Chemical Analysis Report

NE-DIST-2018-03-28-01

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

Event Description: **Gainesville South_2018**
Request ID: **RQ-2018-03-26-09**
Customer: **NE-DIST**
Project ID: **SMP**

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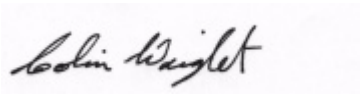
Certified by: Colin Wright, Program Administrator

Date Certified: 26-APR-2018 10:53



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: Lochloosa Slough at SE 225 **Collection Date/Time: 03/27/2018 11:20**

Field ID: G1NE0860 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978500	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P342358	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P342509	
		Sulfate	0.34	I	mg SO4/L	P342513	
	SM 2120 B	Color (true)	390		PCU	P342354	
	SM 2320 B-97	Total Alkalinity	7.7		mg CaCO3/L	P342982	
	SM 2540 C-97	TDS	116		mg/L	P342659	
	SM 2540 D-97	TSS	2	I	mg/L	P343096	
	SM 4500 F-C-97	Fluoride	0.065	I	mg F/L	P342986	
1978501	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P342769	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P342401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P342655	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P342502	
	SM 5310 B-00	Organic Carbon	38		mg C/L	P342906	
1978502	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P342433	
1978529	EPA 200.7 Rev. 4.4	Calcium	7.64		mg/L	P342451	
		Iron	650		ug/L	P342451	
		Magnesium	2.20		mg/L	P342451	
		Potassium	0.53	I	mg/L	P342451	
		Sodium	6.1		mg/L	P342451	
		Zinc	5.0	U	ug/L	P342451	
	EPA 200.8 Rev. 5.4	Arsenic	0.51		ug/L	P342451	
		Cadmium	0.020	U	ug/L	P342451	
		Chromium	0.52	I	ug/L	P342451	
		Copper	0.20	U	ug/L	P342451	
		Lead	0.29		ug/L	P342451	
		Nickel	0.41	I	ug/L	P342451	
		Silver	0.010	U	ug/L	P342451	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Lochloosa Slough at SE 225 **Collection Date/Time: 03/27/2018 11:20**

Field ID: G1NE0860 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978525	EPA 8321B	Aldicarb	0.020	U	ug/L	P342346	
		Aldicarb Sulfone	0.0020	U	ug/L	P342346	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P342346	
		Carbaryl	0.0020	U	ug/L	P342346	
		Carbofuran	0.0020	U	ug/L	P342346	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P342346	
		Methiocarb	0.0020	U	ug/L	P342346	
		Methomyl	0.0020	U	ug/L	P342346	
		Oxamyl	0.0020	U	ug/L	P342346	

Field ID: G1NE0860 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978525	EPA 8321B	Propoxur	0.0020	U	ug/L	P342346	
1978526		2,4-D	0.0020	U	ug/L	P342346	
		Sucralose**	0.010	U	ug/L	P342413	
		Bentazon	8.0E-04	U	ug/L	P342346	
		MCPP	0.0020	U	ug/L	P342346	
		Triclopyr**	0.0040	U	ug/L	P342346	
		Imidacloprid	0.0062	I	ug/L	P342346	MS
		Diuron	0.0020	U	ug/L	P342346	
		Pyraclostrobin**	0.0020	U	ug/L	P342346	
		Primidone**	0.0040	U	ug/L	P342346	
		Linuron	0.0040	U	ug/L	P342346	
		Acetaminophen**	0.0080	U	ug/L	P342346	
		Fenuron	0.016	U	ug/L	P342346	
		Imazapyr**	0.012	I	ug/L	P342346	
		Carbamazepine**	4.0E-04	U	ug/L	P342346	
		Fluridone**	0.0012	I	ug/L	P342346	
		Glyphosate**	0.10	U	ug/L	P342352	
		AMPA**	0.10	U	ug/L	P342352	
1978527	EPA 8270D	Aldrin	4.3	U	ng/L	P342551	
		Alpha-BHC	2.1	U	ng/L	P342551	
		Beta-BHC	4.3	U	ng/L	P342551	
		Delta-BHC	4.3	U	ng/L	P342551	
		Gamma-BHC	4.3	U	ng/L	P342551	
		Carbophenothion	4.3	UJ	ng/L	P342551	RPD
		Chlorothalonil	2.1	U	ng/L	P342551	
		Cypermethrin	21	U	ng/L	P342551	
		DDD-p,p'	3.2	U	ng/L	P342551	
		DDE-p,p'	3.2	U	ng/L	P342551	
		DDT-p,p'	3.2	U	ng/L	P342551	
		Dieldrin	4.3	U	ng/L	P342551	
		Endosulfan I	4.3	U	ng/L	P342551	
		Endosulfan II	4.3	U	ng/L	P342551	
		Endosulfan Sulfate	2.1	U	ng/L	P342551	
		Endrin	2.1	U	ng/L	P342551	
		Endrin Aldehyde	2.1	U	ng/L	P342551	
		Heptachlor	1.6	U	ng/L	P342551	
		Heptachlor Epoxide	2.1	U	ng/L	P342551	
		Methoxychlor	4.3	U	ng/L	P342551	
		Mirex	2.1	U	ng/L	P342551	
		Permethrin	11	U	ng/L	P342551	
		Trifluralin	1.1	U	ng/L	P342551	
		Alpha-Chlordane	1.1	U	ng/L	P342551	
		Gamma-Chlordane	1.1	U	ng/L	P342551	
		Endrin Ketone	2.1	U	ng/L	P342551	
		Dicofol	32	U	ng/L	P342551	

Field ID: G1NE0860 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978527	EPA 8276	Chlordane**	2.7	U	ng/L	P342551	
		Toxaphene**	32	U	ng/L	P342551	
1978528	EPA 8270D	Alachlor	0.24	U	ng/L	P342308	
		Ametryn	0.32	U	ng/L	P342308	
		Atrazine	0.25	I	ng/L	P342308	
		Atrazine Desethyl	1.5	U	ng/L	P342308	
		Azinphos Methyl	2.2	U	ng/L	P342308	
		Bromacil	0.49	U	ng/L	P342308	
		Butylate	0.39	UJ	ng/L	P342308	RPD
		Chlorpyrifos Ethyl	1.3		ng/L	P342308	
		Chlorpyrifos Methyl	0.098	U	ng/L	P342308	
		Demeton	2.0	U	ng/L	P342308	
		Diazinon	0.12	U	ng/L	P342308	
		Disulfoton	0.49	U	ng/L	P342308	
		EPTC	1.2	UJ	ng/L	P342308	RPD
		Ethion	0.15	U	ng/L	P342308	
		Ethoprop	0.098	U	ng/L	P342308	
		Fenamiphos	0.24	U	ng/L	P342308	
		Fipronil	0.24	U	ng/L	P342308	
		Fipronil Sulfide	0.15	U	ng/L	P342308	
		Fipronil Sulfone	0.15	U	ng/L	P342308	
		Hexazinone	0.49	U	ng/L	P342308	
		Malathion	0.34	U	ng/L	P342308	
		Metribuzin	0.20	U	ng/L	P342308	
		Mevinphos	0.49	U	ng/L	P342308	
		Molinate	0.29	UJ	ng/L	P342308	RPD
		Norflurazon	0.49	U	ng/L	P342308	
		Pendimethalin	0.98	U	ng/L	P342308	
		Phorate	0.24	U	ng/L	P342308	
		Prometon	0.88	U	ng/L	P342308	
		Prometryn	0.20	U	ng/L	P342308	
		Simazine	0.49	U	ng/L	P342308	
		Terbufos	0.098	U	ng/L	P342308	
		Terbuthylazine	0.42	U	ng/L	P342308	
		Fonofos	0.20	U	ng/L	P342308	
		Metalaxyl	0.24	U	ng/L	P342308	
		Metolachlor	0.24	U	ng/L	P342308	
		Acetochlor	0.24	U	ng/L	P342308	
		Cyanazine	0.49	UJ	ng/L	P342308	CCV
		Parathion Ethyl	0.24	U	ng/L	P342308	
		Parathion Methyl	0.24	U	ng/L	P342308	

Ref. Method and Comment:
EPA 8270D: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: MS accuracy for Atrazine, Simazine and Fipronil Sulfone not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Moss Lee Lake Center **Collection Date/Time: 03/27/2018 13:00**

Field ID: G3NE0004 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978503	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P342358	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P342509	
		Sulfate	0.75		mg SO4/L	P342513	
	SM 2120 B	Color (true)	190		PCU	P342354	
	SM 2320 B-97	Total Alkalinity	1.7	I	mg CaCO3/L	P342982	
	SM 2540 C-97	TDS	68		mg/L	P342660	
	SM 2540 D-97	TSS	2	I	mg/L	P343097	
	SM 4500 F-C-97	Fluoride	0.079	I	mg F/L	P342986	
1978506	EPA 350.1 Rev. 2.0	Ammonia-N	0.041		mg N/L	P343144	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P342401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P342655	
	EPA 365.1 Rev. 2.0	Total-P	0.068		mg P/L	P342502	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P342906	
1978509	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.052		mg P/L	P342433	

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: Lake Jeffords Center **Collection Date/Time: 03/27/2018 12:00**

Field ID: 20020055 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978504	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P342358	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P342509	
		Sulfate	5.1		mg SO4/L	P342513	
	SM 2120 B	Color (true)	260		PCU	P342354	
	SM 2320 B-97	Total Alkalinity	0.99	I	mg CaCO3/L	P342982	
	SM 2540 C-97	TDS	73		mg/L	P342660	
	SM 2540 D-97	TSS	4	I	mg/L	P343097	
	SM 4500 F-C-97	Fluoride	0.044	I	mg F/L	P342986	
1978507	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P343144	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P342401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P342655	
	EPA 365.1 Rev. 2.0	Total-P	0.083		mg P/L	P342502	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P342906	
1978510	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.063		mg P/L	P342433	

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: Alligator Creek Above The Starke WWTP **Collection Date/Time: 03/27/2018 14:35**

Field ID: 21030076 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978505	EPA 180.1 Rev. 2.0	Turbidity	5.1		NTU	P342358	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P342509	
		Sulfate	25		mg SO4/L	P342513	
	SM 2120 B	Color (true)	86	A	PCU	P342354	

Field ID: 21030076 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1978505	SM 2320 B-97	Total Alkalinity	24		mg CaCO3/L	P342982	
	SM 2540 C-97	TDS	138	A	mg/L	P342660	
	SM 2540 D-97	TSS	3	IA	mg/L	P343097	
	SM 4500 F-C-97	Fluoride	0.054	I	mg F/L	P342986	
1978508	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P343144	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41		mg N/L	P342401	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P342655	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P342502	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P342906	
1978511	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.01	I	mg P/L	P342433	

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P342358

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P342451

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: P342451

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: P342509

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342513

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342769

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343144

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342401

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342655

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342502

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342433

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

Reference Method: EPA 8270D
Batch ID: P342308

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P342308

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

Reference Method: EPA 8270D
Batch ID: P342551

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P342551

Component	Result	Code	Units
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: P342551

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

Reference Method: EPA 8321B
Batch ID: P342346

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	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P342352

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P342413

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P342354

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P342982

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

Reference Method: SM 2540 C-97
Batch ID: P342659

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P342660

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343096

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343097

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P342986

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P342906

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: P342451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	107		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	107		P	85 - 115
Sodium	105		P	85 - 115
Zinc	99.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	101		P	85 - 115
Copper	104		P	85 - 115
Lead	99.5		P	85 - 115
Nickel	104		P	85 - 115
Silver	98.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342509

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: P342513

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342769

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342401

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342655

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342502

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342433

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

Reference Method: EPA 8270D
Batch ID: P342308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	91.2	92.2	P/P	74 - 119
Alachlor	91.2	93.2	P/P	75 - 118
Ametryn	71.7	71.0	P/P	59 - 137
Atrazine	94.4	101	P/P	73 - 120
Atrazine Desethyl	109	102	P/P	19 - 129
Azinphos Methyl	118	126	P/P	65 - 181
Bromacil	60.1	68.0	P/P	43 - 123
Butylate	47.1	32.2	P/P	28 - 85.0
Chlorpyrifos Ethyl	92.9	89.1	P/P	55 - 112
Chlorpyrifos Methyl	94.3	93.6	P/P	35 - 124
Cyanazine	239	249	P/P	26 - 262
Demeton	71.6	63.3	P/P	43 - 122
Diazinon	97.4	98.7	P/P	72 - 120
Disulfoton	87.9	92.1	P/P	45 - 137
EPTC	48.2	30.5	P/P	28 - 95.0
Ethion	89.3	88.4	P/P	63 - 127
Ethoprop	86.3	79.6	P/P	63 - 109
Fenamiphos	93.0	93.8	P/P	66 - 136
Fipronil	91.1	94.5	P/P	63 - 126
Fipronil Sulfide	89.3	87.8	P/P	59 - 123
Fipronil Sulfone	83.5	82.0	P/P	56 - 122
Fonofos	88.3	84.0	P/P	64 - 114
Hexazinone	96.7	103	P/P	49 - 144
Malathion	98.9	101	P/P	68 - 131
Metalaxyl	86.3	91.4	P/P	57 - 126
Metolachlor	90.6	96.9	P/P	75 - 118
Metribuzin	156	149	P/P	46 - 169
Mevinphos	75.4	67.2	P/P	34 - 126
Molinate	53.9	39.1	P/P	37 - 101
Norflurazon	89.5	95.1	P/P	63 - 127
Parathion Ethyl	94.0	97.0	P/P	78 - 109
Parathion Methyl	99.9	104	P/P	74 - 123
Pendimethalin	103	102	P/P	51 - 130
Phorate	81.0	78.5	P/P	53 - 116

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P342308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometon	83.9	85.4	P/P	66 - 124
Prometryn	82.8	81.8	P/P	66 - 124
Simazine	97.8	94.8	P/P	62 - 134
Terbufos	87.5	84.0	P/P	59 - 115
Terbuthylazine	92.3	96.2	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P342551

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	65.2	69.5	P/P	24 - 89.0
Alpha-BHC	81.5	75.2	P/P	58 - 117
Alpha-Chlordane	87.3	90.2	P/P	56 - 115
Beta-BHC	104	125	P/P	55 - 137
Carbophenothion	66.8	90.7	P/P	37 - 145
Chlorothalonil	77.3	88.8	P/P	26 - 163
Cypermethrin	83.7	87.6	P/P	42 - 156
DDD-p,p'	101	108	P/P	59 - 129
DDE-p,p'	87.9	91.3	P/P	52 - 117
DDT-p,p'	85.1	88.7	P/P	48 - 128
Delta-BHC	108	116	P/P	59 - 158
Dicofol	89.8	83.5	P/P	19 - 124
Dieldrin	91.1	90.8	P/P	57 - 126
Endosulfan I	87.6	85.2	P/P	59 - 133
Endosulfan II	102	109	P/P	58 - 148
Endosulfan Sulfate	101	108	P/P	56 - 135
Endrin	86.3	83.3	P/P	50 - 140
Endrin Aldehyde	91.6	100	P/P	47 - 141
Endrin Ketone	93.2	97.4	P/P	63 - 123
Gamma-BHC	84.7	99.7	P/P	59 - 132
Gamma-Chlordane	84.3	88.7	P/P	55 - 112
Heptachlor	69.7	67.8	P/P	45 - 102
Heptachlor Epoxide	84.7	88.9	P/P	61 - 116
Methoxychlor	93.7	95.4	P/P	60 - 133
Mirex	73.9	76.6	P/P	40 - 98.0
Permethrin	80.5	82.2	P/P	45 - 131
Trifluralin	77.8	80.8	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P342551

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	72.1	82.8	P/P	47 - 125
Toxaphene	94.7	101	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P342346

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	78.9		P	40 - 150
3-Hydroxycarbofuran	102		P	40 - 150
Acetaminophen	112		P	30 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P342346

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldicarb	82.2		P	30 - 150
Aldicarb Sulfone	104		P	40 - 150
Aldicarb Sulfoxide	112		P	40 - 150
Bentazon	74.4		P	30 - 150
Carbamazepine	75.8		P	40 - 150
Carbaryl	58.3		P	40 - 150
Carbofuran	65.8		P	40 - 150
Diuron	68.2		P	40 - 150
Fenuron	111		P	40 - 150
Fluridone	60.0		P	40 - 150
Imazapyr	69.0		P	40 - 150
Imidacloprid	93.9		P	40 - 160
Linuron	80.2		P	40 - 150
MCPP	74.3		P	40 - 150
Methiocarb	70.3		P	40 - 150
Methomyl	104		P	40 - 150
Oxamyl	99.0		P	40 - 150
Primidone	115		P	40 - 150
Propoxur	64.1		P	40 - 150
Pyraclostrobin	68.3		P	40 - 150
Triclopyr	79.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	96.2		P	40 - 150
Glyphosate	91.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342413

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	92.6		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P342982

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P342986

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P342906

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P342451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978288	Iron	107	106	P/P	80 - 120
1978288	Magnesium	104		P	80 - 120
1978288	Potassium	105	104	P/P	80 - 120
1978288	Sodium	102		P	80 - 120
1978288	Zinc	99.8	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978288	Arsenic	101	102	P/P	80 - 120
1978288	Cadmium	106	107	P/P	80 - 120
1978288	Chromium	101	101	P/P	80 - 120
1978288	Copper	97.2	96.1	P/P	80 - 120
1978288	Lead	101	100	P/P	80 - 120
1978288	Nickel	96.9	97.1	P/P	80 - 120
1978288	Silver	98.1	98.2	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342509

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978313	Chloride	101	99.4	P/P	90 - 110
1978779	Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342513

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978313	Sulfate	102	99.3	P/P	90 - 110
1978779	Sulfate	99.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978215	Ammonia-N	96.8	93.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978507	Ammonia-N	97.2	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978553	Kjeldahl Nitrogen	96.6	102	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978501	NO2NO3-N	97.0	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978293	Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978312	O-Phosphate-P	100	101	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P342308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1977012	Acetochlor	86.8	81.9	P/P	67 - 125
1977012	Alachlor	77.6	71.3	P/P	69 - 123
1977012	Ametryn	88.5	83.4	P/P	52 - 151
1977012	Atrazine Desethyl	91.2	84.7	P/P	10 - 129
1977012	Azinphos Methyl	110	107	P/P	48 - 200
1977012	Bromacil	80.3	77.2	P/P	46 - 130
1977012	Butylate	34.1	27.0	P/P	10 - 85.0
1977012	Chlorpyrifos Ethyl	81.0	73.7	P/P	54 - 115
1977012	Chlorpyrifos Methyl	88.5	87.6	P/P	44 - 117
1977012	Cyanazine	203	190	P/P	10 - 262
1977012	Demeton	47.9	47.8	P/P	24 - 145
1977012	Diazinon	97.5	90.1	P/P	66 - 129
1977012	Disulfoton	84.0	77.6	P/P	45 - 139
1977012	EPTC	34.2	27.9	P/P	10 - 86.0
1977012	Ethion	92.1	86.8	P/P	59 - 133
1977012	Ethoprop	90.9	89.5	P/P	54 - 116
1977012	Fenamiphos	85.6	81.4	P/P	55 - 140
1977012	Fipronil	90.3	88.4	P/P	37 - 142
1977012	Fipronil Sulfide	84.2	81.3	P/P	37 - 130
1977012	Fonofos	85.7	82.4	P/P	55 - 118
1977012	Hexazinone	105	103	P/P	62 - 140
1977012	Malathion	97.8	98.5	P/P	64 - 132
1977012	Metalaxyl	84.0	78.3	P/P	55 - 129
1977012	Metolachlor	83.4	76.2	P/P	56 - 137
1977012	Metribuzin	191	182	P/P	16 - 218
1977012	Mevinphos	74.8	72.4	P/P	34 - 129
1977012	Molinate	44.5	37.2	P/P	16 - 99.0
1977012	Norflurazon	81.0	83.3	P/P	43 - 135
1977012	Parathion Ethyl	94.8	89.7	P/P	71 - 112
1977012	Parathion Methyl	102	102	P/P	65 - 127
1977012	Pendimethalin	112	103	P/P	35 - 159
1977012	Phorate	71.5	71.9	P/P	41 - 129
1977012	Prometon	90.3	85.5	P/P	56 - 140
1977012	Prometryn	83.7	74.8	P/P	65 - 130

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P342308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1977012	Terbufos	87.5	84.4	P/P	53 - 126
1977012	Terbuthylazine	89.7	86.4	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P342551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978128	Aldrin	61.1	62.9	P/P	26 - 96.0
1978128	Alpha-BHC	81.8	92.3	P/P	51 - 123
1978128	Alpha-Chlordane	73.9	80.2	P/P	45 - 120
1978128	Beta-BHC	119	116	P/P	43 - 146
1978128	Carbophenothion	108	96.8	P/P	26 - 179
1978128	Chlorothalonil	171	138	P/P	10 - 215
1978128	Cypermethrin	92.8	99.5	P/P	35 - 169
1978128	DDD-p,p'	81.3	95.2	P/P	49 - 131
1978128	DDE-p,p'	69.3	76.6	P/P	39 - 127
1978128	DDT-p,p'	67.7	75.0	P/P	49 - 120
1978128	Delta-BHC	114	122	P/P	49 - 187
1978128	Dicofol	67.1	74.9	P/P	10 - 129
1978128	Dieldrin	78.0	85.4	P/P	46 - 132
1978128	Endosulfan I	92.8	96.6	P/P	57 - 130
1978128	Endosulfan II	127	119	P/P	52 - 148
1978128	Endosulfan Sulfate	115	116	P/P	55 - 129
1978128	Endrin	78.4	80.8	P/P	45 - 133
1978128	Endrin Aldehyde	78.4	90.7	P/P	26 - 140
1978128	Endrin Ketone	99.6	108	P/P	60 - 125
1978128	Gamma-BHC	117	123	P/P	50 - 145
1978128	Gamma-Chlordane	73.8	78.7	P/P	44 - 118
1978128	Heptachlor	64.2	66.5	P/P	35 - 106
1978128	Heptachlor Epoxide	79.7	88.5	P/P	52 - 123
1978128	Methoxychlor	83.4	87.4	P/P	54 - 132
1978128	Mirex	66.1	67.8	P/P	36 - 107
1978128	Permethrin	79.6	84.8	P/P	47 - 135
1978128	Trifluralin	67.1	70.9	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P342551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978592	Chlordane	76.4	77.1	P/P	41 - 134
1978592	Toxaphene	98.5	98.4	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P342346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978254	2,4-D	114	130	P/P	40 - 150
1978254	3-Hydroxycarbofuran	117	118	P/P	40 - 150
1978254	Acetaminophen	126	126	P/P	30 - 150
1978254	Aldicarb	93.5	83.4	P/P	30 - 150
1978254	Aldicarb Sulfone	125	125	P/P	40 - 150
1978254	Aldicarb Sulfoxide	103	106	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P342346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978254	Bentazon	48.5	53.2	P/P	30 - 150
1978254	Carbamazepine	101	96.7	P/P	40 - 150
1978254	Carbaryl	61.0	61.6	P/P	40 - 150
1978254	Carbofuran	77.4	73.3	P/P	40 - 150
1978254	Diuron	82.4	82.5	P/P	40 - 150
1978254	Fenuron	106	106	P/P	40 - 150
1978254	Fluridone	65.7	62.4	P/P	40 - 150
1978254	Imazapyr	73.6	63.9	P/P	40 - 150
1978254	Imidacloprid	164	162	F/F	40 - 160
1978254	Linuron	87.6	85.6	P/P	40 - 150
1978254	MCPP	95.0	103	P/P	40 - 150
1978254	Methiocarb	81.3	76.7	P/P	40 - 150
1978254	Methomyl	108	104	P/P	40 - 150
1978254	Oxamyl	105	106	P/P	40 - 150
1978254	Primidone	118	121	P/P	40 - 150
1978254	Propoxur	71.3	66.3	P/P	40 - 150
1978254	Pyraclostrobin	83.1	75.5	P/P	40 - 150
1978254	Triclopyr	97.7	108	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978526	AMPA	94.0	103	P/P	40 - 150
1978526	Glyphosate	93.8	93.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P342413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1977124	Sucralose	101	103	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P342986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978292	Fluoride	95.8	95.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P342906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978807	Organic Carbon	100	102	P/P	85 - 115

Quality Assurance Report
Precision

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P342358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978310	Turbidity	1.15	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P342451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978288	Calcium	0.538	Spike	P	0 - 20
1978288	Iron	0.672	Spike	P	0 - 20
1978288	Magnesium	0.597	Spike	P	0 - 20
1978288	Potassium	0.642	Spike	P	0 - 20
1978288	Sodium	0.291	Spike	P	0 - 20
1978288	Zinc	0.145	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978286	Arsenic	0.472	Spike	P	0 - 20
1978286	Cadmium	1.40	Spike	P	0 - 20
1978286	Chromium	0.578	Spike	P	0 - 20
1978286	Copper	1.12	Spike	P	0 - 20
1978286	Lead	1.18	Spike	P	0 - 20
1978286	Nickel	0.195	Spike	P	0 - 20
1978286	Silver	0.0900	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342509

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978313	Chloride	1.75	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P342513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978313	Sulfate	2.74	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P342769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978215	Ammonia-N	2.39	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978507	Ammonia-N	2.76	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P342401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978553	Kjeldahl Nitrogen	2.91	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P342655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978501	NO2NO3-N	1.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P342502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978293	Total-P	0.744	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P342433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978312	O-Phosphate-P	0.298	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P342308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1977012	Acetochlor	5.86	Spike	P	0 - 30
1977012	Alachlor	8.41	Spike	P	0 - 30
1977012	Ametryn	5.96	Spike	P	0 - 30
1977012	Atrazine	13.6	Spike	P	0 - 30
1977012	Atrazine Desethyl	4.65	Spike	P	0 - 30
1977012	Azinphos Methyl	2.56	Spike	P	0 - 30
1977012	Bromacil	2.54	Spike	P	0 - 30
1977012	Butylate	23.2	Spike	P	0 - 30
1977012	Chlorpyrifos Ethyl	9.36	Spike	P	0 - 30
1977012	Chlorpyrifos Methyl	1.07	Spike	P	0 - 30
1977012	Cyanazine	6.73	Spike	P	0 - 30
1977012	Demeton	0.157	Spike	P	0 - 30
1977012	Diazinon	7.92	Spike	P	0 - 30
1977012	Disulfoton	7.91	Spike	P	0 - 30
1977012	EPTC	20.1	Spike	P	0 - 30
1977012	Ethion	5.97	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P342308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1977012	Ethoprop	1.51	Spike	P	0 - 30
1977012	Fenamiphos	5.00	Spike	P	0 - 30
1977012	Fipronil	1.11	Spike	P	0 - 30
1977012	Fipronil Sulfide	2.40	Spike	P	0 - 30
1977012	Fipronil Sulfone	6.41	Spike	P	0 - 30
1977012	Fonofos	3.92	Spike	P	0 - 30
1977012	Hexazinone	2.50	Spike	P	0 - 30
1977012	Malathion	0.716	Spike	P	0 - 30
1977012	Metalaxyl	6.92	Spike	P	0 - 30
1977012	Metolachlor	8.38	Spike	P	0 - 30
1977012	Metribuzin	4.71	Spike	P	0 - 30
1977012	Mevinphos	3.28	Spike	P	0 - 30
1977012	Molinate	18.0	Spike	P	0 - 30
1977012	Norflurazon	2.83	Spike	P	0 - 30
1977012	Parathion Ethyl	5.48	Spike	P	0 - 30
1977012	Parathion Methyl	0.188	Spike	P	0 - 30
1977012	Pendimethalin	8.53	Spike	P	0 - 30
1977012	Phorate	0.481	Spike	P	0 - 30
1977012	Prometon	5.44	Spike	P	0 - 30
1977012	Prometryn	11.3	Spike	P	0 - 30
1977012	Simazine	8.20	Spike	P	0 - 30
1977012	Terbufos	3.54	Spike	P	0 - 30
1977012	Terbuthylazine	3.72	Spike	P	0 - 30
LFB	Acetochlor	1.10	LCS	P	0 - 30
LFB	Alachlor	2.20	LCS	P	0 - 30
LFB	Ametryn	1.04	LCS	P	0 - 30
LFB	Atrazine	6.99	LCS	P	0 - 30
LFB	Atrazine Desethyl	6.67	LCS	P	0 - 30
LFB	Azinphos Methyl	6.71	LCS	P	0 - 30
LFB	Bromacil	12.3	LCS	P	0 - 30
LFB	Butylate	37.5	LCS	F	0 - 30
LFB	Chlorpyrifos Ethyl	4.19	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.721	LCS	P	0 - 30
LFB	Cyanazine	3.91	LCS	P	0 - 30
LFB	Demeton	12.3	LCS	P	0 - 30
LFB	Diazinon	1.37	LCS	P	0 - 30
LFB	Disulfoton	4.63	LCS	P	0 - 30
LFB	EPTC	45.0	LCS	F	0 - 30
LFB	Ethion	1.06	LCS	P	0 - 30
LFB	Ethoprop	8.15	LCS	P	0 - 30
LFB	Fenamiphos	0.859	LCS	P	0 - 30
LFB	Fipronil	3.62	LCS	P	0 - 30
LFB	Fipronil Sulfide	1.65	LCS	P	0 - 30
LFB	Fipronil Sulfone	1.81	LCS	P	0 - 30
LFB	Fonofos	4.98	LCS	P	0 - 30
LFB	Hexazinone	6.75	LCS	P	0 - 30
LFB	Malathion	1.70	LCS	P	0 - 30
LFB	Metalaxyl	5.75	LCS	P	0 - 30
LFB	Metolachlor	6.69	LCS	P	0 - 30
LFB	Metribuzin	4.62	LCS	P	0 - 30
LFB	Mevinphos	11.5	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P342308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Molinate	31.7	LCS	F	0 - 30
LFB	Norflurazon	6.11	LCS	P	0 - 30
LFB	Parathion Ethyl	3.14	LCS	P	0 - 30
LFB	Parathion Methyl	3.62	LCS	P	0 - 30
LFB	Pendimethalin	1.06	LCS	P	0 - 30
LFB	Phorate	3.23	LCS	P	0 - 30
LFB	Prometon	1.80	LCS	P	0 - 30
LFB	Prometryn	1.20	LCS	P	0 - 30
LFB	Simazine	3.09	LCS	P	0 - 30
LFB	Terbufos	3.99	LCS	P	0 - 30
LFB	Terbuthylazine	4.17	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P342551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978128	Aldrin	2.90	Spike	P	0 - 30
1978128	Alpha-BHC	12.1	Spike	P	0 - 30
1978128	Alpha-Chlordane	8.23	Spike	P	0 - 30
1978128	Beta-BHC	1.90	Spike	P	0 - 30
1978128	Carbophenothion	11.3	Spike	P	0 - 30
1978128	Chlorothalonil	20.9	Spike	P	0 - 30
1978128	Cypermethrin	6.90	Spike	P	0 - 30
1978128	DDD-p,p'	15.8	Spike	P	0 - 30
1978128	DDE-p,p'	10.0	Spike	P	0 - 30
1978128	DDT-p,p'	10.3	Spike	P	0 - 30
1978128	Delta-BHC	6.71	Spike	P	0 - 30
1978128	Dicofol	11.0	Spike	P	0 - 30
1978128	Dieldrin	9.11	Spike	P	0 - 30
1978128	Endosulfan I	4.06	Spike	P	0 - 30
1978128	Endosulfan II	6.30	Spike	P	0 - 30
1978128	Endosulfan Sulfate	0.141	Spike	P	0 - 30
1978128	Endrin	3.03	Spike	P	0 - 30
1978128	Endrin Aldehyde	14.5	Spike	P	0 - 30
1978128	Endrin Ketone	8.29	Spike	P	0 - 30
1978128	Gamma-BHC	4.96	Spike	P	0 - 30
1978128	Gamma-Chlordane	6.48	Spike	P	0 - 30
1978128	Heptachlor	3.63	Spike	P	0 - 30
1978128	Heptachlor Epoxide	10.5	Spike	P	0 - 30
1978128	Methoxychlor	4.70	Spike	P	0 - 30
1978128	Mirex	2.59	Spike	P	0 - 30
1978128	Permethrin	6.30	Spike	P	0 - 30
1978128	Trifluralin	5.52	Spike	P	0 - 30
LFB	Aldrin	6.45	LCS	P	0 - 30
LFB	Alpha-BHC	8.06	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.31	LCS	P	0 - 30
LFB	Beta-BHC	19.0	LCS	P	0 - 30
LFB	Carbophenothion	30.4	LCS	F	0 - 30
LFB	Chlorothalonil	13.8	LCS	P	0 - 30
LFB	Cypermethrin	4.55	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P342551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	DDD-p,p'	6.99	LCS	P	0 - 30
LFB	DDE-p,p'	3.83	LCS	P	0 - 30
LFB	DDT-p,p'	4.15	LCS	P	0 - 30
LFB	Delta-BHC	6.69	LCS	P	0 - 30
LFB	Dicofol	7.29	LCS	P	0 - 30
LFB	Dieldrin	0.371	LCS	P	0 - 30
LFB	Endosulfan I	2.77	LCS	P	0 - 30
LFB	Endosulfan II	7.12	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.63	LCS	P	0 - 30
LFB	Endrin	3.61	LCS	P	0 - 30
LFB	Endrin Aldehyde	9.03	LCS	P	0 - 30
LFB	Endrin Ketone	4.40	LCS	P	0 - 30
LFB	Gamma-BHC	16.3	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.02	LCS	P	0 - 30
LFB	Heptachlor	2.80	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.84	LCS	P	0 - 30
LFB	Methoxychlor	1.81	LCS	P	0 - 30
LFB	Mirex	3.62	LCS	P	0 - 30
LFB	Permethrin	2.01	LCS	P	0 - 30
LFB	Trifluralin	3.75	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P342551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978592	Chlordane	0.910	Spike	P	0 - 30
1978592	Toxaphene	0.0415	Spike	P	0 - 30
LFB	Chlordane	13.7	LCS	P	0 - 30
LFB	Toxaphene	6.21	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978254	2,4-D	13.0	Spike	P	0 - 30
1978254	3-Hydroxycarbofuran	0.766	Spike	P	0 - 30
1978254	Acetaminophen	0.0791	Spike	P	0 - 30
1978254	Aldicarb	11.5	Spike	P	0 - 30
1978254	Aldicarb Sulfone	0.0	Spike	P	0 - 30
1978254	Aldicarb Sulfoxide	2.11	Spike	P	0 - 30
1978254	Bentazon	9.20	Spike	P	0 - 30
1978254	Carbamazepine	4.68	Spike	P	0 - 30
1978254	Carbaryl	1.08	Spike	P	0 - 30
1978254	Carbofuran	5.49	Spike	P	0 - 30
1978254	Diuron	0.0243	Spike	P	0 - 30
1978254	Fenuron	0.189	Spike	P	0 - 30
1978254	Fluridone	5.21	Spike	P	0 - 30
1978254	Imazapyr	10.7	Spike	P	0 - 30
1978254	Imidacloprid	0.983	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P342346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978254	Linuron	2.25	Spike	P	0 - 30
1978254	MCPP	8.17	Spike	P	0 - 30
1978254	Methiocarb	5.85	Spike	P	0 - 30
1978254	Methomyl	3.86	Spike	P	0 - 30
1978254	Oxamyl	0.474	Spike	P	0 - 30
1978254	Primidone	1.92	Spike	P	0 - 30
1978254	Propoxur	7.28	Spike	P	0 - 30
1978254	Pyraclostrobin	9.50	Spike	P	0 - 30
1978254	Triclopyr	10.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978526	AMPA	9.08	Spike	P	0 - 30
1978526	Glyphosate	0.588	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P342413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1977124	Sucralose	2.25	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P342354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978505	Color (true)	0.445	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P342982

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978292	Total Alkalinity	0.365	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P342659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978292	TDS	4.10	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P342660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits

Quality Assurance Report
Precision

Reference Method: SM 2540 C-97
Batch ID: P342660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978505	TDS	3.64	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P342986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978292	Fluoride	0.479	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P342906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978807	Organic Carbon	1.98	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: 1978525
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	60.9	P	30 - 160

Lab Sample ID: 1978526
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	Acetaminophen-d4	150	P	30 - 160
EPA 8321B	Acetaminophen-d4	150	P	30 - 160
EPA 8321B	Carbamazepine-d10	121	P	30 - 160
EPA 8321B	Carbamazepine-d10	121	P	30 - 160
EPA 8321B	Diuron-d6	81.2	P	30 - 160
EPA 8321B	Diuron-d6	81.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	90.0	P	40 - 160
EPA 8321B	Primidone-d5	97.2	P	30 - 160
EPA 8321B	Primidone-d5	97.2	P	30 - 160
EPA 8321B	Sucralose-d6	114	P	40 - 160

Lab Sample ID: 1978527
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits

Quality Assurance Report
Surrogates

Lab Sample ID: 1978527
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	68.9	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	50.1	P	34 - 101
EPA 8276	Decachlorobiphenyl	56.8	P	31 - 108
EPA 8276	PCNB	98.1	P	62 - 142

Lab Sample ID: 1978528
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	91.3	P	71 - 126
EPA 8270D	Terbufos-d10	83.1	P	59 - 149

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82892
Included Lab Sample IDs: 1978500, 1978503, 1978504, 1978505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	99.9	99.8	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A82910
Included Lab Sample IDs: 1978500, 1978503, 1978504, 1978505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	85 - 115
Color (true)	100	100	P/P	85 - 115
Color (true)	102	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82911
Included Lab Sample IDs: 1978500, 1978503, 1978504, 1978505

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82939
Included Lab Sample IDs: 1978502, 1978509, 1978510, 1978511

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A82965
Included Lab Sample IDs: 1978501, 1978506, 1978507, 1978508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A82965
Included Lab Sample IDs: 1978501, 1978506, 1978507, 1978508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	101	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82969
Included Lab Sample IDs: 1978526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.3	86.3	P/P	50 - 150
3-Hydroxycarbofuran	116	119	P/P	60 - 150
Acetaminophen	104	104	P/P	60 - 150
Aldicarb	113	113	P/P	60 - 150
Aldicarb Sulfone	107	116	P/P	50 - 150
Aldicarb Sulfoxide	116	126	P/P	50 - 150
Bentazon	89.0	82.0	P/P	50 - 150
Carbamazepine	103	108	P/P	60 - 150
Carbaryl	110	120	P/P	60 - 150
Carbofuran	115	123	P/P	50 - 150
Diuron	120	122	P/P	60 - 150
Fenuron	110	108	P/P	60 - 150
Fluridone	109	109	P/P	60 - 160
Imazapyr	87.5	80.0	P/P	50 - 150
Imidacloprid	107	111	P/P	60 - 150
Linuron	121	118	P/P	60 - 150
MCPP	92.4	89.6	P/P	50 - 150
Methiocarb	118	119	P/P	50 - 150
Methomyl	114	122	P/P	50 - 150
Oxamyl	109	117	P/P	50 - 150
Primidone	107	113	P/P	60 - 150
Propoxur	116	118	P/P	50 - 150
Pyraclostrobin	119	122	P/P	60 - 150
Triclopyr	90.5	93.1	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A82977
Included Lab Sample IDs: 1978501, 1978506, 1978507

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

Reference Method: EPA 8321B
Run ID: A82991
Included Lab Sample IDs: 1978526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.2	102	P/P	70 - 130
Glyphosate	96.3	92.5	P/P	70 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A82999
Included Lab Sample IDs: 1978529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	102	102	P/P	90 - 110
Sodium	99.2	102	P/P	90 - 110
Zinc	99.6	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A83000
Included Lab Sample IDs: 1978508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A83012
Included Lab Sample IDs: 1978501, 1978506, 1978507, 1978508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A83032
Included Lab Sample IDs: 1978526

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	113	99.4	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A83041
Included Lab Sample IDs: 1978501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.5	98.1	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A83057
Included Lab Sample IDs: 1978527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	92.9		P	80 - 120
Toxaphene	96.2		P	80 - 120

Reference Method: SM 5310 B-00
Run ID: A83079
Included Lab Sample IDs: 1978501, 1978506, 1978507, 1978508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	98.0	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-97
Run ID: A83098
Included Lab Sample IDs: 1978500, 1978503, 1978504, 1978505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	97.4	P/P	90 - 110
Total Alkalinity	97.4	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A83098
Included Lab Sample IDs: 1978500, 1978503, 1978504, 1978505

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	98.6	P/P	90 - 110
Fluoride	98.6	98.1	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A83100
Included Lab Sample IDs: 1978527

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.2		P	80 - 120
Alpha-BHC	97.3		P	80 - 120
Alpha-Chlordane	98.4		P	80 - 120
Beta-BHC	98.0		P	80 - 120
Carbophenothion	94.4		P	80 - 120
Chlorothalonil	112		P	80 - 120
Cypermethrin	90.1		P	80 - 120
DDD-p,p'	97.6		P	80 - 120
DDE-p,p'	99.7		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	92.6		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	97.0		P	80 - 120
Endosulfan I	91.9		P	80 - 120
Endosulfan II	96.3		P	80 - 120
Endosulfan Sulfate	99.7		P	80 - 120
Endrin	93.6		P	80 - 120
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	94.9		P	80 - 120
Gamma-BHC	111		P	80 - 120
Gamma-Chlordane	97.9		P	80 - 120
Heptachlor	96.3		P	80 - 120
Heptachlor Epoxide	98.4		P	80 - 120
Methoxychlor	105		P	80 - 120
Mirex	99.4		P	80 - 120
Permethrin	85.0		P	80 - 120
Trifluralin	98.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A83151
Included Lab Sample IDs: 1978529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	99.2	P/P	90 - 110
Cadmium	100	99.2	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A83151
Included Lab Sample IDs: 1978529

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	97.8	96.4	P/P	90 - 110
Copper	100	98.3	P/P	90 - 110
Lead	98.1	96.7	P/P	90 - 110
Nickel	99.8	98.6	P/P	90 - 110
Silver	100	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A83153
Included Lab Sample IDs: 1978506, 1978507, 1978508

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

Reference Method: EPA 8270D
Run ID: A83227
Included Lab Sample IDs: 1978528

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.8		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	95.3		P	80 - 120
Atrazine	95.7		P	80 - 120
Atrazine Desethyl	108		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Bromacil	100		P	80 - 120
Butylate	98.4		P	80 - 120
Chlorpyrifos Ethyl	97.7		P	80 - 120
Chlorpyrifos Methyl	97.4		P	80 - 120
Cyanazine	128*		F	80 - 120
Demeton	93.8		P	80 - 120
Diazinon	98.0		P	80 - 120
Disulfoton	92.8		P	80 - 120
EPTC	98.7		P	80 - 120
Ethion	93.1		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	94.1		P	80 - 120
Fipronil	96.8		P	80 - 120
Fipronil Sulfide	94.7		P	80 - 120
Fipronil Sulfone	94.0		P	80 - 120
Fonofos	98.3		P	80 - 120
Hexazinone	93.7		P	80 - 120
Malathion	97.5		P	80 - 120
Metalaxyl	95.7		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	111		P	80 - 120
Mevinphos	96.7		P	80 - 120
Molinate	99.6		P	80 - 120
Norflurazon	99.5		P	80 - 120
Parathion Ethyl	94.6		P	80 - 120
Parathion Methyl	95.3		P	80 - 120
Pendimethalin	102		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A83227
Included Lab Sample IDs: 1978528

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Phorate	98.2		P	80 - 120
Prometon	97.8		P	80 - 120
Prometryn	97.8		P	80 - 120
Simazine	99.0		P	80 - 120
Terbufos	95.2		P	80 - 120
Terbuthylazine	96.5		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			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.15	
EPA 200.7 Rev. 4.4	Calcium	105							0.538
	Iron	107		107	106				0.672
	Magnesium	107		104					0.597
	Potassium	107		105	104				0.642
	Sodium	105		102					0.291
	Zinc	99.1		99.8	100				0.145
EPA 200.8 Rev. 5.4	Arsenic	104		101	102				0.472
	Cadmium	104		106	107				1.40
	Chromium	101		101	101				0.578
	Copper	104		97.2	96.1				1.12
	Lead	99.5		101	100				1.18
	Nickel	104		96.9	97.1				0.195
	Silver	98.5		98.1	98.2				0.0900
EPA 300.0 Rev. 2.1	Chloride	98.5		101	99.4	97.7			1.75
	Sulfate	101		102	99.3	99.0			2.74
EPA 350.1 Rev. 2.0	Ammonia-N	94.1		96.8	93.9				2.39
	Ammonia-N	97.7		97.2	101				2.76
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.5		96.6	102				2.91
EPA 353.2 Rev. 2.0	NO2NO3-N	104		97.0	98.0				1.03
EPA 365.1 Rev. 2.0	Total-P	102		102	101				0.744
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5		100	101				0.298
EPA 8270D	Acetochlor	92.2	91.2	86.8	81.9		1.10		5.86
	Alachlor	93.2	91.2	77.6	71.3		2.20		8.41
	Aldrin	65.2	69.5	61.1	62.9		6.45		2.90
	Alpha-BHC	81.5	75.2	81.8	92.3		8.06		12.1
	Alpha-Chlordane	87.3	90.2	73.9	80.2		3.31		8.23
	Ametryn	71.0	71.7	88.5	83.4		1.04		5.96
	Atrazine	101	94.4				6.99		13.6
	Atrazine Desethyl	102	109	91.2	84.7		6.67		4.65
	Azinphos Methyl	118	126	110	107		6.71		2.56
	Beta-BHC	104	125	119	116		19.0		1.90
	Bromacil	60.1	68.0	80.3	77.2		12.3		2.54
	Butylate	47.1	32.2	34.1	27.0		37.5		23.2

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Carbophenothion	66.8	90.7	108	96.8	30.4		11.3
	Chlorothalonil	77.3	88.8	171	138	13.8		20.9
	Chlorpyrifos Ethyl	92.9	89.1	81.0	73.7	4.19		9.36
	Chlorpyrifos Methyl	94.3	93.6	88.5	87.6	0.721		1.07
	Cyanazine	239	249	203	190	3.91		6.73
	Cypermethrin	83.7	87.6	92.8	99.5	4.55		6.90
	DDD-p,p'	101	108	81.3	95.2	6.99		15.8
	DDE-p,p'	87.9	91.3	69.3	76.6	3.83		10.0
	DDT-p,p'	85.1	88.7	67.7	75.0	4.15		10.3
	Delta-BHC	108	116	114	122	6.69		6.71
	Demeton	63.3	71.6	47.9	47.8	12.3		0.157
	Diazinon	98.7	97.4	97.5	90.1	1.37		7.92
	Dicofol	89.8	83.5	67.1	74.9	7.29		11.0
	Dieldrin	91.1	90.8	78.0	85.4	0.371		9.11
	Disulfoton	92.1	87.9	84.0	77.6	4.63		7.91
	Endosulfan I	87.6	85.2	92.8	96.6	2.77		4.06
	Endosulfan II	102	109	127	119	7.12		6.30
	Endosulfan Sulfate	101	108	115	116	6.63		0.141
	Endrin	86.3	83.3	78.4	80.8	3.61		3.03
	Endrin Aldehyde	91.6	100	78.4	90.7	9.03		14.5
	Endrin Ketone	93.2	97.4	99.6	108	4.40		8.29
	EPTC	30.5	48.2	34.2	27.9	45.0		20.1
	Ethion	88.4	89.3	92.1	86.8	1.06		5.97
	Ethoprop	79.6	86.3	90.9	89.5	8.15		1.51
	Fenamiphos	93.8	93.0	85.6	81.4	0.859		5.00
	Fipronil	94.5	91.1	90.3	88.4	3.62		1.11
	Fipronil Sulfide	87.8	89.3	84.2	81.3	1.65		2.40
	Fipronil Sulfone	82.0	83.5			1.81		6.41
	Fonofos	84.0	88.3	85.7	82.4	4.98		3.92
	Gamma-BHC	84.7	99.7	117	123	16.3		4.96
	Gamma-Chlordane	84.3	88.7	73.8	78.7	5.02		6.48
	Heptachlor	69.7	67.8	64.2	66.5	2.80		3.63
	Heptachlor Epoxide	84.7	88.9	79.7	88.5	4.84		10.5
	Hexazinone	103	96.7	105	103	6.75		2.50
	Malathion	101	98.9	97.8	98.5	1.70		0.716
	Metalaxyl	91.4	86.3	84.0	78.3	5.75		6.92
	Methoxychlor	93.7	95.4	83.4	87.4	1.81		4.70
	Metolachlor	96.9	90.6	83.4	76.2	6.69		8.38
	Metribuzin	149	156	191	182	4.62		4.71
	Mevinphos	67.2	75.4	74.8	72.4	11.5		3.28
	Mirex	73.9	76.6	66.1	67.8	3.62		2.59
	Molinate	39.1	53.9	44.5	37.2	31.7		18.0
	Norflurazon	95.1	89.5	81.0	83.3	6.11		2.83
	Parathion Ethyl	94.0	97.0	94.8	89.7	3.14		5.48
	Parathion Methyl	99.9	104	102	102	3.62		0.188
	Pendimethalin	102	103	112	103	1.06		8.53
	Permethrin	80.5	82.2	79.6	84.8	2.01		6.30
	Phorate	78.5	81.0	71.5	71.9	3.23		0.481
	Prometon	85.4	83.9	90.3	85.5	1.80		5.44
	Prometryn	81.8	82.8	83.7	74.8	1.20		11.3
	Simazine	94.8	97.8			3.09		8.20
	Terbufos	84.0	87.5	87.5	84.4	3.99		3.54
	Terbuthylazine	96.2	92.3	89.7	86.4	4.17		3.72
	Trifluralin	77.8	80.8	67.1	70.9	3.75		5.52

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8276	Chlordane	72.1	82.8	76.4	77.1	13.7		0.910
	Toxaphene	94.7	101	98.5	98.4	6.21		0.0415
EPA 8321B	2,4-D	78.9		114	130			13.0
	3-Hydroxycarbofuran	102		117	118			0.766
	Acetaminophen	112		126	126			0.0791
	Aldicarb	82.2		93.5	83.4			11.5
	Aldicarb Sulfone	104		125	125			0.0
	Aldicarb Sulfoxide	112		103	106			2.11
	AMPA	96.2		94.0	103			9.08
	Bentazon	74.4		48.5	53.2			9.20
	Carbamazepine	75.8		101	96.7			4.68
	Carbaryl	58.3		61.0	61.6			1.08
	Carbofuran	65.8		77.4	73.3			5.49
	Diuron	68.2		82.4	82.5			0.0243
	Fenuron	111		106	106			0.189
	Fluridone	60.0		65.7	62.4			5.21
	Glyphosate	91.8		93.8	93.3			0.588
	Imazapyr	69.0		73.6	63.9			10.7
	Imidacloprid	93.9		164	162			0.983
	Linuron	80.2		87.6	85.6			2.25
	MCPP	74.3		95.0	103			8.17
	Methiocarb	70.3		81.3	76.7			5.85
	Methomyl	104		108	104			3.86
	Oxamyl	99.0		105	106			0.474
	Primidone	115		118	121			1.92
	Propoxur	64.1		71.3	66.3			7.28
	Pyraclostrobin	68.3		83.1	75.5			9.50
	Sucralose	92.6		101	103			2.25
	Triclopyr	79.2		97.7	108			10.2
SM 2120 B	Color (true)						0.445	
SM 2320 B-97	Total Alkalinity	100					0.365	
SM 2540 C-97	TDS						4.10	
	TDS						3.64	
SM 4500 F-C-97	Fluoride	97.5		95.8	95.2			0.479
SM 5310 B-00	Organic Carbon	97.6		100	102			1.98

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1978500, 1978503, 1978504, 1978505
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1978529
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1978529
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1978500, 1978503, 1978504, 1978505
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1978500, 1978503, 1978504, 1978505
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1978501, 1978506, 1978507, 1978508
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1978501, 1978506, 1978507, 1978508
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1978501, 1978506, 1978507, 1978508

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1978501, 1978506, 1978507, 1978508
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1978502, 1978509, 1978510, 1978511
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1978527
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1978528
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1978527
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1978525
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1978526
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1978526
SM 2120 B / E31780	True Color measured at 450 nm	1978500, 1978503, 1978504, 1978505
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1978500, 1978503, 1978504, 1978505
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1978500, 1978503, 1978504, 1978505
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1978500, 1978503, 1978504, 1978505
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1978500, 1978503, 1978504, 1978505
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1978501, 1978506, 1978507, 1978508

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	03/28/2018			03/28/2018 15:43	DeAsia Armster	1978500, 1978503, 1978504, 1978505
EPA 200.7 Rev. 4.4	03/28/2018	03/29/2018 17:20	Elliott D. Healy	04/02/2018 18:21	Martin Acosta	1978529
EPA 200.8 Rev. 5.4	03/28/2018	03/29/2018 17:20	Elliott D. Healy	04/10/2018 14:06	Nadine Brooks	1978529
EPA 300.0 Rev. 2.1	03/28/2018			03/30/2018 07:35	Lipi Saha	1978500
	03/28/2018			03/30/2018 07:47	Lipi Saha	1978503
	03/28/2018			03/30/2018 07:59	Lipi Saha	1978504
	03/28/2018			03/30/2018 08:11	Lipi Saha	1978505
EPA 350.1 Rev. 2.0	03/28/2018			04/04/2018 13:46	Ping Hua	1978501
	03/28/2018			04/10/2018 09:50	Ping Hua	1978507
	03/28/2018			04/10/2018 09:55	Ping Hua	1978506
	03/28/2018			04/10/2018 09:56	Ping Hua	1978508
EPA 351.2 Rev. 2.0	03/28/2018	03/29/2018 15:30	Adrian Shelby	03/30/2018 14:41	Joseph Suarez	1978501
	03/28/2018	03/29/2018 15:30	Adrian Shelby	03/30/2018 14:42	Joseph Suarez	1978506
	03/28/2018	03/29/2018 15:30	Adrian Shelby	03/30/2018 14:44	Joseph Suarez	1978507
	03/28/2018	03/29/2018 15:30	Adrian Shelby	03/30/2018 14:45	Joseph Suarez	1978508
EPA 353.2 Rev. 2.0	03/28/2018			04/03/2018 13:07	Lauren Bottorf	1978501
	03/28/2018			04/03/2018 13:18	Lauren Bottorf	1978506
	03/28/2018			04/03/2018 13:19	Lauren Bottorf	1978507
	03/28/2018			04/03/2018 13:20	Lauren Bottorf	1978508
EPA 365.1 Rev. 2.0	03/28/2018	03/30/2018 13:51	Sima Feizi	04/02/2018 10:41	Beverly Y. Sanders	1978501
	03/28/2018	03/30/2018 13:51	Sima Feizi	04/02/2018 10:42	Beverly Y. Sanders	1978506
	03/28/2018	03/30/2018 13:51	Sima Feizi	04/02/2018 10:43	Beverly Y. Sanders	1978507
	03/28/2018	03/30/2018 13:51	Sima Feizi	04/02/2018 14:06	Beverly Y. Sanders	1978508
EPA 365.1 Rev. 2.0 dissolved	03/28/2018			03/28/2018 16:13	Megan Treadwell	1978502
	03/28/2018			03/28/2018 16:14	Megan Treadwell	1978509, 1978510
	03/28/2018			03/28/2018 16:15	Megan Treadwell	1978511
EPA 8270D	03/28/2018	03/28/2018 13:00	John Kaba	04/03/2018 21:42	Vandana T. Nagar	1978528
	03/28/2018	03/30/2018 12:30	Rasheda Ghaffari	04/04/2018 19:47	Vandana T. Nagar	1978527
EPA 8276	03/28/2018	03/30/2018 12:30	Rasheda Ghaffari	04/04/2018 00:24	Vandana T. Nagar	1978527
EPA 8321B	03/28/2018	03/29/2018 08:30	Hoor Shaik	03/30/2018 08:09	Julie Michelle Frank	1978526
	03/28/2018	03/29/2018 08:30	Hoor Shaik	03/30/2018 20:15	Julie Michelle Frank	1978526
	03/28/2018	03/29/2018 08:30	Hoor Shaik	03/31/2018 02:36	Julie Michelle Frank	1978525
	03/28/2018	03/30/2018 08:30	Julie Michelle Frank	03/30/2018 17:54	Mohammad Ghaffari	1978526
	03/28/2018	04/02/2018 09:00	Julie Michelle Frank	04/02/2018 12:00	Julie Michelle Frank	1978526
SM 2120 B	03/28/2018			03/28/2018 15:32	Tanya Welborn	1978505
	03/28/2018			03/28/2018 15:46	Tanya Welborn	1978500
	03/28/2018			03/28/2018 15:47	Tanya Welborn	1978503
	03/28/2018			03/28/2018 15:49	Tanya Welborn	1978504
SM 2320 B-97	03/28/2018			04/05/2018 21:09	Dale L. Simmons	1978500
	03/28/2018			04/05/2018 21:42	Dale L. Simmons	1978503

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	03/28/2018			04/05/2018 21:52	Dale L. Simmons	1978504
	03/28/2018			04/05/2018 22:03	Dale L. Simmons	1978505
SM 2540 C-97	03/28/2018			03/30/2018 16:30	Yijie Li	1978500, 1978503, 1978504, 1978505
SM 2540 D-97	03/28/2018			03/30/2018 16:30	Yijie Li	1978500, 1978503, 1978504, 1978505
SM 4500 F-C-97	03/28/2018			04/05/2018 21:09	Dale L. Simmons	1978500
	03/28/2018			04/05/2018 21:42	Dale L. Simmons	1978503
	03/28/2018			04/05/2018 21:52	Dale L. Simmons	1978504
	03/28/2018			04/05/2018 22:03	Dale L. Simmons	1978505
SM 5310 B-00	03/28/2018			04/05/2018 18:28	Julia Storbeck	1978501
	03/28/2018			04/05/2018 18:42	Julia Storbeck	1978506
	03/28/2018			04/05/2018 18:54	Julia Storbeck	1978507
	03/28/2018			04/05/2018 19:06	Julia Storbeck	1978508