		98.0	101	98.9			1.76
	Lead	101		101	102	102			0.526
	Nickel	104		102	103	102			0.357
	Silver	93.4		93.3	93.4	93.0			0.478
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	103		108	104				2.85
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	99.9		96.4	97.9				1.46
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	36.5	25.9	42.3	50.2		34.2		17.2
	Alpha-BHC	74.6	73.8	83.7	88.0		1.17		5.04
	Alpha-Chlordane	71.7	63.5	75.7	65.0		12.1		15.2
	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	103	107	85.5	96.6		3.75		12.3
	Bromacil	98.1	83.9				15.6		14.4
	Butylate	63.2	67.6	34.0	50.4		6.78		38.9
	Carbophenothion	66.6	57.5	75.4	67.7		14.8		10.8
	Chlorothalonil	92.0	91.3	32.5	27.1		0.822		18.1
	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	41.3	57.5	64.1	58.5		32.8		9.01
	DDD-p,p'	97.3	97.4	90.9	87.2		0.0603		4.13
	DDE-p,p'	60.7	56.4	55.0	64.3		7.34		15.5
	DDT-p,p'	56.6	69.7	65.0	63.3		20.7		2.73
	Delta-BHC	108	107	97.0	107		0.690		9.45
	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	82.0	91.1	93.3	85.4		10.4		8.85
	Dieldrin	91.8	68.5	71.7	84.5		29.1		16.3
	Disulfoton	87.7	81.0	92.3	98.1		7.89		6.02
	Endosulfan I	87.8	69.2	72.4	92.9		23.7		24.8
	Endosulfan II	97.1	84.8	94.1	80.9		13.5		15.1
	Endosulfan Sulfate	93.6	94.9	76.7	78.6		1.39		2.43
	Endrin	86.7	79.5	96.4	76.4		8.63		23.2
	Endrin Aldehyde	96.7	88.3	75.2	60.3		9.12		22.0
	Endrin Ketone	93.9	90.1	79.0	83.9		4.13		5.94

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	104	108	128	107	3.54	17.3
	Gamma-Chlordane	61.4	56.6	69.1	59.6	8.07	14.8
	Heptachlor	49.5	38.2	60.4	52.1	25.8	14.7
	Heptachlor Epoxide	88.5	72.9	85.5	73.2	19.3	15.5
	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	81.3	84.1	78.6	79.3	3.45	0.882
	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	24.0	28.0	44.4	45.1	15.7	1.48
	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	40.9	48.6	61.4	60.9	17.1	0.835
	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	52.2	49.2	60.1	61.3	5.91	1.94
EPA 8276	Chlordane	101	105	79.2	83.5	4.38	4.88
	Toxaphene	68.9	70.5	57.7	53.9	2.30	6.84
EPA 8321B	2,4-D	65.9		59.0	45.5		16.3
	3-Hydroxycarbofuran	105		77.2	65.4		16.5
	Acesulfame K	113		137	115		17.7
	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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Imazapyr	86.4	58.8	61.4		2.50
	Imidacloprid	125	199	189		4.68
	Linuron	92.1	73.5	79.9		8.33
	MCP	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				3.70	
SM 2540 D-97	TSS				4.26	
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	1996489
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1996498
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1996498
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1996489
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1996489
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1996490
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1996490
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1996490
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1996490
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1996491
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1996496
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1996497
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1996496
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1996495
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1996494
SM 2120 B / E31780	True Color measured at 450 nm	1996489
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1996489
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1996489
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1996489
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1996489
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1996490

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	05/31/2018			05/31/2018 15:23	William L. Brown IV	1996489
EPA 200.7 Rev. 4.4	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 19:45	Betina Topolski	1996498
EPA 200.8 Rev. 5.4	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/05/2018 18:27	Nadine Brooks	1996498
	05/31/2018	06/04/2018 15:00	Elliott D. Healy	06/08/2018 17:55	Nadine Brooks	1996498
EPA 300.0 Rev. 2.1	05/31/2018			06/05/2018 15:23	Lipi Saha	1996489
EPA 350.1 Rev. 2.0	05/31/2018			06/11/2018 13:16	Julia Storbeck	1996490
EPA 351.2 Rev. 2.0	05/31/2018	06/06/2018 10:40	Adrian Shelby	06/08/2018 14:36	Joseph Suarez	1996490
EPA 353.2 Rev. 2.0	05/31/2018			06/04/2018 11:28	Lauren Bottorf	1996490
EPA 365.1 Rev. 2.0	05/31/2018	06/05/2018 11:00	Sima Feizi	06/07/2018 11:59	Beverly Y. Sanders	1996490
EPA 365.1 Rev. 2.0 dissolved	05/31/2018			05/31/2018 16:00	Megan Treadwell	1996491
EPA 8270D	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/05/2018 23:39	Dinesh Mishra	1996496
	05/31/2018	06/01/2018 13:30	Fe-Val Siddell	06/05/2018 17:02	Vandana T. Nagar	1996497
EPA 8276	05/31/2018	06/01/2018 09:00	Rasheda Ghaffari	06/12/2018 02:37	Dinesh Mishra	1996496
EPA 8321B	05/31/2018	06/01/2018 16:00	Hoor Shaik	06/05/2018 13:30	Mohammad Ghaffari	1996494
	05/31/2018	06/05/2018 12:00	Hoor Shaik	06/07/2018 05:01	Juyoung Kim	1996494
	05/31/2018	06/05/2018 12:00	Hoor Shaik	06/09/2018 07:06	Juyoung Kim	1996494
	05/31/2018	06/05/2018 12:00	Hoor Shaik	06/09/2018 07:40	Juyoung Kim	1996495
	05/31/2018	06/05/2018 12:00	Hoor Shaik	06/11/2018 20:28	Juyoung Kim	1996494
SM 2120 B	05/31/2018			06/01/2018 15:51	Tanya Welborn	1996489
SM 2320 B-97	05/31/2018			06/07/2018 03:20	Dale L. Simmons	1996489
SM 2540 C-97	05/31/2018			06/01/2018 15:40	William L. Brown IV	1996489
SM 2540 D-97	05/31/2018			06/01/2018 14:30	William L. Brown IV	1996489
SM 4500 F-C-97	05/31/2018			06/07/2018 03:20	Dale L. Simmons	1996489
SM 5310 B-00	05/31/2018			06/08/2018 16:40	Megan Treadwell	1996490