

Chemical Analysis Report

SE-DIST-2018-05-18-01

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

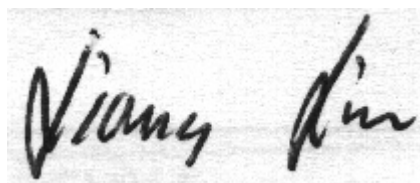
Event Description: **SMP- Okeechobee Run**
Request ID: **RQ-2018-05-14-57**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 12-JUN-2018 14:30

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

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Nubbin Slough upstream of STA

Collection Date/Time: 05/17/2018 11:15

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994014	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P345597	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P345792	
		Sulfate	20		mg SO4/L	P345794	
	SM 2120 B	Color (true)	290		PCU	P345594	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P345949	RPD
	SM 2540 C-97	TDS	203		mg/L	P346046	
	SM 2540 D-97	TSS	6	I	mg/L	P346052	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P345952	
1994015	EPA 350.1 Rev. 2.0	Ammonia-N	0.32		mg N/L	P346069	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.2		mg N/L	P345981	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.41		mg N/L	P345741	
	EPA 365.1 Rev. 2.0	Total-P	0.55		mg P/L	P345813	
	SM 5310 B-00	Organic Carbon	34		mg C/L	P346150	
1994016	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.47		mg P/L	P345602	
1994049	EPA 8321B	Aldicarb	0.020	U	ug/L	P345505	
		Aldicarb Sulfone	0.0020	U	ug/L	P345505	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P345505	
		Carbaryl	0.0020	UJ	ug/L	P345505	MS
		Carbofuran	0.0020	UJ	ug/L	P345505	MS
		3-Hydroxycarbofuran	0.0020	U	ug/L	P345505	
		Methiocarb	0.0020	U	ug/L	P345505	
		Methomyl	0.0020	U	ug/L	P345505	
		Oxamyl	0.0020	U	ug/L	P345505	
		Propoxur	0.0020	UJ	ug/L	P345505	MS
1994050		2,4-D	0.066		ug/L	P345505	
		Bentazon	8.0E-04	U	ug/L	P345505	
		MCP	0.0020	U	ug/L	P345505	
		Triclopyr**	0.0040	UJ	ug/L	P345505	MS
		Imidacloprid	0.0020	U	ug/L	P345505	
		Diuron	0.0020	U	ug/L	P345505	
		Pyraclostrobin**	0.0020	U	ug/L	P345505	
		Primidone**	0.0040	U	ug/L	P345505	
		Linuron	0.0040	U	ug/L	P345505	
		Acetaminophen**	0.0080	U	ug/L	P345505	
		Fenuron	0.016	U	ug/L	P345505	
		Imazapyr**	0.29		ug/L	P345505	
		Carbamazepine**	4.0E-04	U	ug/L	P345505	
		Fluridone**	4.0E-04	U	ug/L	P345505	
		Hydrocodone**	8.0E-04	U	ug/L	P345505	
		Sucralose**	0.010	U	ug/L	P345394	
		Glyphosate**	1.1		ug/L	P345394	
		AMPA**	0.12	I	ug/L	P345394	
		Endothall**	0.10	U	ug/L	P345394	

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994050	EPA 8321B	Glufosinate**	0.10	U	ug/L	P345394	
1994051	EPA 8270D	Aldrin	4.2	U	ng/L	P345802	
		Alpha-BHC	2.1	U	ng/L	P345802	
		Beta-BHC	4.2	U	ng/L	P345802	
		Delta-BHC	4.2	U	ng/L	P345802	
		Gamma-BHC	4.2	U	ng/L	P345802	
		Carbophenothion	4.2	U	ng/L	P345802	
		Chlorothalonil	2.1	UJ	ng/L	P345802	RPD
		Cypermethrin	21	U	ng/L	P345802	
		DDD-p,p'	3.2	U	ng/L	P345802	
		DDE-p,p'	3.2	U	ng/L	P345802	
		DDT-p,p'	3.2	U	ng/L	P345802	
		Dieldrin	4.2	U	ng/L	P345802	
		Endosulfan I	4.2	U	ng/L	P345802	
		Endosulfan II	4.2	U	ng/L	P345802	
		Endosulfan Sulfate	2.1	U	ng/L	P345802	
		Endrin	2.1	U	ng/L	P345802	
		Endrin Aldehyde	2.1	UJ	ng/L	P345802	MS
		Heptachlor	1.6	U	ng/L	P345802	
		Heptachlor Epoxide	2.1	U	ng/L	P345802	
		Methoxychlor	4.2	U	ng/L	P345802	
		Mirex	2.1	U	ng/L	P345802	
		Permethrin	11	U	ng/L	P345802	
		Trifluralin	1.1	U	ng/L	P345802	
		Alpha-Chlordane	1.1	U	ng/L	P345802	
		Gamma-Chlordane	1.1	U	ng/L	P345802	
		Endrin Ketone	2.1	U	ng/L	P345802	
		Dicofol	32	U	ng/L	P345802	
	EPA 8276	Chlordane**	2.6	UJ	ng/L	P345802	LCS, MS
		Toxaphene**	32	U	ng/L	P345802	
1994052	EPA 8270D	Alachlor	0.25	U	ng/L	P345559	
		Ametryn	0.32	U	ng/L	P345559	RPD
		Atrazine	5.7		ng/L	P345559	
		Atrazine Desethyl	1.5	UJ	ng/L	P345559	CCV, MS
		Azinphos Methyl	2.2	U	ng/L	P345559	
		Bromacil	0.50	U	ng/L	P345559	
		Butylate	0.40	U	ng/L	P345559	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P345559	
		Chlorpyrifos Methyl	0.10	U	ng/L	P345559	
		Demeton	2.0	U	ng/L	P345559	RPD
		Diazinon	0.12	U	ng/L	P345559	
		Disulfoton	0.60	I	ng/L	P345559	
		EPTC	1.2	U	ng/L	P345559	
		Ethion	0.15	U	ng/L	P345559	
		Ethoprop	0.10	U	ng/L	P345559	

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994052	EPA 8270D	Fenamiphos	0.25	U	ng/L	P345559	
		Fipronil	0.68	IJ	ng/L	P345559	
		Fipronil Sulfide	0.15	U	ng/L	P345559	
		Fipronil Sulfone	0.15	U	ng/L	P345559	
		Hexazinone	1.7	I	ng/L	P345559	
		Malathion	0.35	U	ng/L	P345559	MS
		Metribuzin	0.20	U	ng/L	P345559	
		Mevinphos	0.50	U	ng/L	P345559	
		Molinate	0.30	U	ng/L	P345559	
		Norflurazon	0.50	U	ng/L	P345559	
		Pendimethalin	1.0	U	ng/L	P345559	
		Phorate	0.25	U	ng/L	P345559	
		Prometon	0.90	U	ng/L	P345559	
		Prometryn	0.20	U	ng/L	P345559	
		Simazine	0.50	U	ng/L	P345559	
		Terbufos	0.10	U	ng/L	P345559	
		Terbutylazine	0.42	U	ng/L	P345559	MS
		Fonofos	0.20	U	ng/L	P345559	
		Metalaxyl	0.25	U	ng/L	P345559	
		Metolachlor	0.25	U	ng/L	P345559	
		Acetochlor	0.25	U	ng/L	P345559	
		Cyanazine	0.50	UJ	ng/L	P345559	CCV
		Parathion Ethyl	0.25	U	ng/L	P345559	
		Parathion Methyl	0.25	U	ng/L	P345559	
1994054	EPA 200.7 Rev. 4.4	Calcium	13.7		mg/L	P345773	
		Iron	860		ug/L	P345773	
		Magnesium	5.15		mg/L	P345773	
		Potassium	11.5		mg/L	P345773	
		Sodium	22.6		mg/L	P345773	
		Zinc	6.5	I	ug/L	P345773	
	EPA 200.8 Rev. 5.4	Arsenic	1.99		ug/L	P345773	
		Cadmium	0.020	U	ug/L	P345773	
		Chromium	1.5	I	ug/L	P345773	
		Copper	1.74		ug/L	P345773	
		Lead	0.29		ug/L	P345773	
		Nickel	0.58	I	ug/L	P345773	
		Silver	0.010	U	ug/L	P345773	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

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

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

EPA 8276: Refer to the narrative for an explanation of QC Codes.

Sample Location: Nubbin Slough upstream of STA

Collection Date/Time: 05/17/2018 11:20

Field ID: G1SE004 BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1994011	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P345597	RPD
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P345792	
		Sulfate	0.20	U	mg SO4/L	P345794	
	SM 2120 B	Color (true)	2.5	U	PCU	P345594	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P345949	
	SM 2540 C-97	TDS	15	U	mg/L	P346044	
	SM 2540 D-97	TSS	2	U	mg/L	P346050	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P345952	
1994012	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P346069	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P345981	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345740	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P345813	
	SM 5310 B-00	Organic Carbon	0.80	I	mg C/L	P346150	
1994013	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345602	MS
1994048	EPA 8321B	2,4-D	0.0020	U	ug/L	P345505	
		Bentazon	8.0E-04	U	ug/L	P345505	
		MCP	0.0020	U	ug/L	P345505	
		Triclopyr**	0.0040	U	ug/L	P345505	
		Imidacloprid	0.0020	U	ug/L	P345505	
		Diuron	0.0020	U	ug/L	P345505	
		Pyraclostrobin**	0.0020	U	ug/L	P345505	
		Primidone**	0.0040	U	ug/L	P345505	
		Linuron	0.0040	U	ug/L	P345505	
		Acetaminophen**	0.0080	U	ug/L	P345505	
		Fenuron	0.016	U	ug/L	P345505	
		Imazapyr**	0.0040	U	ug/L	P345505	
		Carbamazepine**	4.0E-04	U	ug/L	P345505	
		Fluridone**	4.0E-04	U	ug/L	P345505	
		Hydrocodone**	8.0E-04	U	ug/L	P345505	
		Sucralose**	0.010	U	ug/L	P345394	
1994053	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P345773	
		Iron	30	U	ug/L	P345773	
		Magnesium	0.040	U	mg/L	P345773	
		Potassium	0.30	U	mg/L	P345773	
		Sodium	0.50	U	mg/L	P345773	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P345773	
		Cadmium	0.020	U	ug/L	P345773	
		Chromium	0.40	U	ug/L	P345773	
		Copper	0.20	U	ug/L	P345773	
		Lead	0.050	U	ug/L	P345773	
		Nickel	0.20	U	ug/L	P345773	
		Silver	0.010	U	ug/L	P345773	

Field ID: G1SE004 BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 5310 B-00: The result was confirmed on 06/04/2018.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345597

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345773

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: P345773

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: P345792

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345794

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346069

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345981

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345740

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345741

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345813

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345602

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

Reference Method: EPA 8270D
Batch ID: P345559

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P345559

Component	Result	Code	Units
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D

Batch ID: P345802

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P345802

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

Reference Method: EPA 8321B
Batch ID: P345394

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

Reference Method: EPA 8321B
Batch ID: P345505

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	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: P345594

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P345949

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

Reference Method: SM 2540 C-97
Batch ID: P346044

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P346046

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P346050

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P346052

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345952

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P346150

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: P345773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	101		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	98.3		P	85 - 115
Sodium	101		P	85 - 115
Zinc	94.3		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P345773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	100		P	85 - 115
Copper	99.1		P	85 - 115
Lead	97.9		P	85 - 115
Nickel	102		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P345792

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P345794

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P346069

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	92.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P345981

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: P345740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P345741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P345813

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345602

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

Reference Method: EPA 8270D
Batch ID: P345559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.4	96.1	P/P	74 - 119
Alachlor	92.4	97.6	P/P	75 - 118
Ametryn	86.3	95.1	P/P	59 - 137
Atrazine	94.5	97.8	P/P	73 - 120
Atrazine Desethyl	78.9	106	P/P	19 - 129
Azinphos Methyl	106	111	P/P	65 - 181
Bromacil	86.8	94.3	P/P	43 - 123
Butylate	51.3	58.0	P/P	28 - 85.0
Chlorpyrifos Ethyl	78.7	87.0	P/P	55 - 112
Chlorpyrifos Methyl	82.4	91.4	P/P	35 - 124
Cyanazine	188	209	P/P	26 - 262
Demeton	68.8	76.4	P/P	43 - 122
Diazinon	103	104	P/P	72 - 120
Disulfoton	84.8	89.2	P/P	45 - 137
EPTC	54.6	61.7	P/P	28 - 95.0
Ethion	80.2	85.8	P/P	63 - 127
Ethoprop	84.5	93.1	P/P	63 - 109
Fenamiphos	79.7	102	P/P	66 - 136
Fipronil	96.8	98.7	P/P	63 - 126
Fipronil Sulfide	78.2	85.4	P/P	59 - 123
Fipronil Sulfone	79.4	84.4	P/P	56 - 122
Fonofos	89.8	96.5	P/P	64 - 114
Hexazinone	95.4	94.2	P/P	49 - 144
Malathion	83.8	92.0	P/P	68 - 131
Metaxyl	96.4	98.5	P/P	57 - 126
Metolachlor	92.5	95.0	P/P	75 - 118
Metribuzin	82.6	103	P/P	46 - 169
Mevinphos	74.3	85.6	P/P	34 - 126
Molinate	65.9	70.9	P/P	37 - 101
Norflurazon	93.8	96.2	P/P	63 - 127
Parathion Ethyl	88.9	92.1	P/P	78 - 109
Parathion Methyl	95.5	99.4	P/P	74 - 123
Pendimethalin	105	109	P/P	51 - 130
Phorate	83.7	86.7	P/P	53 - 116
Prometon	84.8	87.8	P/P	66 - 124
Prometryn	92.7	95.7	P/P	66 - 124
Simazine	87.8	103	P/P	62 - 134
Terbufos	85.9	91.7	P/P	59 - 115
Terbutylazine	94.0	95.8	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P345802

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	65.7	66.5	P/P	24 - 89.0
Alpha-BHC	72.0	75.3	P/P	58 - 117

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P345802

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alpha-Chlordane	81.7	83.0	P/P	56 - 115
Beta-BHC	83.2	93.8	P/P	55 - 137
Carbophenothion	85.0	92.7	P/P	37 - 145
Chlorothalonil	115	119	P/P	26 - 163
Cypermethrin	74.1	78.9	P/P	42 - 156
DDD-p,p'	96.3	103	P/P	59 - 129
DDE-p,p'	82.6	86.8	P/P	52 - 117
DDT-p,p'	74.8	79.4	P/P	48 - 128
Delta-BHC	98.3	108	P/P	59 - 158
Dicofol	80.6	79.7	P/P	19 - 124
Dieldrin	82.8	86.7	P/P	57 - 126
Endosulfan I	89.7	88.6	P/P	59 - 133
Endosulfan II	95.2	92.7	P/P	58 - 148
Endosulfan Sulfate	85.9	86.5	P/P	56 - 135
Endrin	88.9	87.4	P/P	50 - 140
Endrin Aldehyde	91.6	94.0	P/P	47 - 141
Endrin Ketone	86.7	89.3	P/P	63 - 123
Gamma-BHC	86.1	84.3	P/P	59 - 132
Gamma-Chlordane	80.5	82.0	P/P	55 - 112
Heptachlor	68.9	67.3	P/P	45 - 102
Heptachlor Epoxide	83.8	84.2	P/P	61 - 116
Methoxychlor	85.6	88.7	P/P	60 - 133
Mirex	65.4	69.9	P/P	40 - 98.0
Permethrin	74.7	80.3	P/P	45 - 131
Trifluralin	68.4	72.2	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P345802

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	143	166	F/F	47 - 125
Toxaphene	125	131	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P345394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	89.7		P	40 - 140
Endothall	97.1		P	40 - 140
Glufosinate	102		P	40 - 140
Glyphosate	115		P	40 - 140
Sucralose	79.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P345505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	65.0		P	40 - 150
3-Hydroxycarbofuran	104		P	40 - 150
Acetaminophen	102		P	30 - 150
Aldicarb	79.8		P	30 - 150
Aldicarb Sulfone	105		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P345505

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

Reference Method: SM 2320 B-97
Batch ID: P345949

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

Reference Method: SM 4500 F-C-97
Batch ID: P345952

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P346150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993980	Calcium	103		P	80 - 120
1993980	Iron	104	102	P/P	80 - 120
1993980	Magnesium	106	104	P/P	80 - 120
1993980	Potassium	98.6		P	80 - 120
1993980	Sodium	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993980	Zinc	101	101	P/P	80 - 120
1994611	Calcium	103		P	80 - 120
1994611	Iron	104		P	80 - 120
1994611	Magnesium	107		P	80 - 120
1994611	Potassium	96.9		P	80 - 120
1994611	Sodium	95.6		P	80 - 120
1994611	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993980	Arsenic	103	102	P/P	80 - 120
1993980	Cadmium	101	98.4	P/P	80 - 120
1993980	Chromium	98.0	97.7	P/P	80 - 120
1993980	Copper	97.3	96.9	P/P	80 - 120
1993980	Lead	99.4	97.4	P/P	80 - 120
1993980	Nickel	101	99.7	P/P	80 - 120
1993980	Silver	100	99.5	P/P	80 - 120
1994611	Arsenic	102		P	80 - 120
1994611	Cadmium	98.5		P	80 - 120
1994611	Chromium	95.5		P	80 - 120
1994611	Copper	99.1		P	80 - 120
1994611	Lead	98.2		P	80 - 120
1994611	Nickel	103		P	80 - 120
1994611	Silver	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993938	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993897	Sulfate	96.7		P	90 - 110
1993938	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346069

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993932	Ammonia-N	94.5	94.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993995	Kjeldahl Nitrogen	96.4	93.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993991	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994060	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993995	Total-P	94.8	99.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993992	O-Phosphate-P	96.5	96.6	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P345559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992932	Acetochlor	100	87.5	P/P	67 - 125
1992932	Alachlor	104	93.9	P/P	69 - 123
1992932	Ametryn	112	80.2	P/P	52 - 151
1992932	Atrazine	124	91.1	P/P	71 - 125
1992932	Atrazine Desethyl	110	136	P/F	10 - 129
1992932	Azinphos Methyl	118	98.4	P/P	48 - 200
1992932	Bromacil	101	91.1	P/P	46 - 130
1992932	Butylate	51.5	39.3	P/P	10 - 85.0
1992932	Chlorpyrifos Ethyl	99.2	81.1	P/P	54 - 115
1992932	Chlorpyrifos Methyl	88.5	79.3	P/P	44 - 117
1992932	Cyanazine	199	181	P/P	10 - 262
1992932	Demeton	117	81.1	P/P	24 - 145
1992932	Diazinon	123	106	P/P	66 - 129
1992932	Disulfoton	96.8	98.8	P/P	45 - 139
1992932	EPTC	44.3	34.4	P/P	10 - 86.0
1992932	Ethion	67.2	69.1	P/P	59 - 133
1992932	Ethoprop	113	92.4	P/P	54 - 116
1992932	Fenamiphos	71.0	72.4	P/P	55 - 140
1992932	Fipronil	93.2	83.5	P/P	37 - 142
1992932	Fipronil Sulfide	76.2	71.1	P/P	37 - 130
1992932	Fipronil Sulfone	70.2	66.8	P/P	18 - 143
1992932	Fonofos	117	99.5	P/P	55 - 118
1992932	Hexazinone	118	113	P/P	62 - 140
1992932	Malathion	61.8	76.6	F/P	64 - 132
1992932	Metalaxyl	104	88.7	P/P	55 - 129
1992932	Metolachlor	109	86.7	P/P	56 - 137
1992932	Metribuzin	137	172	P/P	16 - 218
1992932	Mevinphos	115	93.7	P/P	34 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P345559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992932	Molinate	57.4	47.4	P/P	16 - 99.0
1992932	Norflurazon	66.0	60.4	P/P	43 - 135
1992932	Parathion Ethyl	101	93.2	P/P	71 - 112
1992932	Parathion Methyl	122	106	P/P	65 - 127
1992932	Pendimethalin	119	113	P/P	35 - 159
1992932	Phorate	125	107	P/P	41 - 129
1992932	Prometon	112	87.6	P/P	56 - 140
1992932	Prometryn	93.4	85.1	P/P	65 - 130
1992932	Simazine	102	95.6	P/P	54 - 148
1992932	Terbufos	123	101	P/P	53 - 126
1992932	Terbutylazine	115	95.8	F/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P345802

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1994051	Aldrin	61.7	61.0	P/P	26 - 96.0
1994051	Alpha-BHC	70.0	71.5	P/P	51 - 123
1994051	Alpha-Chlordane	71.7	68.8	P/P	45 - 120
1994051	Beta-BHC	85.2	88.4	P/P	43 - 146
1994051	Carbophenothion	107	125	P/P	26 - 179
1994051	Chlorothalonil	110	148	P/P	10 - 215
1994051	Cypermethrin	91.3	98.3	P/P	35 - 169
1994051	DDD-p,p'	85.2	82.8	P/P	49 - 131
1994051	DDE-p,p'	70.3	69.6	P/P	39 - 127
1994051	DDT-p,p'	67.5	63.2	P/P	49 - 120
1994051	Delta-BHC	93.9	98.4	P/P	49 - 187
1994051	Dicofol	67.2	74.0	P/P	10 - 129
1994051	Dieldrin	78.5	71.7	P/P	46 - 132
1994051	Endosulfan I	76.0	79.1	P/P	57 - 130
1994051	Endosulfan II	87.7	94.2	P/P	52 - 148
1994051	Endosulfan Sulfate	80.9	90.6	P/P	55 - 129
1994051	Endrin	87.5	78.1	P/P	45 - 133
1994051	Endrin Aldehyde	155	175	F/F	26 - 140
1994051	Endrin Ketone	84.0	82.7	P/P	60 - 125
1994051	Gamma-BHC	97.1	91.9	P/P	50 - 145
1994051	Gamma-Chlordane	73.9	72.1	P/P	44 - 118
1994051	Heptachlor	65.1	66.6	P/P	35 - 106
1994051	Heptachlor Epoxide	74.1	72.9	P/P	52 - 123
1994051	Methoxychlor	118	122	P/P	54 - 132
1994051	Mirex	73.5	69.1	P/P	36 - 107
1994051	Permethrin	89.7	88.2	P/P	47 - 135
1994051	Trifluralin	72.3	68.0	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P345802

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993978	Chlordane	163	152	F/F	41 - 134
1993978	Toxaphene	124	109	P/P	39 - 158

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P345394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992930	AMPA	68.1	62.4	P/P	40 - 140
1992930	Endothall	101	108	P/P	40 - 140
1992930	Glufosinate	88.2	83.8	P/P	40 - 140
1992930	Glyphosate	91.9	100	P/P	40 - 140
1992930	Sucralose	78.8	70.8	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P345505

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

Reference Method: SM 4500 F-C-97

Batch ID: P345952

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993994	Fluoride	96.3	94.2	P/P	91 - 105

Reference Method: SM 5310 B-00

Batch ID: P346150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993933	Organic Carbon	96.3	96.4	P/P	85 - 115

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993988	Turbidity	0.571	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993980	Calcium	0.800	Spike	P	0 - 20
1993980	Iron	1.63	Spike	P	0 - 20
1993980	Magnesium	1.11	Spike	P	0 - 20
1993980	Potassium	0.436	Spike	P	0 - 20
1993980	Sodium	0.484	Spike	P	0 - 20
1993980	Zinc	0.826	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993980	Arsenic	1.35	Spike	P	0 - 20
1993980	Cadmium	2.65	Spike	P	0 - 20
1993980	Chromium	0.331	Spike	P	0 - 20
1993980	Copper	0.390	Spike	P	0 - 20
1993980	Lead	1.99	Spike	P	0 - 20
1993980	Nickel	1.24	Spike	P	0 - 20
1993980	Silver	0.930	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993938	Chloride	0.609	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993938	Sulfate	2.37	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P346069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993932	Ammonia-N	0.0550	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993995	Kjeldahl Nitrogen	2.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993991	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994060	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993995	Total-P	5.06	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993992	O-Phosphate-P	0.104	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P345559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992932	Acetochlor	13.7	Spike	P	0 - 30
1992932	Alachlor	10.1	Spike	P	0 - 30
1992932	Ametryn	33.1	Spike	F	0 - 30
1992932	Atrazine	22.8	Spike	P	0 - 30
1992932	Atrazine Desethyl	20.9	Spike	P	0 - 30
1992932	Azinphos Methyl	18.3	Spike	P	0 - 30
1992932	Bromacil	10.8	Spike	P	0 - 30
1992932	Butylate	27.0	Spike	P	0 - 30
1992932	Chlorpyrifos Ethyl	20.1	Spike	P	0 - 30
1992932	Chlorpyrifos Methyl	11.0	Spike	P	0 - 30
1992932	Cyanazine	9.28	Spike	P	0 - 30
1992932	Demeton	36.0	Spike	F	0 - 30
1992932	Diazinon	15.6	Spike	P	0 - 30
1992932	Disulfoton	2.04	Spike	P	0 - 30
1992932	EPTC	25.1	Spike	P	0 - 30
1992932	Ethion	2.78	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P345559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992932	Ethoprop	20.5	Spike	P	0 - 30
1992932	Fenamiphos	2.01	Spike	P	0 - 30
1992932	Fipronil	10.9	Spike	P	0 - 30
1992932	Fipronil Sulfide	6.97	Spike	P	0 - 30
1992932	Fipronil Sulfone	4.98	Spike	P	0 - 30
1992932	Fonofos	15.8	Spike	P	0 - 30
1992932	Hexazinone	4.28	Spike	P	0 - 30
1992932	Malathion	21.3	Spike	P	0 - 30
1992932	Metalaxyl	15.9	Spike	P	0 - 30
1992932	Metolachlor	23.0	Spike	P	0 - 30
1992932	Metribuzin	22.2	Spike	P	0 - 30
1992932	Mevinphos	20.3	Spike	P	0 - 30
1992932	Molinate	19.2	Spike	P	0 - 30
1992932	Norflurazon	8.85	Spike	P	0 - 30
1992932	Parathion Ethyl	7.95	Spike	P	0 - 30
1992932	Parathion Methyl	13.7	Spike	P	0 - 30
1992932	Pendimethalin	5.07	Spike	P	0 - 30
1992932	Phorate	15.7	Spike	P	0 - 30
1992932	Prometon	24.4	Spike	P	0 - 30
1992932	Prometryn	9.31	Spike	P	0 - 30
1992932	Simazine	6.42	Spike	P	0 - 30
1992932	Terbufos	20.1	Spike	P	0 - 30
1992932	Terbuthylazine	18.4	Spike	P	0 - 30
LFB	Acetochlor	0.692	LCS	P	0 - 30
LFB	Alachlor	5.45	LCS	P	0 - 30
LFB	Ametryn	9.78	LCS	P	0 - 30
LFB	Atrazine	3.42	LCS	P	0 - 30
LFB	Atrazine Desethyl	28.9	LCS	P	0 - 30
LFB	Azinphos Methyl	4.76	LCS	P	0 - 30
LFB	Bromacil	8.28	LCS	P	0 - 30
LFB	Butylate	12.2	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	10.1	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	10.4	LCS	P	0 - 30
LFB	Cyanazine	10.6	LCS	P	0 - 30
LFB	Demeton	10.4	LCS	P	0 - 30
LFB	Diazinon	1.06	LCS	P	0 - 30
LFB	Disulfoton	4.98	LCS	P	0 - 30
LFB	EPTC	12.3	LCS	P	0 - 30
LFB	Ethion	6.79	LCS	P	0 - 30
LFB	Ethoprop	9.69	LCS	P	0 - 30
LFB	Fenamiphos	24.3	LCS	P	0 - 30
LFB	Fipronil	1.91	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.76	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.15	LCS	P	0 - 30
LFB	Fonofos	7.15	LCS	P	0 - 30
LFB	Hexazinone	1.19	LCS	P	0 - 30
LFB	Malathion	9.37	LCS	P	0 - 30
LFB	Metalaxyl	2.13	LCS	P	0 - 30
LFB	Metolachlor	2.63	LCS	P	0 - 30
LFB	Metribuzin	21.5	LCS	P	0 - 30
LFB	Mevinphos	14.1	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P345559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Molinate	7.29	LCS	P	0 - 30
LFB	Norflurazon	2.52	LCS	P	0 - 30
LFB	Parathion Ethyl	3.47	LCS	P	0 - 30
LFB	Parathion Methyl	3.99	LCS	P	0 - 30
LFB	Pendimethalin	3.66	LCS	P	0 - 30
LFB	Phorate	3.54	LCS	P	0 - 30
LFB	Prometon	3.48	LCS	P	0 - 30
LFB	Prometryn	3.18	LCS	P	0 - 30
LFB	Simazine	15.6	LCS	P	0 - 30
LFB	Terbufos	6.56	LCS	P	0 - 30
LFB	Terbuthylazine	1.86	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P345802

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994051	Aldrin	1.28	Spike	P	0 - 30
1994051	Alpha-BHC	2.09	Spike	P	0 - 30
1994051	Alpha-Chlordane	4.12	Spike	P	0 - 30
1994051	Beta-BHC	3.71	Spike	P	0 - 30
1994051	Carbophenothion	15.1	Spike	P	0 - 30
1994051	Chlorothalonil	30.1	Spike	F	0 - 30
1994051	Cypermethrin	7.42	Spike	P	0 - 30
1994051	DDD-p,p'	2.84	Spike	P	0 - 30
1994051	DDE-p,p'	1.03	Spike	P	0 - 30
1994051	DDT-p,p'	6.56	Spike	P	0 - 30
1994051	Delta-BHC	4.67	Spike	P	0 - 30
1994051	Dicofol	9.65	Spike	P	0 - 30
1994051	Dieldrin	9.07	Spike	P	0 - 30
1994051	Endosulfan I	3.97	Spike	P	0 - 30
1994051	Endosulfan II	7.10	Spike	P	0 - 30
1994051	Endosulfan Sulfate	11.3	Spike	P	0 - 30
1994051	Endrin	11.4	Spike	P	0 - 30
1994051	Endrin Aldehyde	12.1	Spike	P	0 - 30
1994051	Endrin Ketone	1.52	Spike	P	0 - 30
1994051	Gamma-BHC	5.52	Spike	P	0 - 30
1994051	Gamma-Chlordane	2.52	Spike	P	0 - 30
1994051	Heptachlor	2.33	Spike	P	0 - 30
1994051	Heptachlor Epoxide	1.58	Spike	P	0 - 30
1994051	Methoxychlor	3.45	Spike	P	0 - 30
1994051	Mirex	6.12	Spike	P	0 - 30
1994051	Permethrin	1.72	Spike	P	0 - 30
1994051	Trifluralin	6.04	Spike	P	0 - 30
LFB	Aldrin	1.13	LCS	P	0 - 30
LFB	Alpha-BHC	4.50	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.54	LCS	P	0 - 30
LFB	Beta-BHC	11.9	LCS	P	0 - 30
LFB	Carbophenothion	8.70	LCS	P	0 - 30
LFB	Chlorothalonil	3.37	LCS	P	0 - 30
LFB	Cypermethrin	6.29	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P345802

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	DDD-p,p'	6.92	LCS	P	0 - 30
LFB	DDE-p,p'	4.92	LCS	P	0 - 30
LFB	DDT-p,p'	6.02	LCS	P	0 - 30
LFB	Delta-BHC	9.31	LCS	P	0 - 30
LFB	Dicofol	1.14	LCS	P	0 - 30
LFB	Dieldrin	4.58	LCS	P	0 - 30
LFB	Endosulfan I	1.31	LCS	P	0 - 30
LFB	Endosulfan II	2.73	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.622	LCS	P	0 - 30
LFB	Endrin	1.70	LCS	P	0 - 30
LFB	Endrin Aldehyde	2.65	LCS	P	0 - 30
LFB	Endrin Ketone	2.86	LCS	P	0 - 30
LFB	Gamma-BHC	2.15	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.81	LCS	P	0 - 30
LFB	Heptachlor	2.32	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.450	LCS	P	0 - 30
LFB	Methoxychlor	3.58	LCS	P	0 - 30
LFB	Mirex	6.56	LCS	P	0 - 30
LFB	Permethrin	7.31	LCS	P	0 - 30
LFB	Trifluralin	5.40	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P345802

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993978	Chlordane	6.84	Spike	P	0 - 30
1993978	Toxaphene	12.4	Spike	P	0 - 30
LFB	Chlordane	14.7	LCS	P	0 - 30
LFB	Toxaphene	4.26	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P345394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992930	AMPA	8.73	Spike	P	0 - 30
1992930	Endothall	6.81	Spike	P	0 - 30
1992930	Glufosinate	5.14	Spike	P	0 - 30
1992930	Glyphosate	8.83	Spike	P	0 - 30
1992930	Sucralose	10.7	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P345505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1994049	3-Hydroxycarbofuran	3.70	Spike	P	0 - 30
1994049	Aldicarb	5.55	Spike	P	0 - 30
1994049	Aldicarb Sulfone	1.64	Spike	P	0 - 30
1994049	Aldicarb Sulfoxide	9.45	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P345505

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

Reference Method: SM 2120 B
Batch ID: P345594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993813	Color (true)	2.86	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P345949

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993994	Total Alkalinity	4.47	Sample	F	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P346044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993853	TDS	4.79	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P346046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993994	TDS	7.72	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P345952

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993994	Fluoride	1.95	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P346150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993933	Organic Carbon	0.0994	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: 1994048
Field Sample ID: G1SE004 BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	67.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	135	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.0	P	30 - 160
EPA 8321B	Diuron-d6	95.2	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	76.0	P	40 - 160

Lab Sample ID: 1994049
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	39.1	P	30 - 160

Lab Sample ID: 1994050
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.8	P	30 - 160
EPA 8321B	Diuron-d6	60.2	P	30 - 160
EPA 8321B	Endothall-d6	81.4	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	61.1	P	40 - 160
EPA 8321B	Primidone-d5	62.8	P	30 - 160
EPA 8321B	Sucralose-d6	73.0	P	40 - 160

Lab Sample ID: 1994051
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	60.6	P	37 - 117

Quality Assurance Report Surrogates

Lab Sample ID: 1994051
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Tetrachloro-m-xylene	49.5	P	34 - 101
EPA 8276	Decachlorobiphenyl	54.6	P	31 - 108
EPA 8276	PCNB	83.8	P	62 - 142

Lab Sample ID: 1994052
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	83.9	P	71 - 126
EPA 8270D	Terbufos-d10	83.6	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A84019
Included Lab Sample IDs: 1994011, 1994014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 115
Color (true)	103	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A84020
Included Lab Sample IDs: 1994011, 1994014

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A84023
Included Lab Sample IDs: 1994013, 1994016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A84061
Included Lab Sample IDs: 1994011, 1994014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	104	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A84080
Included Lab Sample IDs: 1994012, 1994015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84107

Included Lab Sample IDs: 1994048, 1994050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	90.8	94.7	P/P	60 - 160
Endothall	137	134	P/P	60 - 160
Glufosinate	88.0	94.2	P/P	60 - 160
Glyphosate	101	99.8	P/P	60 - 160
Sucralose	84.8	81.0	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84136

Included Lab Sample IDs: 1994015

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84148

Included Lab Sample IDs: 1994053, 1994054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	99.5	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Cadmium	97.8	97.4	P/P	90 - 110
Cadmium	98.9	98.8	P/P	90 - 110
Chromium	102	98.2	P/P	90 - 110
Chromium	99.1	101	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Copper	102	99.6	P/P	90 - 110
Lead	98.0	96.6	P/P	90 - 110
Lead	99.1	98.5	P/P	90 - 110
Nickel	101	99.7	P/P	90 - 110
Nickel	102	99.3	P/P	90 - 110
Silver	99.1	99.0	P/P	90 - 110
Silver	99.6	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A84156

Included Lab Sample IDs: 1994011, 1994014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.9	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84156

Included Lab Sample IDs: 1994011, 1994014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84158

Included Lab Sample IDs: 1994012

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

Reference Method: EPA 8270D

Run ID: A84184

Included Lab Sample IDs: 1994051

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.9		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	98.8		P	80 - 120
Beta-BHC	94.5		P	80 - 120
Carbophenothion	82.4		P	80 - 120
Chlorothalonil	116		P	80 - 120
Cypermethrin	95.8		P	80 - 120
DDD-p,p'	105		P	80 - 120
DDE-p,p'	99.4		P	80 - 120
DDT-p,p'	104		P	80 - 120
Delta-BHC	106		P	80 - 120
Dicofol	99.1		P	80 - 120
Dieldrin	98.8		P	80 - 120
Endosulfan I	94.2		P	80 - 120
Endosulfan II	95.7		P	80 - 120
Endosulfan Sulfate	93.7		P	80 - 120
Endrin	96.6		P	80 - 120
Endrin Aldehyde	95.6		P	80 - 120
Endrin Ketone	96.6		P	80 - 120
Gamma-BHC	98.3		P	80 - 120
Gamma-Chlordane	99.1		P	80 - 120
Heptachlor	93.6		P	80 - 120
Heptachlor Epoxide	98.5		P	80 - 120
Methoxychlor	107		P	80 - 120
Mirex	98.6		P	80 - 120
Permethrin	104		P	80 - 120
Trifluralin	98.7		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84200

Included Lab Sample IDs: 1994012, 1994015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.8	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84210

Included Lab Sample IDs: 1994012, 1994015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84216

Included Lab Sample IDs: 1994053, 1994054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	95 - 105
Calcium	99.4	102	P/P	90 - 110
Iron	102	102	P/P	95 - 105
Iron	99.1	99.7	P/P	90 - 110
Magnesium	100	101	P/P	90 - 110
Magnesium	102	102	P/P	95 - 105
Potassium	99.1	102	P/P	90 - 110
Potassium	100	101	P/P	95 - 105
Sodium	102	105	P/P	90 - 110
Sodium	102	102	P/P	95 - 105
Zinc	98.3	98.2	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A84243

Included Lab Sample IDs: 1994012, 1994015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	98.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84279

Included Lab Sample IDs: 1994048, 1994050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.1	93.6	P/P	50 - 150
2,4-D	93.6	93.6	P/P	50 - 150
3-Hydroxycarbofuran	129	133	P/P	50 - 150
Acetaminophen	123	120	P/P	60 - 150
Acetaminophen	128	125	P/P	60 - 150
Aldicarb	101	91.9	P/P	60 - 150
Aldicarb Sulfone	118	121	P/P	50 - 150
Aldicarb Sulfoxide	109	113	P/P	50 - 150
Bentazon	107	95.2	P/P	50 - 150
Bentazon	95.2	99.5	P/P	50 - 150
Carbamazepine	118	120	P/P	60 - 150
Carbamazepine	92.4	117	P/P	60 - 150
Carbaryl	130	116	P/P	60 - 150
Carbofuran	96.5	121	P/P	50 - 150
Diuron	119	132	P/P	60 - 150
Diuron	135	119	P/P	60 - 150
Fenuron	116	112	P/P	60 - 150
Fenuron	117	119	P/P	60 - 150
Fluridone	123	123	P/P	60 - 160
Fluridone	125	124	P/P	60 - 160
Hydrocodone	114	119	P/P	60 - 150
Hydrocodone	115	118	P/P	60 - 150
Imazapyr	94.0	98.3	P/P	50 - 150
Imazapyr	99.1	94.8	P/P	50 - 150
Imidacloprid	97.5	105	P/P	60 - 150
Imidacloprid	98.7	97.3	P/P	60 - 150
Linuron	109	117	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84279

Included Lab Sample IDs: 1994048, 1994050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	117	118	P/P	60 - 150
MCP	92.7	82.2	P/P	50 - 150
MCP	96.4	92.7	P/P	50 - 150
Methiocarb	108	97.1	P/P	50 - 150
Methomyl	108	107	P/P	50 - 150
Oxamyl	112	118	P/P	50 - 150
Primidone	103	111	P/P	60 - 150
Primidone	111	102	P/P	60 - 150
Propoxur	94.2	109	P/P	50 - 150
Pyraclostrobin	105	116	P/P	60 - 150
Pyraclostrobin	111	111	P/P	60 - 150
Triclopyr	91.6	92.5	P/P	50 - 160
Triclopyr	92.5	95.8	P/P	50 - 160

Reference Method: EPA 8270D

Run ID: A84287

Included Lab Sample IDs: 1994052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.9		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	101		P	80 - 120
Atrazine	92.4		P	80 - 120
Atrazine Desethyl	78.5*		F	80 - 120
Azinphos Methyl	99.7		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	95.3		P	80 - 120
Chlorpyrifos Methyl	95.8		P	80 - 120
Cyanazine	66.4*		F	80 - 120
Demeton	100		P	80 - 120
Diazinon	99.2		P	80 - 120
Disulfoton	95.3		P	80 - 120
EPTC	101		P	80 - 120
Ethion	93.9		P	80 - 120
Ethoprop	97.3		P	80 - 120
Fenamiphos	92.8		P	80 - 120
Fipronil	97.6		P	80 - 120
Fipronil Sulfide	108		P	80 - 120
Fipronil Sulfone	95.6		P	80 - 120
Fonofos	97.1		P	80 - 120
Hexazinone	96.9		P	80 - 120
Malathion	95.6		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	85.8		P	80 - 120
Mevinphos	97.4		P	80 - 120
Molinate	96.4		P	80 - 120
Norflurazon	98.1		P	80 - 120
Parathion Ethyl	92.9		P	80 - 120
Parathion Methyl	94.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A84287
Included Lab Sample IDs: 1994052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pendimethalin	96.1		P	80 - 120
Phorate	91.3		P	80 - 120
Prometon	97.2		P	80 - 120
Prometryn	102		P	80 - 120
Simazine	94.7		P	80 - 120
Terbufos	94.0		P	80 - 120
Terbutylazine	96.5		P	80 - 120

Reference Method: EPA 8276
Run ID: A84317
Included Lab Sample IDs: 1994051

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Toxaphene	80.7		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							0.571	
EPA 200.7 Rev. 4.4	Calcium	101		103	103				0.800
	Iron	101		104	102	104			1.63
	Magnesium	104		106	104	107			1.11
	Potassium	98.3		98.6	96.9				0.436
	Sodium	101		101	95.6				0.484
	Zinc	94.3		101	101	101			0.826
EPA 200.8 Rev. 5.4	Arsenic	102		103	102	102			1.35
	Cadmium	100		101	98.4	98.5			2.65
	Chromium	100		98.0	97.7	95.5			0.331
	Copper	99.1		97.3	96.9	99.1			0.390
	Lead	97.9		99.4	97.4	98.2			1.99
	Nickel	102		101	99.7	103			1.24
	Silver	101		100	99.5	101			0.930
EPA 300.0 Rev. 2.1	Chloride	100		104				0.609	
	Sulfate	99.6		103	96.7			2.37	
EPA 350.1 Rev. 2.0	Ammonia-N	92.2		94.5	94.5				0.0550
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		96.4	93.2				2.44
EPA 353.2 Rev. 2.0	NO2NO3-N	102		101	101				0.0
	NO2NO3-N	102		97.0	97.0				0.0
EPA 365.1 Rev. 2.0	Total-P	102		94.8	99.9				5.06
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		96.5	96.6				0.104
EPA 8270D	Acetochlor	95.4	96.1	100	87.5		0.692		13.7
	Alachlor	92.4	97.6	93.9	104		5.45		10.1
	Aldrin	65.7	66.5	61.7	61.0		1.13		1.28

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						SMP	MS
EPA 8270D	Alpha-BHC	72.0	75.3	70.0	71.5	4.50	2.09
	Alpha-Chlordane	81.7	83.0	71.7	68.8	1.54	4.12
	Ametryn	86.3	95.1	80.2	112	9.78	33.1
	Atrazine	94.5	97.8	91.1	124	3.42	22.8
	Atrazine Desethyl	78.9	106	136	110	28.9	20.9
	Azinphos Methyl	106	111	118	98.4	4.76	18.3
	Beta-BHC	83.2	93.8	85.2	88.4	11.9	3.71
	Bromacil	86.8	94.3	101	91.1	8.28	10.8
	Butylate	51.3	58.0	51.5	39.3	12.2	27.0
	Carbophenothion	85.0	92.7	107	125	8.70	15.1
	Chlorothalonil	115	119	110	148	3.37	30.1
	Chlorpyrifos Ethyl	78.7	87.0	99.2	81.1	10.1	20.1
	Chlorpyrifos Methyl	82.4	91.4	88.5	79.3	10.4	11.0
	Cyanazine	188	209	199	181	10.6	9.28
	Cypermethrin	74.1	78.9	91.3	98.3	6.29	7.42
	DDD-p,p'	96.3	103	85.2	82.8	6.92	2.84
	DDE-p,p'	82.6	86.8	70.3	69.6	4.92	1.03
	DDT-p,p'	74.8	79.4	67.5	63.2	6.02	6.56
	Delta-BHC	98.3	108	93.9	98.4	9.31	4.67
	Demeton	68.8	76.4	81.1	117	10.4	36.0
	Diazinon	103	104	106	123	1.06	15.6
	Dicofol	80.6	79.7	67.2	74.0	1.14	9.65
	Dieldrin	82.8	86.7	78.5	71.7	4.58	9.07
	Disulfoton	84.8	89.2	98.8	96.8	4.98	2.04
	Endosulfan I	89.7	88.6	76.0	79.1	1.31	3.97
	Endosulfan II	95.2	92.7	87.7	94.2	2.73	7.10
	Endosulfan Sulfate	85.9	86.5	80.9	90.6	0.622	11.3
	Endrin	88.9	87.4	87.5	78.1	1.70	11.4
	Endrin Aldehyde	91.6	94.0	155	175	2.65	12.1
	Endrin Ketone	86.7	89.3	84.0	82.7	2.86	1.52
	EPTC	54.6	61.7	34.4	44.3	12.3	25.1
	Ethion	80.2	85.8	69.1	67.2	6.79	2.78
	Ethoprop	84.5	93.1	92.4	113	9.69	20.5
	Fenamiphos	79.7	102	72.4	71.0	24.3	2.01
	Fipronil	96.8	98.7	83.5	93.2	1.91	10.9
	Fipronil Sulfide	78.2	85.4	71.1	76.2	8.76	6.97
	Fipronil Sulfone	79.4	84.4	66.8	70.2	6.15	4.98
	Fonofos	89.8	96.5	99.5	117	7.15	15.8
	Gamma-BHC	86.1	84.3	97.1	91.9	2.15	5.52
	Gamma-Chlordane	80.5	82.0	73.9	72.1	1.81	2.52
	Heptachlor	68.9	67.3	65.1	66.6	2.32	2.33
	Heptachlor Epoxide	83.8	84.2	74.1	72.9	0.450	1.58
	Hexazinone	95.4	94.2	113	118	1.19	4.28
	Malathion	83.8	92.0	76.6	61.8	9.37	21.3
	Metalaxyl	96.4	98.5	104	88.7	2.13	15.9
	Methoxychlor	85.6	88.7	118	122	3.58	3.45
	Metolachlor	92.5	95.0	109	86.7	2.63	23.0
	Metribuzin	82.6	103	172	137	21.5	22.2
	Mevinphos	74.3	85.6	93.7	115	14.1	20.3
	Mirex	65.4	69.9	73.5	69.1	6.56	6.12
	Molinate	65.9	70.9	47.4	57.4	7.29	19.2
	Norflurazon	93.8	96.2	60.4	66.0	2.52	8.85
	Parathion Ethyl	88.9	92.1	101	93.2	3.47	7.95
	Parathion Methyl	95.5	99.4	122	106	3.99	13.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Pendimethalin	105	109	113	119	3.66	5.07
	Permethrin	74.7	80.3	89.7	88.2	7.31	1.72
	Phorate	83.7	86.7	107	125	3.54	15.7
	Prometon	84.8	87.8	87.6	112	3.48	24.4
	Prometryn	92.7	95.7	85.1	93.4	3.18	9.31
	Simazine	87.8	103	95.6	102	15.6	6.42
	Terbufos	85.9	91.7	101	123	6.56	20.1
	Terbuthylazine	94.0	95.8	95.8	115	1.86	18.4
	Trifluralin	68.4	72.2	72.3	68.0	5.40	6.04
EPA 8276	Chlordane	143	166	163	152	14.7	6.84
	Toxaphene	125	131	124	109	4.26	12.4
EPA 8321B	2,4-D	65.0		122	149		12.1
	3-Hydroxycarbofuran	104		62.3	60.1		3.70
	Acetaminophen	102		87.5	87.6		0.153
	Aldicarb	79.8		33.4	31.6		5.55
	Aldicarb Sulfone	105		67.2	68.3		1.64
	Aldicarb Sulfoxide	94.8		55.4	60.9		9.45
	AMPA	89.7		68.1	62.4		8.73
	Bentazon	81.7		49.3	45.1		8.90
	Carbamazepine	87.4		51.5	58.3		12.4
	Carbaryl	59.7		41.9	38.4		8.72
	Carbofuran	84.1		39.6	47.3		17.8
	Diuron	68.7		57.4	55.0		4.31
	Endothall	97.1		101	108		6.81
	Fenuron	102		53.2	52.8		0.887
	Fluridone	83.6		67.4	66.9		0.658
	Glufosinate	102		88.2	83.8		5.14
	Glyphosate	115		91.9	100		8.83
	Hydrocodone	99.5		76.2	74.3		2.55
	Imazapyr	88.5		69.7	95.3		5.75
	Imidacloprid	93.1		122	118		3.32
	Linuron	72.9		60.8	65.4		7.36
	MCPP	88.5		134	130		3.40
	Methiocarb	63.3		52.3	51.1		2.26
	Methomyl	93.4		48.2	51.4		6.37
	Oxamyl	102		58.7	61.5		4.56
	Primidone	90.3		69.0	65.5		5.24
	Propoxur	80.8		33.1	36.3		9.03
	Pyraclostrobin	82.1		73.3	89.4		19.7
	Sucralose	79.4		78.8	70.8		10.7
	Triclopyr	85.3		187	171		8.55
SM 2120 B	Color (true)					2.86	
SM 2320 B-97	Total Alkalinity	102				4.47	
SM 2540 C-97	TDS					4.79	
	TDS					7.72	
SM 4500 F-C-97	Fluoride	96.7		96.3	94.2		1.95
SM 5310 B-00	Organic Carbon	94.7		96.3	96.4		0.0994

Reference Method Descriptions

Method / DoH Cert #
EPA 180.1 Rev. 2.0 /
E31780

Description
Turbidity in aqueous matrices

Associated Samples
1994011, 1994014

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1994053, 1994054
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1994053, 1994054
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1994011, 1994014
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1994011, 1994014
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1994012, 1994015
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1994012, 1994015
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1994012, 1994015
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1994012, 1994015
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1994013, 1994016
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1994051
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1994052
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1994051
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1994049
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1994048, 1994050
SM 2120 B / E31780	True Color measured at 450 nm	1994011, 1994014
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1994011, 1994014
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1994011, 1994014
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1994011, 1994014
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1994011, 1994014
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1994012, 1994015

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	05/18/2018			05/18/2018 14:20	DeAsia Armster	1994011, 1994014
EPA 200.7 Rev. 4.4	05/18/2018	05/23/2018 14:33	Allison Taylor	05/29/2018 17:05	Betina Topolski	1994053
	05/18/2018	05/23/2018 14:33	Allison Taylor	05/29/2018 19:31	Betina Topolski	1994054
EPA 200.8 Rev. 5.4	05/18/2018	05/23/2018 14:33	Allison Taylor	05/24/2018 15:02	Nadine Brooks	1994053
	05/18/2018	05/23/2018 14:33	Allison Taylor	05/24/2018 19:12	Nadine Brooks	1994054
EPA 300.0 Rev. 2.1	05/18/2018			05/23/2018 02:19	Lipi Saha	1994011
	05/18/2018			05/23/2018 02:31	Lipi Saha	1994014
EPA 350.1 Rev. 2.0	05/18/2018			05/25/2018 11:08	Ping Hua	1994015
	05/18/2018			05/25/2018 11:11	Ping Hua	1994012
EPA 351.2 Rev. 2.0	05/18/2018	05/25/2018 11:00	Adrian Shelby	05/29/2018 12:18	Joseph Suarez	1994012
	05/18/2018	05/25/2018 11:00	Adrian Shelby	05/29/2018 12:19	Joseph Suarez	1994015
EPA 353.2 Rev. 2.0	05/18/2018			05/22/2018 13:46	Lauren Bottorf	1994012
	05/18/2018			05/22/2018 13:59	Lauren Bottorf	1994015
EPA 365.1 Rev. 2.0	05/18/2018	05/23/2018 13:05	Sima Feizi	05/24/2018 10:50	Beverly Y. Sanders	1994015
	05/18/2018	05/23/2018 13:05	Sima Feizi	05/25/2018 09:49	Beverly Y. Sanders	1994012
EPA 365.1 Rev. 2.0 dissolved	05/18/2018			05/18/2018 15:49	Megan Treadwell	1994013
	05/18/2018			05/18/2018 15:52	Megan Treadwell	1994016
EPA 8270D	05/18/2018	05/18/2018 12:39	Rasheda Ghaffari	05/23/2018 16:43	Vandana T. Nagar	1994052
	05/18/2018	05/23/2018 08:00	Rasheda Ghaffari	05/24/2018 19:00	Dinesh Mishra	1994051
EPA 8276	05/18/2018	05/23/2018 08:00	Rasheda Ghaffari	05/31/2018 19:29	John P. Burgos	1994051
EPA 8321B	05/18/2018	05/18/2018 14:30	Juyoung Kim	05/21/2018 20:54	Juyoung Kim	1994048
	05/18/2018	05/18/2018 14:30	Juyoung Kim	05/21/2018 21:13	Juyoung Kim	1994050
	05/18/2018	05/23/2018 08:30	Hoor Shaik	05/23/2018 17:30	Juyoung Kim	1994050
	05/18/2018	05/23/2018 08:30	Hoor Shaik	05/23/2018 23:50	Juyoung Kim	1994048
	05/18/2018	05/23/2018 08:30	Hoor Shaik	05/24/2018 07:20	Juyoung Kim	1994050
	05/18/2018	05/23/2018 08:30	Hoor Shaik	05/24/2018 08:29	Juyoung Kim	1994049
	05/18/2018	05/23/2018 08:30	Hoor Shaik	05/24/2018 17:09	Juyoung Kim	1994048
SM 2120 B	05/18/2018			05/18/2018 15:58	Tanya Welborn	1994011
	05/18/2018			05/18/2018 16:12	Tanya Welborn	1994014
SM 2320 B-97	05/18/2018			05/25/2018 07:26	Dale L. Simmons	1994011
	05/18/2018			05/25/2018 07:37	Dale L. Simmons	1994014
SM 2540 C-97	05/18/2018			05/23/2018 10:15	Yijie Li	1994011, 1994014
SM 2540 D-97	05/18/2018			05/23/2018 10:15	Yijie Li	1994011, 1994014
SM 4500 F-C-97	05/18/2018			05/25/2018 07:26	Dale L. Simmons	1994011
	05/18/2018			05/25/2018 07:37	Dale L. Simmons	1994014
SM 5310 B-00	05/18/2018			05/29/2018 18:51	Megan Treadwell	1994012
	05/18/2018			05/29/2018 19:07	Megan Treadwell	1994015