

Chemical Analysis Report

CEN-DIST-2018-05-11-01

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

Event Description: **Kasey / Dot / Fairhope**

Request ID: **RQ-2018-05-07-62**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

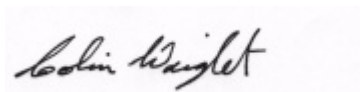
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Certified by: Colin Wright, Program Administrator

Date Certified: 15-JUN-2018 11:07



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 Dot @ Center

Collection Date/Time: 05/10/2018 09:44

Field ID: G2CE0067

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992341	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P345148	
	EPA 300.0 Rev. 2.1	Chloride	8.5		mg Cl/L	P345433	
		Sulfate	12		mg SO4/L	P345435	
	SM 2120 B	Color (true)	11		PCU	P345138	
	SM 2320 B-97	Total Alkalinity	64		mg CaCO3/L	P345483	
	SM 2540 C-97	TDS	95.5	A	mg/L	P345721	
	SM 2540 D-97	TSS	4	IA	mg/L	P345713	
	SM 4500 F-C-97	Fluoride	0.057	I	mg F/L	P345486	
1992342	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P345385	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P345535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345409	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P345442	
	SM 5310 B-00	Organic Carbon	5.0		mg C/L	P345545	
1992343	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345152	
1992352	EPA 8321B	2,4-D	0.0027	I	ug/L	P345194	
		Bentazon	0.0073		ug/L	P345194	
		MCP	0.0020	U	ug/L	P345194	
		Triclopyr**	0.0040	U	ug/L	P345194	
		Imidacloprid	0.0079	I	ug/L	P345194	
		Diuron	0.0037	I	ug/L	P345194	
		Pyraclostrobin**	0.0020	U	ug/L	P345194	
		Primidone**	0.0040	U	ug/L	P345194	
		Linuron	0.0040	U	ug/L	P345194	
		Acetaminophen**	0.012	I	ug/L	P345194	
		Fenuron	0.016	U	ug/L	P345194	
		Imazapyr**	0.0078	I	ug/L	P345194	
		Carbamazepine**	4.0E-04	U	ug/L	P345194	
		Fluridone**	0.0020		ug/L	P345194	
		Hydrocodone**	8.0E-04	U	ug/L	P345194	
		Sucralose**	0.088		ug/L	P345129	

Ref. Method and Comment:

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

Sample Location: Kasey Lake @ Center

Collection Date/Time: 05/10/2018 10:27

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992338	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P345148	
	EPA 300.0 Rev. 2.1	Chloride	8.2		mg Cl/L	P345433	
		Sulfate	4.4		mg SO4/L	P345435	
	SM 2120 B	Color (true)	34		PCU	P345138	
	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P345483	
	SM 2540 C-97	TDS	53		mg/L	P345721	
	SM 2540 D-97	TSS	6	I	mg/L	P345713	

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992338	SM 4500 F-C-97	Fluoride	0.047	I	mg F/L	P345486	
1992339	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P345385	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P345535	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345409	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P345442	
	SM 5310 B-00	Organic Carbon	9.6		mg C/L	P345624	
1992340	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345152	
1992363	EPA 200.7 Rev. 4.4	Calcium	9.14		mg/L	P345280	
		Iron	35	I	ug/L	P345280	
		Magnesium	1.53		mg/L	P345280	
		Potassium	1.8		mg/L	P345280	
		Sodium	5.0		mg/L	P345280	
		Zinc	5.0	U	ug/L	P345280	
	EPA 200.8 Rev. 5.4	Arsenic	0.18	I	ug/L	P345280	
		Cadmium	0.020	U	ug/L	P345280	
		Chromium	0.40	U	ug/L	P345280	
		Copper	0.51	I	ug/L	P345280	
		Lead	0.064	I	ug/L	P345280	
		Nickel	0.20	U	ug/L	P345280	
		Silver	0.010	U	ug/L	P345280	

Ref. Method and Comment:

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

Sample Location: Kasey Lake @ Center

Collection Date/Time: 05/10/2018 10:27

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992350	EPA 8321B	Aldicarb	0.020	U	ug/L	P345194	
		Aldicarb Sulfone	0.0020	U	ug/L	P345194	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P345194	
		Carbaryl	0.0020	U	ug/L	P345194	
		Carbofuran	0.0020	U	ug/L	P345194	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P345194	
		Methiocarb	0.0020	U	ug/L	P345194	
		Methomyl	0.0020	U	ug/L	P345194	
		Oxamyl	0.0020	U	ug/L	P345194	
		Propoxur	0.0020	U	ug/L	P345194	
1992351		2,4-D	0.010		ug/L	P345194	
		Bentazon	0.015		ug/L	P345194	
		MCP	0.0067	I	ug/L	P345194	
		Triclopyr**	0.0040	U	ug/L	P345194	
		Imidacloprid	0.0020	U	ug/L	P345194	
		Diuron	0.0020	U	ug/L	P345194	
		Pyraclostrobin**	0.0020	U	ug/L	P345194	
		Primidone**	0.0040	U	ug/L	P345194	

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992351	EPA 8321B	Linuron	0.0040	U	ug/L	P345194	
		Acetaminophen**	0.0080	U	ug/L	P345194	
		Fenuron	0.016	U	ug/L	P345194	
		Imazapyr**	0.0040	U	ug/L	P345194	
		Carbamazepine**	4.0E-04	U	ug/L	P345194	
		Fluridone**	4.0E-04	U	ug/L	P345194	
		Hydrocodone**	8.0E-04	U	ug/L	P345194	
		Sucralose**	0.11		ug/L	P345005	
		Glyphosate**	0.10	U	ug/L	P345005	
		AMPA**	0.10	U	ug/L	P345005	
		Endothal**	0.10	U	ug/L	P345005	MS
		Glufosinate**	0.10	U	ug/L	P345005	
1992353	EPA 8270D	Aldrin	4.2	UJ	ng/L	P345389	SUR
		Alpha-BHC	2.1	UJ	ng/L	P345389	SUR
		Beta-BHC	4.2	UJ	ng/L	P345389	SUR
		Delta-BHC	4.2	UJ	ng/L	P345389	SUR
		Gamma-BHC	4.2	UJ	ng/L	P345389	SUR
		Carbophenothion	4.2	UJ	ng/L	P345389	SUR
		Chlorothalonil	2.1	UJ	ng/L	P345389	SUR
		Cypermethrin	21	UJ	ng/L	P345389	SUR
		DDD-p,p'	3.2	UJ	ng/L	P345389	SUR
		DDE-p,p'	3.2	UJ	ng/L	P345389	SUR
		DDT-p,p'	3.2	UJ	ng/L	P345389	SUR
		Dieldrin	4.2	UJ	ng/L	P345389	SUR
		Endosulfan I	4.2	UJ	ng/L	P345389	SUR
		Endosulfan II	4.2	UJ	ng/L	P345389	SUR
		Endosulfan Sulfate	2.1	UJ	ng/L	P345389	SUR
		Endrin	2.1	UJ	ng/L	P345389	SUR
		Endrin Aldehyde	2.1	UJ	ng/L	P345389	SUR
		Heptachlor	1.6	UJ	ng/L	P345389	SUR
		Heptachlor Epoxide	2.1	UJ	ng/L	P345389	SUR
		Methoxychlor	4.2	UJ	ng/L	P345389	SUR
		Mirex	2.1	UJ	ng/L	P345389	SUR
		Permethrin	11	UJ	ng/L	P345389	SUR
		Trifluralin	1.1	UJ	ng/L	P345389	SUR
		Alpha-Chlordane	1.1	UJ	ng/L	P345389	SUR
		Gamma-Chlordane	1.1	UJ	ng/L	P345389	SUR
		Endrin Ketone	2.1	UJ	ng/L	P345389	SUR
		Dicofol	32	UJ	ng/L	P345389	SUR
	EPA 8276	Chlordane**	2.7	U	ng/L	P345389	
		Toxaphene**	32	U	ng/L	P345389	
1992354	EPA 8270D	Alachlor	0.25	U	ng/L	P345251	
		Ametryn	4.4		ng/L	P345251	
		Atrazine	210		ng/L	P345251	
		Atrazine Desethyl	24		ng/L	P345251	

Field ID: G2CE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992354	EPA 8270D	Azinphos Methyl	2.3	U	ng/L	P345251	
		Bromacil	0.51	U	ng/L	P345251	
		Butylate	0.40	U	ng/L	P345251	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P345251	
		Chlorpyrifos Methyl	0.10	U	ng/L	P345251	
		Demeton	2.0	U	ng/L	P345251	
		Diazinon	0.13	U	ng/L	P345251	
		Disulfoton	0.51	U	ng/L	P345251	
		EPTC	1.3	U	ng/L	P345251	
		Ethion	0.15	U	ng/L	P345251	
		Ethoprop	0.10	U	ng/L	P345251	
		Fenamiphos	0.25	U	ng/L	P345251	
		Fipronil	0.36	I	ng/L	P345251	
		Fipronil Sulfide	0.97		ng/L	P345251	
		Fipronil Sulfone	4.1		ng/L	P345251	
		Hexazinone	0.51	U	ng/L	P345251	
		Malathion	0.35	U	ng/L	P345251	
		Metribuzin	0.20	U	ng/L	P345251	
		Mevinphos	0.51	U	ng/L	P345251	
		Molinate	0.30	U	ng/L	P345251	
		Norflurazon	0.51	U	ng/L	P345251	
		Pendimethalin	1.0	U	ng/L	P345251	
		Phorate	0.25	U	ng/L	P345251	
		Prometon	0.91	U	ng/L	P345251	
		Prometryn	0.20	U	ng/L	P345251	
		Simazine	0.51	U	ng/L	P345251	
		Terbufos	0.10	U	ng/L	P345251	
		Terbuthylazine	0.43	U	ng/L	P345251	
		Fonofos	0.20	U	ng/L	P345251	
		Metalaxyl	0.25	U	ng/L	P345251	
		Metolachlor	0.47	I	ng/L	P345251	
		Acetochlor	0.25	U	ng/L	P345251	
		Cyanazine	0.51	UJ	ng/L	P345251	CCV
		Parathion Ethyl	0.25	U	ng/L	P345251	
		Parathion Methyl	0.25	U	ng/L	P345251	

Ref. Method and Comment:

EPA 8270D: Refer to the narrative for an explanation of QC Codes. Reported results qualified with J due to surrogate below control limits; the sample was subsequently re-analyzed (after expiration) with acceptable surrogate recovery and the same analytical results were obtained. Insufficient sample available to perform duplicate matrix spikes.

EPA 8276: Insufficient sample available to perform duplicate matrix spikes.

EPA 8270D: MS accuracy for Simazine and Atrazine 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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345148

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345280

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: P345280

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: P345433

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345435

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345385

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345535

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: P345409

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345442

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345152

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

Reference Method: EPA 8270D
Batch ID: P345251

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: P345251

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: P345389

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: P345389

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

Reference Method: EPA 8321B
 Batch ID: P345005

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P345005

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P345129

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P345194

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.030	I	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: SM 2120 B
Batch ID: P345138

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P345483

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P345721

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P345713

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345486

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P345545

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00
Batch ID: P345624

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: P345280

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.8		P	85 - 115
Iron	104		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	98.3		P	85 - 115
Sodium	97.5		P	85 - 115
Zinc	99.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345280

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	108		P	85 - 115
Copper	103		P	85 - 115
Lead	105		P	85 - 115
Nickel	102		P	85 - 115
Silver	102		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P345433

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P345435

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P345385

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P345535

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: P345409

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345442

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P345152

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P345251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	92.0	95.0	P/P	74 - 119
Alachlor	93.6	96.6	P/P	75 - 118
Ametryn	86.9	73.0	P/P	59 - 137
Atrazine	94.3	99.3	P/P	73 - 120
Atrazine Desethyl	96.9	97.0	P/P	19 - 129
Azinphos Methyl	94.8	92.5	P/P	65 - 181
Bromacil	81.9	80.5	P/P	43 - 123
Butylate	58.8	60.8	P/P	28 - 85.0
Chlorpyrifos Ethyl	88.3	89.9	P/P	55 - 112
Chlorpyrifos Methyl	89.9	90.0	P/P	35 - 124

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P345251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	186	191	P/P	26 - 262
Demeton	64.8	68.7	P/P	43 - 122
Diazinon	100	104	P/P	72 - 120
Disulfoton	85.2	88.9	P/P	45 - 137
EPTC	55.5	59.0	P/P	28 - 95.0
Ethion	87.3	93.3	P/P	63 - 127
Ethoprop	68.8	80.7	P/P	63 - 109
Fenamiphos	89.6	89.7	P/P	66 - 136
Fipronil	84.6	81.8	P/P	63 - 126
Fipronil Sulfide	74.9	71.1	P/P	59 - 123
Fipronil Sulfone	69.3	66.2	P/P	56 - 122
Fonofos	91.4	91.3	P/P	64 - 114
Hexazinone	93.8	103	P/P	49 - 144
Malathion	84.4	84.8	P/P	68 - 131
Metalaxyl	93.3	93.8	P/P	57 - 126
Metolachlor	91.5	95.6	P/P	75 - 118
Metribuzin	152	156	P/P	46 - 169
Mevinphos	73.9	65.3	P/P	34 - 126
Molinate	57.6	65.6	P/P	37 - 101
Norflurazon	69.2	72.1	P/P	63 - 127
Parathion Ethyl	91.2	94.2	P/P	78 - 109
Parathion Methyl	90.4	90.3	P/P	74 - 123
Pendimethalin	111	121	P/P	51 - 130
Phorate	79.6	78.6	P/P	53 - 116
Prometon	90.0	88.8	P/P	66 - 124
Prometryn	91.7	96.5	P/P	66 - 124
Simazine	97.9	103	P/P	62 - 134
Terbufos	89.1	91.6	P/P	59 - 115
Terbutylazine	94.3	97.1	P/P	76 - 113

Reference Method: EPA 8270D

Batch ID: P345389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	58.9	46.3	P/P	24 - 89.0
Alpha-BHC	75.1	74.0	P/P	58 - 117
Alpha-Chlordane	78.5	75.9	P/P	56 - 115
Beta-BHC	82.2	90.8	P/P	55 - 137
Carbophenothion	78.9	69.7	P/P	37 - 145
Chlorothalonil	59.0	64.6	P/P	26 - 163
Cypermethrin	99.8	89.0	P/P	42 - 156
DDD-p,p'	98.7	97.2	P/P	59 - 129
DDE-p,p'	79.1	74.9	P/P	52 - 117
DDT-p,p'	87.0	82.7	P/P	48 - 128
Delta-BHC	113	117	P/P	59 - 158
Dicofol	86.1	78.3	P/P	19 - 124
Dieldrin	77.1	82.0	P/P	57 - 126
Endosulfan I	92.9	84.0	P/P	59 - 133
Endosulfan II	79.4	74.9	P/P	58 - 148
Endosulfan Sulfate	110	97.7	P/P	56 - 135
Endrin	81.9	77.0	P/P	50 - 140
Endrin Aldehyde	88.8	82.9	P/P	47 - 141

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P345389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin Ketone	109	96.4	P/P	63 - 123
Gamma-BHC	81.2	89.8	P/P	59 - 132
Gamma-Chlordane	75.2	74.0	P/P	55 - 112
Heptachlor	60.2	58.2	P/P	45 - 102
Heptachlor Epoxide	81.1	77.6	P/P	61 - 116
Methoxychlor	91.4	89.1	P/P	60 - 133
Mirex	69.1	66.2	P/P	40 - 98.0
Permethrin	83.7	74.2	P/P	45 - 131
Trifluralin	69.6	70.3	P/P	38 - 179

Reference Method: EPA 8276

Batch ID: P345389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	74.6	61.1	P/P	47 - 125
Toxaphene	61.2	56.3	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P345005

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	76.4		P	40 - 140
Endothall	136		P	40 - 140
Glufosinate	92.6		P	40 - 140
Glyphosate	99.9		P	40 - 140
Sucralose	109		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P345129

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P345194

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.0		P	40 - 150
3-Hydroxycarbofuran	87.9		P	40 - 150
Acetaminophen	98.3		P	30 - 150
Aldicarb	70.6		P	30 - 150
Aldicarb Sulfone	98.7		P	40 - 150
Aldicarb Sulfoxide	89.5		P	40 - 150
Bentazon	79.5		P	30 - 150
Carbamazepine	61.5		P	40 - 150
Carbaryl	58.0		P	40 - 150
Carbofuran	60.7		P	40 - 150
Diuron	62.2		P	40 - 150
Fenuron	96.2		P	40 - 150
Fluridone	83.0		P	40 - 150
Hydrocodone	98.8		P	40 - 150
Imazapyr	85.6		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
 Batch ID: P345194

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	102		P	40 - 160
Linuron	97.2		P	40 - 150
MCPP	96.7		P	40 - 150
Methiocarb	80.6		P	40 - 150
Methomyl	88.8		P	40 - 150
Oxamyl	80.1		P	40 - 150
Primidone	98.1		P	40 - 150
Propoxur	60.3		P	40 - 150
Pyraclostrobin	66.3		P	40 - 150
Triclopyr	94.9		P	40 - 150

Reference Method: SM 2320 B-97
 Batch ID: P345483

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

Reference Method: SM 4500 F-C-97
 Batch ID: P345486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.6		P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P345545

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

Reference Method: SM 5310 B-00
 Batch ID: P345624

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P345280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992363	Calcium	100		P	80 - 120
1992363	Iron	103	103	P/P	80 - 120
1992363	Magnesium	103	104	P/P	80 - 120
1992363	Potassium	96.7	96.4	P/P	80 - 120
1992363	Sodium	99.1		P	80 - 120
1992363	Zinc	102	101	P/P	80 - 120
1992415	Calcium	101		P	80 - 120
1992415	Iron	104		P	80 - 120
1992415	Magnesium	106		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992415	Potassium	96.8		P	80 - 120
1992415	Sodium	92.2		P	80 - 120
1992415	Zinc	99.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992363	Arsenic	101	104	P/P	80 - 120
1992363	Cadmium	102	105	P/P	80 - 120
1992363	Chromium	107	111	P/P	80 - 120
1992363	Copper	99.8	105	P/P	80 - 120
1992363	Lead	104	107	P/P	80 - 120
1992363	Nickel	99.4	102	P/P	80 - 120
1992363	Silver	98.2	103	P/P	80 - 120
1992415	Arsenic	105		P	80 - 120
1992415	Cadmium	110		P	80 - 120
1992415	Chromium	101		P	80 - 120
1992415	Copper	105		P	80 - 120
1992415	Lead	106		P	80 - 120
1992415	Nickel	100		P	80 - 120
1992415	Silver	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992246	Chloride	96.9		P	90 - 110
1992309	Chloride	98.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345435

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992246	Sulfate	93.8		P	90 - 110
1992309	Sulfate	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992310	Ammonia-N	97.5	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992301	Kjeldahl Nitrogen	100	90.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992301	NO2NO3-N	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992342	Total-P	103	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P345152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992307	O-Phosphate-P	101	100	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P345251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990887	Acetochlor	99.5	94.0	P/P	67 - 125
1990887	Alachlor	83.5	81.4	P/P	69 - 123
1990887	Ametryn	92.7	83.5	P/P	52 - 151
1990887	Atrazine Desethyl	106	108	P/P	10 - 129
1990887	Azinphos Methyl	82.5	85.2	P/P	48 - 200
1990887	Bromacil	115	117	P/P	46 - 130
1990887	Butylate	45.1	49.2	P/P	10 - 85.0
1990887	Chlorpyrifos Ethyl	88.4	83.5	P/P	54 - 115
1990887	Chlorpyrifos Methyl	91.5	88.4	P/P	44 - 117
1990887	Cyanazine	156	163	P/P	10 - 262
1990887	Demeton	59.9	62.2	P/P	24 - 145
1990887	Diazinon	114	112	P/P	66 - 129
1990887	Disulfoton	102	95.3	P/P	45 - 139
1990887	EPTC	44.5	45.4	P/P	10 - 86.0
1990887	Ethion	92.0	87.7	P/P	59 - 133
1990887	Ethoprop	97.8	76.7	P/P	54 - 116
1990887	Fenamiphos	92.2	82.7	P/P	55 - 140
1990887	Fipronil	75.1	70.3	P/P	37 - 142
1990887	Fipronil Sulfide	66.2	58.2	P/P	37 - 130
1990887	Fipronil Sulfone	54.6	45.3	P/P	18 - 143
1990887	Fonofos	101	99.7	P/P	55 - 118
1990887	Hexazinone	106	101	P/P	62 - 140
1990887	Malathion	90.9	88.1	P/P	64 - 132
1990887	Metalaxyl	92.5	97.0	P/P	55 - 129
1990887	Metolachlor	97.4	95.0	P/P	56 - 137
1990887	Metribuzin	166	177	P/P	16 - 218
1990887	Mevinphos	76.5	78.0	P/P	34 - 129
1990887	Molinate	62.4	57.9	P/P	16 - 99.0
1990887	Norflurazon	60.6	50.8	P/P	43 - 135
1990887	Parathion Ethyl	92.8	96.8	P/P	71 - 112
1990887	Parathion Methyl	96.6	91.4	P/P	65 - 127
1990887	Pendimethalin	138	131	P/P	35 - 159
1990887	Phorate	83.6	91.1	P/P	41 - 129
1990887	Prometon	82.6	94.2	P/P	56 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P345251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1990887	Prometryn	96.5	96.6	P/P	65 - 130
1990887	Terbufos	106	106	P/P	53 - 126
1990887	Terbutylazine	99.8	99.2	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P345389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992353	Aldrin	40.6		P	26 - 96.0
1992353	Alpha-BHC	89.4		P	51 - 123
1992353	Alpha-Chlordane	54.0		P	45 - 120
1992353	Beta-BHC	87.6		P	43 - 146
1992353	Carbophenothion	74.5		P	26 - 179
1992353	Chlorothalonil	104		P	10 - 215
1992353	Cypermethrin	94.3		P	35 - 169
1992353	DDD-p,p'	68.6		P	49 - 131
1992353	DDE-p,p'	50.5		P	39 - 127
1992353	DDT-p,p'	62.3		P	49 - 120
1992353	Delta-BHC	148		P	49 - 187
1992353	Dicofol	70.9		P	10 - 129
1992353	Dieldrin	55.3		P	46 - 132
1992353	Endosulfan I	84.2		P	57 - 130
1992353	Endosulfan II	88.8		P	52 - 148
1992353	Endosulfan Sulfate	97.4		P	55 - 129
1992353	Endrin	58.7		P	45 - 133
1992353	Endrin Aldehyde	44.7		P	26 - 140
1992353	Endrin Ketone	95.0		P	60 - 125
1992353	Gamma-BHC	86.7		P	50 - 145
1992353	Gamma-Chlordane	52.9		P	44 - 118
1992353	Heptachlor	47.1		P	35 - 106
1992353	Heptachlor Epoxide	69.1		P	52 - 123
1992353	Methoxychlor	76.8		P	54 - 132
1992353	Mirex	60.1		P	36 - 107
1992353	Permethrin	68.9		P	47 - 135
1992353	Trifluralin	55.2		P	32 - 228

Reference Method: EPA 8276
Batch ID: P345389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992353	Chlordane	63.4		P	41 - 134
1992353	Toxaphene	47.4		P	39 - 158

Reference Method: EPA 8321B
Batch ID: P345005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1991713	AMPA	61.2	61.9	P/P	40 - 140
1991713	Endothall	152	142	F/F	40 - 140
1991713	Glufosinate	98.9	96.7	P/P	40 - 140
1991713	Glyphosate	103	97.9	P/P	40 - 140
1991713	Sucralose	97.2	99.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P345129

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992563	Sucralose	111	107	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P345194

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992331	2,4-D	76.0	72.8	P/P	40 - 150
1992331	3-Hydroxycarbofuran	87.1	92.5	P/P	40 - 150
1992331	Acetaminophen	95.0	92.5	P/P	30 - 150
1992331	Aldicarb	54.2	61.8	P/P	30 - 150
1992331	Aldicarb Sulfone	101	103	P/P	40 - 150
1992331	Aldicarb Sulfoxide	83.5	82.3	P/P	40 - 150
1992331	Bentazon	45.6	44.3	P/P	30 - 150
1992331	Carbamazepine	53.4	56.7	P/P	40 - 150
1992331	Carbaryl	51.2	50.8	P/P	40 - 150
1992331	Carbofuran	50.8	53.7	P/P	40 - 150
1992331	Diuron	52.4	55.3	P/P	40 - 150
1992331	Fenuron	85.2	91.1	P/P	40 - 150
1992331	Fluridone	75.3	77.3	P/P	40 - 150
1992331	Hydrocodone	106	109	P/P	40 - 150
1992331	Imazapyr	100	99.6	P/P	40 - 150
1992331	Imidacloprid	152	159	P/P	40 - 160
1992331	Linuron	92.3	91.6	P/P	40 - 150
1992331	MCPP	74.5	71.5	P/P	40 - 150
1992331	Methiocarb	79.8	82.0	P/P	40 - 150
1992331	Methomyl	83.5	85.5	P/P	40 - 150
1992331	Oxamyl	76.7	78.6	P/P	40 - 150
1992331	Primidone	103	111	P/P	40 - 150
1992331	Propoxur	52.4	51.7	P/P	40 - 150
1992331	Pyraclostrobin	72.0	71.6	P/P	40 - 150
1992331	Triclopyr	81.1	73.8	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P345486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992225	Fluoride	94.9	93.8	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P345545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992342	Organic Carbon	93.3	94.1	P/P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P345624

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1991039	Organic Carbon	98.0	97.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992295	Turbidity	3.43	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992363	Calcium	0.368	Spike	P	0 - 20
1992363	Iron	0.549	Spike	P	0 - 20
1992363	Magnesium	0.806	Spike	P	0 - 20
1992363	Potassium	0.183	Spike	P	0 - 20
1992363	Sodium	0.0954	Spike	P	0 - 20
1992363	Zinc	0.195	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992363	Arsenic	3.25	Spike	P	0 - 20
1992363	Cadmium	2.01	Spike	P	0 - 20
1992363	Chromium	4.06	Spike	P	0 - 20
1992363	Copper	5.14	Spike	P	0 - 20
1992363	Lead	3.04	Spike	P	0 - 20
1992363	Nickel	3.03	Spike	P	0 - 20
1992363	Silver	4.33	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992246	Chloride	0.405	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345435

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992246	Sulfate	2.03	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992310	Ammonia-N	1.48	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P345535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992301	Kjeldahl Nitrogen	7.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P345409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992301	NO2NO3-N	0.380	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P345442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992342	Total-P	4.01	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P345152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992307	O-Phosphate-P	0.298	Spike	P	0 - 20

Reference Method: EPA 8270D
 Batch ID: P345251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990887	Acetochlor	5.66	Spike	P	0 - 30
1990887	Alachlor	2.24	Spike	P	0 - 30
1990887	Ametryn	10.5	Spike	P	0 - 30
1990887	Atrazine	0.386	Spike	P	0 - 30
1990887	Atrazine Desethyl	2.18	Spike	P	0 - 30
1990887	Azinphos Methyl	3.25	Spike	P	0 - 30
1990887	Bromacil	2.01	Spike	P	0 - 30
1990887	Butylate	8.61	Spike	P	0 - 30
1990887	Chlorpyrifos Ethyl	5.65	Spike	P	0 - 30
1990887	Chlorpyrifos Methyl	3.41	Spike	P	0 - 30
1990887	Cyanazine	4.30	Spike	P	0 - 30
1990887	Demeton	3.64	Spike	P	0 - 30
1990887	Diazinon	1.51	Spike	P	0 - 30
1990887	Disulfoton	6.36	Spike	P	0 - 30
1990887	EPTC	2.15	Spike	P	0 - 30
1990887	Ethion	4.78	Spike	P	0 - 30
1990887	Ethoprop	24.2	Spike	P	0 - 30
1990887	Fenamiphos	10.9	Spike	P	0 - 30
1990887	Fipronil	5.58	Spike	P	0 - 30
1990887	Fipronil Sulfide	7.13	Spike	P	0 - 30
1990887	Fipronil Sulfone	6.30	Spike	P	0 - 30
1990887	Fonofos	0.928	Spike	P	0 - 30
1990887	Hexazinone	5.43	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P345251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1990887	Malathion	3.16	Spike	P	0 - 30
1990887	Metalaxyl	4.71	Spike	P	0 - 30
1990887	Metolachlor	2.41	Spike	P	0 - 30
1990887	Metribuzin	6.39	Spike	P	0 - 30
1990887	Mevinphos	1.93	Spike	P	0 - 30
1990887	Molinate	7.42	Spike	P	0 - 30
1990887	Norflurazon	17.7	Spike	P	0 - 30
1990887	Parathion Ethyl	4.22	Spike	P	0 - 30
1990887	Parathion Methyl	5.48	Spike	P	0 - 30
1990887	Pendimethalin	4.86	Spike	P	0 - 30
1990887	Phorate	8.55	Spike	P	0 - 30
1990887	Prometon	8.17	Spike	P	0 - 30
1990887	Prometryn	0.0550	Spike	P	0 - 30
1990887	Simazine	7.53	Spike	P	0 - 30
1990887	Terbufos	0.436	Spike	P	0 - 30
1990887	Terbutylazine	0.626	Spike	P	0 - 30
LFB	Acetochlor	3.20	LCS	P	0 - 30
LFB	Alachlor	3.20	LCS	P	0 - 30
LFB	Ametryn	17.4	LCS	P	0 - 30
LFB	Atrazine	5.25	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.0371	LCS	P	0 - 30
LFB	Azinphos Methyl	2.45	LCS	P	0 - 30
LFB	Bromacil	1.75	LCS	P	0 - 30
LFB	Butylate	3.40	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.74	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.124	LCS	P	0 - 30
LFB	Cyanazine	2.76	LCS	P	0 - 30
LFB	Demeton	5.79	LCS	P	0 - 30
LFB	Diazinon	4.13	LCS	P	0 - 30
LFB	Disulfoton	4.25	LCS	P	0 - 30
LFB	EPTC	6.06	LCS	P	0 - 30
LFB	Ethion	6.65	LCS	P	0 - 30
LFB	Ethoprop	16.0	LCS	P	0 - 30
LFB	Fenamiphos	0.116	LCS	P	0 - 30
LFB	Fipronil	3.32	LCS	P	0 - 30
LFB	Fipronil Sulfide	5.22	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.55	LCS	P	0 - 30
LFB	Fonofos	0.181	LCS	P	0 - 30
LFB	Hexazinone	8.99	LCS	P	0 - 30
LFB	Malathion	0.453	LCS	P	0 - 30
LFB	Metalaxyl	0.457	LCS	P	0 - 30
LFB	Metolachlor	4.34	LCS	P	0 - 30
LFB	Metribuzin	2.75	LCS	P	0 - 30
LFB	Mevinphos	12.4	LCS	P	0 - 30
LFB	Molinate	12.9	LCS	P	0 - 30
LFB	Norflurazon	4.14	LCS	P	0 - 30
LFB	Parathion Ethyl	3.29	LCS	P	0 - 30
LFB	Parathion Methyl	0.0664	LCS	P	0 - 30
LFB	Pendimethalin	8.60	LCS	P	0 - 30
LFB	Phorate	1.30	LCS	P	0 - 30
LFB	Prometon	1.42	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P345251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometryn	5.03	LCS	P	0 - 30
LFB	Simazine	5.22	LCS	P	0 - 30
LFB	Terbufos	2.74	LCS	P	0 - 30
LFB	Terbutylazine	2.97	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P345389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Aldrin	23.9	LCS	P	0 - 30
LFB	Alpha-BHC	1.39	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.34	LCS	P	0 - 30
LFB	Beta-BHC	9.88	LCS	P	0 - 30
LFB	Carbophenothion	12.4	LCS	P	0 - 30
LFB	Chlorothalonil	9.05	LCS	P	0 - 30
LFB	Cypermethrin	11.5	LCS	P	0 - 30
LFB	DDD-p,p'	1.51	LCS	P	0 - 30
LFB	DDE-p,p'	5.49	LCS	P	0 - 30
LFB	DDT-p,p'	5.15	LCS	P	0 - 30
LFB	Delta-BHC	3.27	LCS	P	0 - 30
LFB	Dicofol	9.45	LCS	P	0 - 30
LFB	Dieldrin	6.15	LCS	P	0 - 30
LFB	Endosulfan I	10.1	LCS	P	0 - 30
LFB	Endosulfan II	5.86	LCS	P	0 - 30
LFB	Endosulfan Sulfate	11.6	LCS	P	0 - 30
LFB	Endrin	6.12	LCS	P	0 - 30
LFB	Endrin Aldehyde	6.92	LCS	P	0 - 30
LFB	Endrin Ketone	12.1	LCS	P	0 - 30
LFB	Gamma-BHC	10.0	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.62	LCS	P	0 - 30
LFB	Heptachlor	3.41	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.30	LCS	P	0 - 30
LFB	Methoxychlor	2.55	LCS	P	0 - 30
LFB	Mirex	4.42	LCS	P	0 - 30
LFB	Permethrin	12.1	LCS	P	0 - 30
LFB	Trifluralin	0.913	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P345389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	19.9	LCS	P	0 - 30
LFB	Toxaphene	8.31	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P345005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P345005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1991713	AMPA	1.15	Spike	P	0 - 30
1991713	Endothall	6.62	Spike	P	0 - 30
1991713	Glufosinate	2.29	Spike	P	0 - 30
1991713	Glyphosate	5.50	Spike	P	0 - 30
1991713	Sucralose	1.94	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P345129

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992563	Sucralose	3.82	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P345194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992331	2,4-D	4.28	Spike	P	0 - 30
1992331	3-Hydroxycarbofuran	6.02	Spike	P	0 - 30
1992331	Acetaminophen	2.60	Spike	P	0 - 30
1992331	Aldicarb	13.1	Spike	P	0 - 30
1992331	Aldicarb Sulfone	2.19	Spike	P	0 - 30
1992331	Aldicarb Sulfoxide	1.46	Spike	P	0 - 30
1992331	Bentazon	3.03	Spike	P	0 - 30
1992331	Carbamazepine	5.92	Spike	P	0 - 30
1992331	Carbaryl	0.717	Spike	P	0 - 30
1992331	Carbofuran	5.64	Spike	P	0 - 30
1992331	Diuron	5.45	Spike	P	0 - 30
1992331	Fenuron	6.70	Spike	P	0 - 30
1992331	Fluridone	2.63	Spike	P	0 - 30
1992331	Hydrocodone	2.28	Spike	P	0 - 30
1992331	Imazapyr	0.862	Spike	P	0 - 30
1992331	Imidacloprid	4.18	Spike	P	0 - 30
1992331	Linuron	0.702	Spike	P	0 - 30
1992331	MCPP	4.22	Spike	P	0 - 30
1992331	Methiocarb	2.79	Spike	P	0 - 30
1992331	Methomyl	2.39	Spike	P	0 - 30
1992331	Oxamyl	2.44	Spike	P	0 - 30
1992331	Primidone	7.32	Spike	P	0 - 30
1992331	Propoxur	1.47	Spike	P	0 - 30
1992331	Pyraclostrobin	0.568	Spike	P	0 - 30
1992331	Triclopyr	9.45	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P345138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992297	Color (true)	4.75	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P345483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992225	Total Alkalinity	0.607	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P345721

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992341	TDS	9.42	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P345486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992225	Fluoride	0.943	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P345545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992342	Organic Carbon	0.675	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P345624

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1991039	Organic Carbon	0.0808	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: 1992350
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	30.9	P	30 - 160

Lab Sample ID: 1992351
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	44.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	59.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	31.4	P	30 - 160
EPA 8321B	Diuron-d6	30.9	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1992351
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Endothall-d6	107	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	40 - 160
EPA 8321B	Primidone-d5	86.0	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160

Lab Sample ID: 1992352
Field Sample ID: G2CE0067

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	39.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	67.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	32.4	P	30 - 160
EPA 8321B	Diuron-d6	32.5	P	30 - 160
EPA 8321B	Primidone-d5	87.9	P	30 - 160
EPA 8321B	Sucralose-d6	97.1	P	40 - 160

Lab Sample ID: 1992353
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	47.6	P	37 - 117
EPA 8270D	Decachlorobiphenyl	78.2	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	28.9	F	34 - 101
EPA 8270D	Tetrachloro-m-xylene	56.0	P	34 - 101
EPA 8276	Decachlorobiphenyl	38.4	P	31 - 108
EPA 8276	PCNB	63.1	P	62 - 142

Lab Sample ID: 1992354
Field Sample ID: G2CE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	91.9	P	71 - 126
EPA 8270D	Terbufos-d10	102	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A83828
Included Lab Sample IDs: 1992338, 1992341

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	99.3	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A83829
Included Lab Sample IDs: 1992338, 1992341

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	101	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A83830

Included Lab Sample IDs: 1992340, 1992343

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	99.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A83885

Included Lab Sample IDs: 1992338, 1992341

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	99.4	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83925

Included Lab Sample IDs: 1992339, 1992342

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83934

Included Lab Sample IDs: 1992339, 1992342

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

Reference Method: SM 2320 B-97

Run ID: A83969

Included Lab Sample IDs: 1992338, 1992341

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	99.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A83969

Included Lab Sample IDs: 1992338, 1992341

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.1	99.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A83978

Included Lab Sample IDs: 1992351, 1992352

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.3	99.0	P/P	60 - 160
Endothall	106	92.8	P/P	60 - 160
Glufosinate	97.5	99.2	P/P	60 - 160
Glyphosate	97.6	108	P/P	60 - 160
Sucralose	104	99.5	P/P	60 - 160
Sucralose	109	109	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83986

Included Lab Sample IDs: 1992363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.4	98.9	P/P	90 - 110
Iron	99.9	99.8	P/P	90 - 110
Magnesium	99.8	99.9	P/P	90 - 110
Potassium	97.1	98.8	P/P	90 - 110
Sodium	97.4	99.2	P/P	90 - 110
Zinc	100	99.0	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A83989

Included Lab Sample IDs: 1992342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.8	96.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83991

Included Lab Sample IDs: 1992363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	98.3	P/P	90 - 110
Cadmium	102	100	P/P	90 - 110
Chromium	108	108	P/P	90 - 110
Lead	103	101	P/P	90 - 110
Nickel	100	97.6	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A84034

Included Lab Sample IDs: 1992339

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84044

Included Lab Sample IDs: 1992339, 1992342

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	94.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84048

Included Lab Sample IDs: 1992342

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84065

Included Lab Sample IDs: 1992339

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84065

Included Lab Sample IDs: 1992339

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	101	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84068

Included Lab Sample IDs: 1992354

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	105		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	110		P	80 - 120
Atrazine Desethyl	88.9		P	80 - 120
Azinphos Methyl	96.9		P	80 - 120
Bromacil	109		P	80 - 120
Butylate	105		P	80 - 120
Chlorpyrifos Ethyl	94.7		P	80 - 120
Chlorpyrifos Methyl	95.7		P	80 - 120
Cyanazine	72.9*		F	80 - 120
Demeton	97.3		P	80 - 120
Diazinon	101		P	80 - 120
Disulfoton	94.5		P	80 - 120
EPTC	104		P	80 - 120
Ethion	93.5		P	80 - 120
Ethoprop	89.5		P	80 - 120
Fenamiphos	89.5		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Sulfide	93.2		P	80 - 120
Fipronil Sulfone	95.5		P	80 - 120
Fonofos	95.9		P	80 - 120
Hexazinone	98.1		P	80 - 120
Malathion	96.1		P	80 - 120
Metalaxyl	107		P	80 - 120
Metolachlor	108		P	80 - 120
Metribuzin	80.0		P	80 - 120
Mevinphos	98.3		P	80 - 120
Molinate	104		P	80 - 120
Norflurazon	101		P	80 - 120
Parathion Ethyl	93.5		P	80 - 120
Parathion Methyl	92.2		P	80 - 120
Pendimethalin	98.4		P	80 - 120
Phorate	92.9		P	80 - 120
Prometon	104		P	80 - 120
Prometryn	104		P	80 - 120
Simazine	97.0		P	80 - 120
Terbufos	93.5		P	80 - 120
Terbutylazine	97.1		P	80 - 120

Reference Method: EPA 8276

Run ID: A84093

Included Lab Sample IDs: 1992353

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

Reference Method: EPA 8276

Run ID: A84093

Included Lab Sample IDs: 1992353

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.3		P	80 - 120
Toxaphene	86.7		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84101

Included Lab Sample IDs: 1992363

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	106	106	P/P	90 - 110
Silver	99.8	105	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84138

Included Lab Sample IDs: 1992354

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	92.4		P	80 - 120

Reference Method: EPA 8270D

Run ID: A84179

Included Lab Sample IDs: 1992353

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	91.0		P	80 - 120
Alpha-BHC	98.6		P	80 - 120
Alpha-Chlordane	92.9		P	80 - 120
Beta-BHC	93.5		P	80 - 120
Carbophenothion	114		P	80 - 120
Chlorothalonil	87.0		P	80 - 120
Cypermethrin	101		P	80 - 120
DDD-p,p'	98.2		P	80 - 120
DDE-p,p'	92.8		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	95.8		P	80 - 120
Dicofol	96.9		P	80 - 120
Dieldrin	94.5		P	80 - 120
Endosulfan I	95.1		P	80 - 120
Endosulfan II	92.9		P	80 - 120
Endosulfan Sulfate	108		P	80 - 120
Endrin	82.0		P	80 - 120
Endrin Aldehyde	89.4		P	80 - 120
Endrin Ketone	104		P	80 - 120
Gamma-BHC	92.8		P	80 - 120
Gamma-Chlordane	93.2		P	80 - 120
Heptachlor	89.2		P	80 - 120
Heptachlor Epoxide	93.5		P	80 - 120
Methoxychlor	106		P	80 - 120
Mirex	95.4		P	80 - 120
Permethrin	89.6		P	80 - 120
Trifluralin	97.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A84227
 Included Lab Sample IDs: 1992350

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	100	84.4	P/P	50 - 150
Aldicarb	97.7	77.8	P/P	60 - 150
Aldicarb Sulfone	106	98.8	P/P	50 - 150
Aldicarb Sulfoxide	102	90.2	P/P	50 - 150
Carbaryl	93.2	83.8	P/P	60 - 150
Carbofuran	89.3	70.6	P/P	50 - 150
Methiocarb	94.4	102	P/P	50 - 150
Methomyl	99.6	95.6	P/P	50 - 150
Oxamyl	103	88.5	P/P	50 - 150
Propoxur	84.1	68.1	P/P	50 - 150

Reference Method: EPA 8321B
 Run ID: A84229
 Included Lab Sample IDs: 1992351, 1992352

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	80.4	81.4	P/P	50 - 150
Acetaminophen	81.4	93.9	P/P	60 - 150
Bentazon	92.0	93.1	P/P	50 - 150
Carbamazepine	73.1	87.2	P/P	60 - 150
Diuron	80.2	90.4	P/P	60 - 150
Fenuron	89.9	99.9	P/P	60 - 150
Fluridone	92.4	94.6	P/P	60 - 160
Hydrocodone	91.0	101	P/P	60 - 150
Imazapyr	105	98.2	P/P	50 - 150
Imidacloprid	79.3	98.1	P/P	60 - 150
Linuron	112	102	P/P	60 - 150
MCPP	81.0	89.8	P/P	50 - 150
Primidone	89.3	102	P/P	60 - 150
Pyraclostrobin	101	93.8	P/P	60 - 150
Triclopyr	74.1	83.5	P/P	50 - 160

* 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				3.43	
EPA 200.7 Rev. 4.4	Calcium	99.8	100	101		0.368
	Iron	104	103	103	104	0.549
	Magnesium	106	103	104	106	0.806
	Potassium	98.3	96.7	96.4	96.8	0.183
	Sodium	97.5	99.1	92.2		0.0954
	Zinc	99.5	102	101	99.0	0.195
EPA 200.8 Rev. 5.4	Arsenic	104	101	104	105	3.25
	Cadmium	102	102	105	110	2.01

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 200.8 Rev. 5.4	Chromium	108		107	111	101		4.06
	Copper	103		99.8	105	105		5.14
	Lead	105		104	107	106		3.04
	Nickel	102		99.4	102	100		3.03
	Silver	102		98.2	103	107		4.33
EPA 300.0 Rev. 2.1	Chloride	98.5		96.9	98.5		0.405	
	Sulfate	95.7		93.8	96.8		2.03	
EPA 350.1 Rev. 2.0	Ammonia-N	101		97.5	99.3			1.48
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		100	90.7			7.45
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100		99.9	100			0.380
EPA 365.1 Rev. 2.0	Total-P	98.3		103	98.6			4.01
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3		101	100			0.298
EPA 8270D	Acetochlor	92.0	95.0	99.5	94.0	3.20		5.66
	Alachlor	93.6	96.6	81.4	83.5	3.20		2.24
	Aldrin	58.9	46.3	40.6		23.9		
	Alpha-BHC	75.1	74.0	89.4		1.39		
	Alpha-Chlordane	78.5	75.9	54.0		3.34		
	Ametryn	86.9	73.0	83.5	92.7	17.4		10.5
	Atrazine	94.3	99.3			5.25		0.386
	Atrazine Desethyl	96.9	97.0	106	108	0.0371		2.18
	Azinphos Methyl	94.8	92.5	82.5	85.2	2.45		3.25
	Beta-BHC	82.2	90.8	87.6		9.88		
	Bromacil	81.9	80.5	115	117	1.75		2.01
	Butylate	58.8	60.8	45.1	49.2	3.40		8.61
	Carbophenothion	78.9	69.7	74.5		12.4		
	Chlorothalonil	59.0	64.6	104		9.05		
	Chlorpyrifos Ethyl	88.3	89.9	88.4	83.5	1.74		5.65
	Chlorpyrifos Methyl	89.9	90.0	91.5	88.4	0.124		3.41
	Cyanazine	186	191	156	163	2.76		4.30
	Cypermethrin	99.8	89.0	94.3		11.5		
	DDD-p,p'	98.7	97.2	68.6		1.51		
	DDE-p,p'	79.1	74.9	50.5		5.49		
	DDT-p,p'	87.0	82.7	62.3		5.15		
	Delta-BHC	113	117	148		3.27		
	Demeton	64.8	68.7	62.2	59.9	5.79		3.64
	Diazinon	100	104	112	114	4.13		1.51
	Dicofol	86.1	78.3	70.9		9.45		
	Dieldrin	77.1	82.0	55.3		6.15		
	Disulfoton	85.2	88.9	95.3	102	4.25		6.36
	Endosulfan I	92.9	84.0	84.2		10.1		
	Endosulfan II	79.4	74.9	88.8		5.86		
	Endosulfan Sulfate	110	97.7	97.4		11.6		
	Endrin	81.9	77.0	58.7		6.12		
	Endrin Aldehyde	88.8	82.9	44.7		6.92		
	Endrin Ketone	109	96.4	95.0		12.1		
	EPTC	55.5	59.0	45.4	44.5	6.06		2.15
	Ethion	87.3	93.3	87.7	92.0	6.65		4.78
	Ethoprop	68.8	80.7	76.7	97.8	16.0		24.2
	Fenamiphos	89.6	89.7	82.7	92.2	0.116		10.9
	Fipronil	84.6	81.8	70.3	75.1	3.32		5.58
	Fipronil Sulfide	74.9	71.1	58.2	66.2	5.22		7.13
	Fipronil Sulfone	69.3	66.2	45.3	54.6	4.55		6.30
	Fonofos	91.4	91.3	99.7	101	0.181		0.928
	Gamma-BHC	81.2	89.8	86.7		10.0		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270D	Gamma-Chlordane	75.2	74.0	52.9		1.62		
	Heptachlor	60.2	58.2	47.1		3.41		
	Heptachlor Epoxide	81.1	77.6	69.1		4.30		
	Hexazinone	93.8	103	101	106	8.99		5.43
	Malathion	84.4	84.8	88.1	90.9	0.453		3.16
	Metalaxyl	93.3	93.8	92.5	97.0	0.457		4.71
	Methoxychlor	91.4	89.1	76.8		2.55		
	Metolachlor	91.5	95.6	97.4	95.0	4.34		2.41
	Metribuzin	152	156	177	166	2.75		6.39
	Mevinphos	73.9	65.3	78.0	76.5	12.4		1.93
	Mirex	69.1	66.2	60.1		4.42		
	Molinate	57.6	65.6	57.9	62.4	12.9		7.42
	Norflurazon	69.2	72.1	50.8	60.6	4.14		17.7
	Parathion Ethyl	91.2	94.2	92.8	96.8	3.29		4.22
	Parathion Methyl	90.4	90.3	96.6	91.4	0.0664		5.48
	Pendimethalin	111	121	131	138	8.60		4.86
	Permethrin	83.7	74.2	68.9		12.1		
	Phorate	79.6	78.6	91.1	83.6	1.30		8.55
	Prometon	90.0	88.8	94.2	82.6	1.42		8.17
	Prometryn	91.7	96.5	96.6	96.5	5.03		0.0550
	Simazine	97.9	103			5.22		7.53
	Terbufos	89.1	91.6	106	106	2.74		0.436
	Terbutylazine	94.3	97.1	99.2	99.8	2.97		0.626
	Trifluralin	69.6	70.3	55.2		0.913		
EPA 8276	Chlordane	74.6	61.1	63.4		19.9		
	Toxaphene	61.2	56.3	47.4		8.31		
EPA 8321B	2,4-D	90.0		76.0	72.8			4.28
	3-Hydroxycarbofuran	87.9		87.1	92.5			6.02
	Acetaminophen	98.3		95.0	92.5			2.60
	Aldicarb	70.6		54.2	61.8			13.1
	Aldicarb Sulfone	98.7		101	103			2.19
	Aldicarb Sulfoxide	89.5		83.5	82.3			1.46
	AMPA	76.4		61.2	61.9			1.15
	Bentazon	79.5		45.6	44.3			3.03
	Carbamazepine	61.5		53.4	56.7			5.92
	Carbaryl	58.0		51.2	50.8			0.717
	Carbofuran	60.7		50.8	53.7			5.64
	Diuron	62.2		52.4	55.3			5.45
	Endothall	136		152	142			6.62
	Fenuron	96.2		85.2	91.1			6.70
	Fluridone	83.0		75.3	77.3			2.63
	Glufosinate	92.6		98.9	96.7			2.29
	Glyphosate	99.9		103	97.9			5.50
	Hydrocodone	98.8		106	109			2.28
	Imazapyr	85.6		100	99.6			0.862
	Imidacloprid	102		152	159			4.18
	Linuron	97.2		92.3	91.6			0.702
	MCPP	96.7		74.5	71.5			4.22
	Methiocarb	80.6		79.8	82.0			2.79
	Methomyl	88.8		83.5	85.5			2.39
	Oxamyl	80.1		76.7	78.6			2.44
	Primidone	98.1		103	111			7.32
	Propoxur	60.3		52.4	51.7			1.47
	Pyraclostrobin	66.3		72.0	71.6			0.568

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 8321B	Sucralose	109	97.2 99.2			1.94
	Sucralose	113	111 107			3.82
	Triclopyr	94.9	81.1 73.8			9.45
SM 2120 B	Color (true)				4.75	
SM 2320 B-97	Total Alkalinity	102			0.607	
SM 2540 C-97	TDS				9.42	
SM 4500 F-C-97	Fluoride	95.6	94.9 93.8			0.943
SM 5310 B-00	Organic Carbon	95.4	93.3 94.1			0.675
	Organic Carbon	99.4	98.0 97.9			0.0808

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1992338, 1992341
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1992363
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1992363
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1992338, 1992341
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1992338, 1992341
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1992339, 1992342
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1992339, 1992342
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1992339, 1992342
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1992339, 1992342
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1992340, 1992343
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1992353
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1992354
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1992353
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1992350
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1992351, 1992352
SM 2120 B / E31780	True Color measured at 450 nm	1992338, 1992341
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1992338, 1992341
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1992338, 1992341
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1992338, 1992341
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1992338, 1992341
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1992339, 1992342

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	05/11/2018			05/11/2018 14:35	Tanya Welborn	1992338, 1992341
EPA 200.7 Rev. 4.4	05/11/2018	05/15/2018 16:00	Martin Acosta	05/17/2018 18:42	Betina Topolski	1992363
EPA 200.8 Rev. 5.4	05/11/2018	05/15/2018 16:00	Martin Acosta	05/17/2018 17:44	Robert K Palmer	1992363
	05/11/2018	05/15/2018 16:00	Martin Acosta	05/22/2018 10:50	Robert K Palmer	1992363
EPA 300.0 Rev. 2.1	05/11/2018			05/15/2018 18:17	Lipi Saha	1992338
	05/11/2018			05/15/2018 18:29	Lipi Saha	1992341
EPA 350.1 Rev. 2.0	05/11/2018			05/15/2018 11:18	Ping Hua	1992339
	05/11/2018			05/15/2018 11:26	Ping Hua	1992342
EPA 351.2 Rev. 2.0	05/11/2018	05/17/2018 15:45	Adrian Shelby	05/18/2018 20:44	Joseph Suarez	1992339
	05/11/2018	05/17/2018 15:45	Adrian Shelby	05/18/2018 20:45	Joseph Suarez	1992342
EPA 353.2 Rev. 2.0	05/11/2018			05/16/2018 12:26	Lauren Bottorf	1992339
	05/11/2018			05/16/2018 12:27	Lauren Bottorf	1992342
EPA 365.1 Rev. 2.0	05/11/2018	05/16/2018 08:57	Sima Feizi	05/21/2018 12:58	Beverly Y. Sanders	1992342
	05/11/2018	05/16/2018 08:57	Sima Feizi	05/22/2018 10:18	Beverly Y. Sanders	1992339
EPA 365.1 Rev. 2.0 dissolved	05/11/2018			05/11/2018 15:18	Julia Storbeck	1992340
	05/11/2018			05/11/2018 15:19	Julia Storbeck	1992343
EPA 8270D	05/11/2018	05/14/2018 08:48	Dinesh Mishra	05/21/2018 15:26	Vandana T. Nagar	1992354
	05/11/2018	05/14/2018 08:48	Dinesh Mishra	05/23/2018 17:07	Vandana T. Nagar	1992354
	05/11/2018	05/17/2018 08:40	Rasheda Ghaffari	05/18/2018 22:43	Dinesh Mishra	1992353
EPA 8276	05/11/2018	05/17/2018 08:40	Rasheda Ghaffari	05/22/2018 20:54	John P. Burgos	1992353
EPA 8321B	05/11/2018	05/15/2018 16:00	Hoor Shaik	05/15/2018 22:14	Juyoung Kim	1992351
	05/11/2018	05/16/2018 07:15	Juyoung Kim	05/16/2018 07:31	Juyoung Kim	1992352
	05/11/2018	05/16/2018 10:00	Hoor Shaik	05/16/2018 20:13	Juyoung Kim	1992350
	05/11/2018	05/16/2018 10:00	Hoor Shaik	05/16/2018 21:56	Juyoung Kim	1992351
	05/11/2018	05/16/2018 10:00	Hoor Shaik	05/16/2018 22:31	Juyoung Kim	1992352
	05/11/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 14:05	Juyoung Kim	1992351
	05/11/2018	05/16/2018 10:00	Hoor Shaik	05/17/2018 14:39	Juyoung Kim	1992352
SM 2120 B	05/11/2018			05/11/2018 14:54	Tanya Welborn	1992338
	05/11/2018			05/11/2018 14:55	Tanya Welborn	1992341
SM 2320 B-97	05/11/2018			05/16/2018 05:33	Dale L. Simmons	1992338
	05/11/2018			05/16/2018 05:44	Dale L. Simmons	1992341
SM 2540 C-97	05/11/2018			05/16/2018 15:26	Yijie Li	1992338, 1992341
SM 2540 D-97	05/11/2018			05/16/2018 15:26	Yijie Li	1992338, 1992341
SM 4500 F-C-97	05/11/2018			05/16/2018 05:33	Dale L. Simmons	1992338
	05/11/2018			05/16/2018 05:44	Dale L. Simmons	1992341
SM 5310 B-00	05/11/2018			05/16/2018 23:05	Megan Treadwell	1992342
	05/11/2018			05/18/2018 16:41	Julia Storbeck	1992339