

Chemical Analysis Report

NE-DIST-2018-05-02-01

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

Event Description: **Gainesville South_2018**

Request ID: **RQ-2018-04-23-24**

Customer: **NE-DIST**

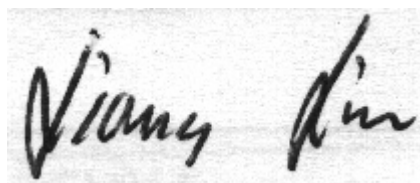
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way W
Suite 100
Jacksonville, FL 32256-7577
Attn: Nicole Frederick

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 30-MAY-2018 11:14

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: LOCHLOOSA SLOUGH AT SE 225

Collection Date/Time: 05/01/2018 10:50

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989022	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P344506	
	EPA 300.0 Rev. 2.1	Chloride	8.2		mg Cl/L	P344849	
		Sulfate	0.30	I	mg SO4/L	P344852	
	SM 2120 B	Color (true)	380		PCU	P344491	
	SM 2320 B-97	Total Alkalinity	10		mg CaCO3/L	P345071	
	SM 2540 C-97	TDS	114		mg/L	P345188	
	SM 2540 D-97	TSS	2	U	mg/L	P345181	
	SM 4500 F-C-97	Fluoride	0.072	I	mg F/L	P345075	
1989027	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P344567	
1989053	EPA 200.7 Rev. 4.4	Calcium	7.36		mg/L	P344563	
		Iron	650		ug/L	P344563	
		Magnesium	1.91		mg/L	P344563	
		Potassium	0.31	I	mg/L	P344563	
		Sodium	4.5		mg/L	P344563	
		Zinc	5.0	U	ug/L	P344563	
	EPA 200.8 Rev. 5.4	Arsenic	0.57		ug/L	P344563	
		Cadmium	0.020	U	ug/L	P344563	
		Chromium	0.73	I	ug/L	P344563	
		Copper	0.20	U	ug/L	P344563	
		Lead	0.30		ug/L	P344563	
		Nickel	0.44	I	ug/L	P344563	
		Silver	0.010	U	ug/L	P344563	

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: LOCHLOOSA SLOUGH AT SE 225

Collection Date/Time: 05/01/2018 10:50

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989047	EPA 8321B	Aldicarb	0.020	U	ug/L	P344412	
		Aldicarb Sulfone	0.0020	U	ug/L	P344412	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P344412	
		Carbaryl	0.0020	U	ug/L	P344412	
		Carbofuran	0.0020	U	ug/L	P344412	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P344412	
		Methiocarb	0.0020	U	ug/L	P344412	
		Methomyl	0.0020	U	ug/L	P344412	
		Oxamyl	0.0020	U	ug/L	P344412	
		Propoxur	0.0020	U	ug/L	P344412	
		2,4-D	0.0020	U	ug/L	P344412	
		Bentazon	8.0E-04	U	ug/L	P344412	
		MCP	0.0020	U	ug/L	P344412	
		Triclopyr**	0.0040	U	ug/L	P344412	
		Imidacloprid	0.0043	I	ug/L	P344412	MS

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989048	EPA 8321B	Diuron	0.0020	U	ug/L	P344412	
		Pyraclostrobin**	0.0020	U	ug/L	P344412	
		Primidone**	0.0040	U	ug/L	P344412	
		Linuron	0.0040	U	ug/L	P344412	
		Acetaminophen**	0.0080	U	ug/L	P344412	
		Fenuron	0.016	U	ug/L	P344412	
		Imazapyr**	0.021		ug/L	P344412	
		Carbamazepine**	4.0E-04	U	ug/L	P344412	
		Fluridone**	0.0024	I	ug/L	P344412	
		Hydrocodone**	8.0E-04	U	ug/L	P344412	
		Sucralose**	0.10	U	ug/L	P344375	
		Glyphosate**	0.10	UJ	ug/L	P344375	MS, SUR
		AMPA**	0.10	UJ	ug/L	P344375	MS, SUR
		Endothall**	0.10	UJ	ug/L	P344375	SUR
		Glufosinate**	0.10	UJ	ug/L	P344375	SUR
1989049	EPA 8270D	Aldrin	4.1	U	ng/L	P344637	
		Alpha-BHC	2.1	U	ng/L	P344637	
		Beta-BHC	4.1	U	ng/L	P344637	
		Delta-BHC	4.1	U	ng/L	P344637	
		Gamma-BHC	4.1	U	ng/L	P344637	
		Carbophenothion	4.1	U	ng/L	P344637	
		Chlorothalonil	2.1	UJ	ng/L	P344637	RPD
		Cypermethrin	21	U	ng/L	P344637	
		DDD-p,p'	3.1	U	ng/L	P344637	
		DDE-p,p'	3.1	U	ng/L	P344637	
		DDT-p,p'	3.1	U	ng/L	P344637	
		Dieldrin	4.1	U	ng/L	P344637	
		Endosulfan I	4.1	U	ng/L	P344637	
		Endosulfan II	4.1	U	ng/L	P344637	
		Endosulfan Sulfate	2.1	U	ng/L	P344637	
		Endrin	2.1	U	ng/L	P344637	
		Endrin Aldehyde	2.1	U	ng/L	P344637	
		Heptachlor	1.5	U	ng/L	P344637	
		Heptachlor Epoxide	2.1	U	ng/L	P344637	
		Methoxychlor	4.1	U	ng/L	P344637	
		Mirex	2.1	U	ng/L	P344637	
		Permethrin	10	U	ng/L	P344637	
		Trifluralin	1.0	U	ng/L	P344637	
		Alpha-Chlordane	1.0	U	ng/L	P344637	
		Gamma-Chlordane	1.0	U	ng/L	P344637	
		Endrin Ketone	2.1	U	ng/L	P344637	
		Dicofol	31	U	ng/L	P344637	
	EPA 8276	Chlordane**	2.6	U	ng/L	P344637	
		Toxaphene**	31	U	ng/L	P344637	
1989050	EPA 8270D	Alachlor	0.24	U	ng/L	P344703	

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989050	EPA 8270D	Ametryn	0.31	U	ng/L	P344703	
		Atrazine	0.44	I	ng/L	P344703	
		Atrazine Desethyl	1.4	UJ	ng/L	P344703	RPD
		Azinphos Methyl	2.1	UJ	ng/L	P344703	RPD
		Bromacil	0.47	UJ	ng/L	P344703	RPD
		Butylate	0.38	U	ng/L	P344703	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P344703	
		Chlorpyrifos Methyl	0.094	U	ng/L	P344703	
		Demeton	1.9	U	ng/L	P344703	RPD
		Diazinon	0.12	U	ng/L	P344703	
		Disulfoton	0.47	U	ng/L	P344703	RPD
		EPTC	1.2	U	ng/L	P344703	RPD
		Ethion	0.14	U	ng/L	P344703	
		Ethoprop	0.094	U	ng/L	P344703	
		Fenamiphos	0.24	UJ	ng/L	P344703	RPD
		Fipronil	0.24	U	ng/L	P344703	
		Fipronil Sulfide	0.14	U	ng/L	P344703	
		Fipronil Sulfone	0.14	U	ng/L	P344703	RPD
		Hexazinone	0.47	UJ	ng/L	P344703	LCS, RPD
		Malathion	0.33	U	ng/L	P344703	
		Metribuzin	0.19	UJ	ng/L	P344703	RPD
		Mevinphos	0.47	U	ng/L	P344703	RPD
		Molinate	0.28	U	ng/L	P344703	
		Norflurazon	0.47	UJ	ng/L	P344703	LCS, RPD
		Pendimethalin	0.94	U	ng/L	P344703	
		Phorate	0.24	U	ng/L	P344703	RPD
		Prometon	0.85	U	ng/L	P344703	
		Prometryn	0.19	U	ng/L	P344703	
		Simazine	0.47	U	ng/L	P344703	
		Terbufos	0.094	U	ng/L	P344703	RPD
		Terbuthylazine	0.40	U	ng/L	P344703	
		Fonofos	0.19	U	ng/L	P344703	RPD
		Metalaxyl	0.24	UJ	ng/L	P344703	RPD
		Metolachlor	0.24	I	ng/L	P344703	
		Acetochlor	0.24	U	ng/L	P344703	
		Cyanazine	0.47	UJ	ng/L	P344703	RPD
		Parathion Ethyl	0.24	U	ng/L	P344703	
		Parathion Methyl	0.24	U	ng/L	P344703	

Ref. Method and Comment:

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 8270D: MS accuracy for Atrazine 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: 05/01/2018 12:40

Field ID: G3NE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989031	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P344506	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P344849	
		Sulfate	0.66		mg SO4/L	P344852	
	SM 2120 B	Color (true)	180		PCU	P344491	
	SM 2320 B-97	Total Alkalinity	1.9	I	mg CaCO3/L	P345071	
	SM 2540 C-97	TDS	68		mg/L	P345189	
	SM 2540 D-97	TSS	2	I	mg/L	P345182	
	SM 4500 F-C-97	Fluoride	0.079	I	mg F/L	P345075	
1989032	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P344870	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P344574	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.010		mg N/L	P344587	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P344583	
	SM 5310 B-00	Organic Carbon	23		mg C/L	P345024	
1989033	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P344567	

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: 05/01/2018 11:45

Field ID: 20020055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989023	EPA 180.1 Rev. 2.0	Turbidity	5.0	A	NTU	P344506	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P344849	
		Sulfate	5.0		mg SO4/L	P344852	
	SM 2120 B	Color (true)	260		PCU	P344491	
	SM 2320 B-97	Total Alkalinity	0.78	I	mg CaCO3/L	P345071	
	SM 2540 C-97	TDS	70		mg/L	P345188	
	SM 2540 D-97	TSS	2	I	mg/L	P345181	
	SM 4500 F-C-97	Fluoride	0.043	I	mg F/L	P345075	
1989025	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P344870	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P344573	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.051		mg N/L	P344587	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P344583	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P345024	
1989028	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.061		mg P/L	P344567	

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: 05/01/2018 14:25

Field ID: 21030076

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989024	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P344506	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P344849	
		Sulfate	37		mg SO4/L	P344852	

Field ID: 21030076

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989024	SM 2120 B	Color (true)	50	A	PCU	P344491	
	SM 2320 B-97	Total Alkalinity	21		mg CaCO3/L	P345071	
	SM 2540 C-97	TDS	134		mg/L	P345188	
	SM 2540 D-97	TSS	2	I	mg/L	P345181	
	SM 4500 F-C-97	Fluoride	0.050	I	mg F/L	P345075	
1989026	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P344870	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P344573	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.096		mg N/L	P344587	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P344583	
	SM 5310 B-00	Organic Carbon	6.8		mg C/L	P345024	
1989029	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P344567	

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: LOCHLOOSA SLOUGH AT SE 225

Collection Date/Time: 05/01/2018 10:50

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989120	EPA 350.1 Rev. 2.0	Ammonia-N	0.080		mg N/L	P344870	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P344574	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P344587	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P344583	
	SM 5310 B-00	Organic Carbon	35		mg C/L	P345024	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P344506

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P344563

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: P344563

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Component	Result	Code	Units
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: P344849

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344852

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344870

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344573

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344574

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344587

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344583

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344567

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344567

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

Reference Method: EPA 8270D
Batch ID: P344637

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

Reference Method: EPA 8270D
Batch ID: P344703

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P344703

Component	Result	Code	Units
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
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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P344637

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

Reference Method: EPA 8321B

Batch ID: P344375

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	0.10	U	ug/L

Reference Method: EPA 8321B

Batch ID: P344412

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P344412

Component	Result	Code	Units
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
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: P344491

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P345071

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

Reference Method: SM 2540 C-97
Batch ID: P345188

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P345189

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P345181

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P345182

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345075

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P345024

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: P344563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	107		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	102		P	85 - 115
Sodium	97.7		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	101		P	85 - 115
Copper	99.4		P	85 - 115
Lead	101		P	85 - 115
Nickel	103		P	85 - 115
Silver	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344849

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344852

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344870

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344573

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344574

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344587

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344583

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344567

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

Reference Method: EPA 8270D
Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.3	60.4	P/P	24 - 89.0
Alpha-BHC	75.6	74.9	P/P	58 - 117
Alpha-Chlordane	83.2	77.5	P/P	56 - 115
Beta-BHC	124	112	P/P	55 - 137
Carbophenothion	113	105	P/P	37 - 145
Chlorothalonil	27.9	63.8	P/P	26 - 163
Cypermethrin	99.4	91.9	P/P	42 - 156
DDD-p,p'	112	95.2	P/P	59 - 129
DDE-p,p'	88.6	78.7	P/P	52 - 117
DDT-p,p'	95.2	74.9	P/P	48 - 128
Delta-BHC	122	131	P/P	59 - 158
Dicofol	82.5	79.8	P/P	19 - 124
Dieldrin	88.0	76.8	P/P	57 - 126
Endosulfan I	94.0	92.2	P/P	59 - 133
Endosulfan II	105	86.8	P/P	58 - 148
Endosulfan Sulfate	101	116	P/P	56 - 135

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
 Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	93.3	80.3	P/P	50 - 140
Endrin Aldehyde	113	104	P/P	47 - 141
Endrin Ketone	102	99.7	P/P	63 - 123
Gamma-BHC	93.8	93.0	P/P	59 - 132
Gamma-Chlordane	81.9	75.9	P/P	55 - 112
Heptachlor	65.0	63.7	P/P	45 - 102
Heptachlor Epoxide	83.2	78.7	P/P	61 - 116
Methoxychlor	104	95.8	P/P	60 - 133
Mirex	75.9	67.9	P/P	40 - 98.0
Permethrin	84.8	83.4	P/P	45 - 131
Trifluralin	76.0	72.7	P/P	38 - 179

Reference Method: EPA 8270D
 Batch ID: P344703

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	90.6	85.5	P/P	74 - 119
Alachlor	93.4	88.1	P/P	75 - 118
Ametryn	88.7	88.3	P/P	59 - 137
Atrazine	106	94.9	P/P	73 - 120
Atrazine Desethyl	110	51.0	P/P	19 - 129
Azinphos Methyl	127	90.9	P/P	65 - 181
Bromacil	78.3	50.0	P/P	43 - 123
Butylate	41.9	46.5	P/P	28 - 85.0
Chlorpyrifos Ethyl	101	94.6	P/P	55 - 112
Chlorpyrifos Methyl	99.8	82.4	P/P	35 - 124
Cyanazine	188	93.7	P/P	26 - 262
Demeton	67.2	68.2	P/P	43 - 122
Diazinon	97.7	87.5	P/P	72 - 120
Disulfoton	92.6	93.3	P/P	45 - 137
EPTC	41.4	47.4	P/P	28 - 95.0
Ethion	97.5	88.6	P/P	63 - 127
Ethoprop	83.5	82.3	P/P	63 - 109
Fenamiphos	102	66.4	P/P	66 - 136
Fipronil	87.1	74.2	P/P	63 - 126
Fipronil Sulfide	84.3	81.2	P/P	59 - 123
Fipronil Sulfone	77.5	75.0	P/P	56 - 122
Fonofos	84.6	69.8	P/P	64 - 114
Hexazinone	101	31.3	P/F	49 - 144
Malathion	104	99.1	P/P	68 - 131
Metalaxyl	95.5	60.5	P/P	57 - 126
Metolachlor	92.7	92.1	P/P	75 - 118
Metribuzin	154	109	P/P	46 - 169
Mevinphos	71.3	59.2	P/P	34 - 126
Molinate	49.5	55.1	P/P	37 - 101
Norflurazon	86.8	46.7	P/F	63 - 127
Parathion Ethyl	93.9	82.9	P/P	78 - 109
Parathion Methyl	99.6	82.6	P/P	74 - 123
Pendimethalin	116	98.9	P/P	51 - 130
Phorate	77.7	65.7	P/P	53 - 116
Prometon	88.1	79.2	P/P	66 - 124
Prometryn	90.5	85.4	P/P	66 - 124

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P344703

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	104	84.9	P/P	62 - 134
Terbufos	89.7	74.8	P/P	59 - 115
Terbutylazine	98.6	85.3	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.3	68.3	P/P	47 - 125
Toxaphene	81.1	78.2	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P344375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	100		P	40 - 140
Endothall	103		P	40 - 140
Glufosinate	99.2		P	40 - 140
Glyphosate	94.7		P	40 - 140
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P344412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	95.1		P	40 - 150
3-Hydroxycarbofuran	101		P	40 - 150
Acetaminophen	106		P	30 - 150
Aldicarb	111		P	30 - 150
Aldicarb Sulfone	109		P	40 - 150
Aldicarb Sulfoxide	117		P	40 - 150
Bentazon	95.6		P	30 - 150
Carbamazepine	109		P	40 - 150
Carbaryl	91.7		P	40 - 150
Carbofuran	91.9		P	40 - 150
Diuron	97.6		P	40 - 150
Fenuron	127		P	40 - 150
Fluridone	98.6		P	40 - 150
Hydrocodone	123		P	40 - 150
Imazapyr	118		P	40 - 150
Imidacloprid	111		P	40 - 160
Linuron	103		P	40 - 150
MCPP	104		P	40 - 150
Methiocarb	92.0		P	40 - 150
Methomyl	99.5		P	40 - 150
Oxamyl	94.0		P	40 - 150
Primidone	107		P	40 - 150
Propoxur	90.2		P	40 - 150
Pyraclostrobin	105		P	40 - 150
Triclopyr	110		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P345071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P345075

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P345024

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988828	Calcium	103		P	80 - 120
1988828	Iron	105		P	80 - 120
1988828	Magnesium	105		P	80 - 120
1988828	Potassium	98.1		P	80 - 120
1988828	Sodium	99.0		P	80 - 120
1988828	Zinc	100		P	80 - 120
1989433	Calcium	99.0		P	80 - 120
1989433	Iron	103	104	P/P	80 - 120
1989433	Magnesium	101		P	80 - 120
1989433	Potassium	95.9	97.3	P/P	80 - 120
1989433	Sodium	95.0		P	80 - 120
1989433	Zinc	98.0	98.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988828	Arsenic	106		P	80 - 120
1988828	Cadmium	104		P	80 - 120
1988828	Chromium	102		P	80 - 120
1988828	Copper	99.0		P	80 - 120
1988828	Lead	102		P	80 - 120
1988828	Nickel	103		P	80 - 120
1988828	Silver	104		P	80 - 120
1989433	Arsenic	103	104	P/P	80 - 120
1989433	Cadmium	104	104	P/P	80 - 120
1989433	Chromium	99.2	99.7	P/P	80 - 120
1989433	Copper	95.3	95.9	P/P	80 - 120
1989433	Lead	99.7	100	P/P	80 - 120
1989433	Nickel	98.3	99.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989433	Silver	105	105	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P344849

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989010	Chloride	100		P	90 - 110
1989146	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P344852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989010	Sulfate	98.6		P	90 - 110
1989146	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P344870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989013	Ammonia-N	103	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P344573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989012	Kjeldahl Nitrogen	106	112	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P344574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989101	Kjeldahl Nitrogen	97.8	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P344587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989012	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P344583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989013	Total-P	98.9	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P344567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989014	O-Phosphate-P	93.8	96.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P344637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989939	Aldrin	59.0	56.9	P/P	26 - 96.0
1989939	Alpha-BHC	73.4	71.3	P/P	51 - 123
1989939	Alpha-Chlordane	79.9	75.6	P/P	45 - 120
1989939	Beta-BHC	114	105	P/P	43 - 146
1989939	Carbophenothion	111	124	P/P	26 - 179
1989939	Chlorothalonil	125	95.5	P/P	10 - 215
1989939	Cypermethrin	98.4	99.1	P/P	35 - 169
1989939	DDD-p,p'	95.8	93.8	P/P	49 - 131
1989939	DDE-p,p'	81.4	76.3	P/P	39 - 127
1989939	DDT-p,p'	80.5	78.2	P/P	49 - 120
1989939	Delta-BHC	130	122	P/P	49 - 187
1989939	Dicofol	74.7	73.7	P/P	10 - 129
1989939	Dieldrin	93.8	89.2	P/P	46 - 132
1989939	Endosulfan I	101	89.8	P/P	57 - 130
1989939	Endosulfan II	107	98.2	P/P	52 - 148
1989939	Endosulfan Sulfate	81.9	79.8	P/P	55 - 129
1989939	Endrin	84.8	63.0	P/P	45 - 133
1989939	Endrin Aldehyde	82.8	74.5	P/P	26 - 140
1989939	Endrin Ketone	95.1	95.9	P/P	60 - 125
1989939	Gamma-BHC	96.8	81.7	P/P	50 - 145
1989939	Gamma-Chlordane	78.5	74.2	P/P	44 - 118
1989939	Heptachlor	61.5	59.5	P/P	35 - 106
1989939	Heptachlor Epoxide	81.4	78.1	P/P	52 - 123
1989939	Methoxychlor	90.2	86.5	P/P	54 - 132
1989939	Mirex	69.1	71.6	P/P	36 - 107
1989939	Permethrin	82.6	84.3	P/P	47 - 135
1989939	Trifluralin	71.4	74.2	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P344703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988813	Acetochlor	90.1	87.0	P/P	67 - 125
1988813	Alachlor	82.4	77.5	P/P	69 - 123
1988813	Ametryn	98.9	95.1	P/P	52 - 151
1988813	Atrazine Desethyl	57.9	103	P/P	10 - 129
1988813	Azinphos Methyl	106	123	P/P	48 - 200
1988813	Bromacil	64.3	78.7	P/P	46 - 130
1988813	Butylate	28.7	36.9	P/P	10 - 85.0
1988813	Chlorpyrifos Ethyl	101	102	P/P	54 - 115
1988813	Chlorpyrifos Methyl	94.2	105	P/P	44 - 117
1988813	Cyanazine	80.0	163	P/P	10 - 262
1988813	Demeton	56.5	82.8	P/P	24 - 145
1988813	Diazinon	93.0	102	P/P	66 - 129
1988813	Disulfoton	74.4	109	P/P	45 - 139
1988813	EPTC	27.6	37.5	P/P	10 - 86.0
1988813	Ethion	101	102	P/P	59 - 133
1988813	Ethoprop	78.1	100	P/P	54 - 116
1988813	Fenamiphos	77.2	95.9	P/P	55 - 140
1988813	Fipronil	64.4	71.9	P/P	37 - 142
1988813	Fipronil Sulfide	66.3	76.2	P/P	37 - 130
1988813	Fipronil Sulfone	30.3	65.0	P/P	18 - 143

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P344703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988813	Fonofos	78.7	108	P/P	55 - 118
1988813	Hexazinone	82.2	99.6	P/P	62 - 140
1988813	Malathion	110	109	P/P	64 - 132
1988813	Metalaxyl	88.9	91.0	P/P	55 - 129
1988813	Metolachlor	93.8	83.1	P/P	56 - 137
1988813	Metribuzin	153	190	P/P	16 - 218
1988813	Mevinphos	62.8	85.0	P/P	34 - 129
1988813	Molinate	39.9	48.7	P/P	16 - 99.0
1988813	Norflurazon	54.9	50.2	P/P	43 - 135
1988813	Parathion Ethyl	94.4	99.4	P/P	71 - 112
1988813	Parathion Methyl	99.7	111	P/P	65 - 127
1988813	Pendimethalin	118	116	P/P	35 - 159
1988813	Phorate	67.8	96.0	P/P	41 - 129
1988813	Prometon	90.7	90.3	P/P	56 - 140
1988813	Prometryn	91.6	88.4	P/P	65 - 130
1988813	Simazine	95.5	105	P/P	54 - 148
1988813	Terbufos	80.5	109	P/P	53 - 126
1988813	Terbutylazine	94.4	94.6	P/P	73 - 114

Reference Method: EPA 8276
Batch ID: P344637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989309	Chlordane	54.4	75.6	P/P	41 - 134
1989309	Toxaphene	73.6	69.4	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P344375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988880	AMPA	29.7	27.5	F/F	40 - 140
1988880	Endothall	104	106	P/P	40 - 140
1988880	Glufosinate	102	102	P/P	40 - 140
1988880	Glyphosate	32.7	35.4	F/F	40 - 140
1988880	Sucralose	91.4	98.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P344412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989090	2,4-D	70.6	70.8	P/P	40 - 150
1989090	3-Hydroxycarbofuran	112	107	P/P	40 - 150
1989090	Acetaminophen	116	108	P/P	30 - 150
1989090	Aldicarb	105	95.3	P/P	30 - 150
1989090	Aldicarb Sulfone	126	119	P/P	40 - 150
1989090	Aldicarb Sulfoxide	104	94.6	P/P	40 - 150
1989090	Bentazon	43.6	42.0	P/P	30 - 150
1989090	Carbamazepine	106	102	P/P	40 - 150
1989090	Carbaryl	70.9	68.2	P/P	40 - 150
1989090	Carbofuran	74.9	74.3	P/P	40 - 150
1989090	Diuron	95.0	81.7	P/P	40 - 150
1989090	Fenuron	109	106	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P344412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989090	Fluridone	87.2	85.7	P/P	40 - 150
1989090	Hydrocodone	140	136	P/P	40 - 150
1989090	Imazapyr	130	112	P/P	40 - 150
1989090	Imidacloprid	216	200	F/F	40 - 160
1989090	Linuron	94.2	88.9	P/P	40 - 150
1989090	MCP	71.6	69.1	P/P	40 - 150
1989090	Methiocarb	87.4	85.8	P/P	40 - 150
1989090	Methomyl	91.1	82.1	P/P	40 - 150
1989090	Oxamyl	85.3	79.6	P/P	40 - 150
1989090	Primidone	119	102	P/P	40 - 150
1989090	Propoxur	73.4	73.2	P/P	40 - 150
1989090	Pyraclostrobin	94.4	92.7	P/P	40 - 150
1989090	Triclopyr	80.6	75.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P345075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989011	Fluoride	94.5	95.0	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P345024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989013	Organic Carbon	102	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P344506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989023	Turbidity	0.402	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989433	Calcium	1.06	Spike	P	0 - 20
1989433	Iron	0.840	Spike	P	0 - 20
1989433	Magnesium	1.09	Spike	P	0 - 20
1989433	Potassium	0.992	Spike	P	0 - 20
1989433	Sodium	0.855	Spike	P	0 - 20
1989433	Zinc	0.883	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989433	Arsenic	0.720	Spike	P	0 - 20
1989433	Cadmium	0.157	Spike	P	0 - 20
1989433	Chromium	0.551	Spike	P	0 - 20
1989433	Copper	0.629	Spike	P	0 - 20
1989433	Lead	0.519	Spike	P	0 - 20
1989433	Nickel	1.32	Spike	P	0 - 20
1989433	Silver	0.386	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344849

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989010	Chloride	0.535	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989010	Sulfate	0.907	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989013	Ammonia-N	1.86	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989012	Kjeldahl Nitrogen	6.16	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P344574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989101	Kjeldahl Nitrogen	0.597	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989012	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P344583

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989013	Total-P	3.91	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P344567

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989014	O-Phosphate-P	2.34	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P344637

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989939	Aldrin	3.58	Spike	P	0 - 30
1989939	Alpha-BHC	2.98	Spike	P	0 - 30
1989939	Alpha-Chlordane	5.60	Spike	P	0 - 30
1989939	Beta-BHC	8.42	Spike	P	0 - 30
1989939	Carbophenothion	11.0	Spike	P	0 - 30
1989939	Chlorothalonil	26.8	Spike	P	0 - 30
1989939	Cypermethrin	0.749	Spike	P	0 - 30
1989939	DDD-p,p'	2.17	Spike	P	0 - 30
1989939	DDE-p,p'	6.48	Spike	P	0 - 30
1989939	DDT-p,p'	2.96	Spike	P	0 - 30
1989939	Delta-BHC	6.81	Spike	P	0 - 30
1989939	Dicofol	1.32	Spike	P	0 - 30
1989939	Dieldrin	4.99	Spike	P	0 - 30
1989939	Endosulfan I	11.4	Spike	P	0 - 30
1989939	Endosulfan II	8.70	Spike	P	0 - 30
1989939	Endosulfan Sulfate	2.58	Spike	P	0 - 30
1989939	Endrin	29.5	Spike	P	0 - 30
1989939	Endrin Aldehyde	10.6	Spike	P	0 - 30
1989939	Endrin Ketone	0.857	Spike	P	0 - 30
1989939	Gamma-BHC	16.8	Spike	P	0 - 30
1989939	Gamma-Chlordane	5.54	Spike	P	0 - 30
1989939	Heptachlor	3.30	Spike	P	0 - 30
1989939	Heptachlor Epoxide	4.14	Spike	P	0 - 30
1989939	Methoxychlor	4.16	Spike	P	0 - 30
1989939	Mirex	3.62	Spike	P	0 - 30
1989939	Permethrin	2.06	Spike	P	0 - 30
1989939	Trifluralin	3.80	Spike	P	0 - 30
LFB	Aldrin	2.99	LCS	P	0 - 30
LFB	Alpha-BHC	0.887	LCS	P	0 - 30
LFB	Alpha-Chlordane	7.05	LCS	P	0 - 30
LFB	Beta-BHC	9.90	LCS	P	0 - 30
LFB	Carbophenothion	7.27	LCS	P	0 - 30
LFB	Chlorothalonil	78.3	LCS	F	0 - 30
LFB	Cypermethrin	7.80	LCS	P	0 - 30
LFB	DDD-p,p'	16.0	LCS	P	0 - 30
LFB	DDE-p,p'	11.9	LCS	P	0 - 30
LFB	DDT-p,p'	23.9	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P344637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Delta-BHC	7.22	LCS	P	0 - 30
LFB	Dicofol	3.29	LCS	P	0 - 30
LFB	Dieldrin	13.6	LCS	P	0 - 30
LFB	Endosulfan I	1.88	LCS	P	0 - 30
LFB	Endosulfan II	19.3	LCS	P	0 - 30
LFB	Endosulfan Sulfate	14.1	LCS	P	0 - 30
LFB	Endrin	15.0	LCS	P	0 - 30
LFB	Endrin Aldehyde	8.44	LCS	P	0 - 30
LFB	Endrin Ketone	1.97	LCS	P	0 - 30
LFB	Gamma-BHC	0.944	LCS	P	0 - 30
LFB	Gamma-Chlordane	7.55	LCS	P	0 - 30
LFB	Heptachlor	2.02	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.63	LCS	P	0 - 30
LFB	Methoxychlor	8.53	LCS	P	0 - 30
LFB	Mirex	11.2	LCS	P	0 - 30
LFB	Permethrin	1.64	LCS	P	0 - 30
LFB	Trifluralin	4.46	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P344703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988813	Acetochlor	3.49	Spike	P	0 - 30
1988813	Alachlor	6.09	Spike	P	0 - 30
1988813	Ametryn	2.95	Spike	P	0 - 30
1988813	Atrazine	8.28	Spike	P	0 - 30
1988813	Atrazine Desethyl	46.7	Spike	F	0 - 30
1988813	Azinphos Methyl	14.4	Spike	P	0 - 30
1988813	Bromacil	20.1	Spike	P	0 - 30
1988813	Butylate	25.0	Spike	P	0 - 30
1988813	Chlorpyrifos Ethyl	1.13	Spike	P	0 - 30
1988813	Chlorpyrifos Methyl	11.1	Spike	P	0 - 30
1988813	Cyanazine	68.6	Spike	F	0 - 30
1988813	Demeton	37.8	Spike	F	0 - 30
1988813	Diazinon	9.14	Spike	P	0 - 30
1988813	Disulfoton	37.4	Spike	F	0 - 30
1988813	EPTC	30.2	Spike	F	0 - 30
1988813	Ethion	0.494	Spike	P	0 - 30
1988813	Ethoprop	24.8	Spike	P	0 - 30
1988813	Fenamiphos	21.7	Spike	P	0 - 30
1988813	Fipronil	11.0	Spike	P	0 - 30
1988813	Fipronil Sulfide	13.9	Spike	P	0 - 30
1988813	Fipronil Sulfone	43.7	Spike	F	0 - 30
1988813	Fonofos	31.6	Spike	F	0 - 30
1988813	Hexazinone	19.2	Spike	P	0 - 30
1988813	Malathion	0.603	Spike	P	0 - 30
1988813	Metaxyl	2.36	Spike	P	0 - 30
1988813	Metolachlor	11.8	Spike	P	0 - 30
1988813	Metribuzin	21.8	Spike	P	0 - 30
1988813	Mevinphos	30.1	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P344703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988813	Molinate	19.8	Spike	P	0 - 30
1988813	Norflurazon	8.91	Spike	P	0 - 30
1988813	Parathion Ethyl	5.12	Spike	P	0 - 30
1988813	Parathion Methyl	10.3	Spike	P	0 - 30
1988813	Pendimethalin	2.51	Spike	P	0 - 30
1988813	Phorate	34.4	Spike	F	0 - 30
1988813	Prometon	0.447	Spike	P	0 - 30
1988813	Prometryn	3.60	Spike	P	0 - 30
1988813	Simazine	9.03	Spike	P	0 - 30
1988813	Terbufos	30.1	Spike	F	0 - 30
1988813	Terbuthylazine	0.132	Spike	P	0 - 30
LFB	Acetochlor	5.74	LCS	P	0 - 30
LFB	Alachlor	5.80	LCS	P	0 - 30
LFB	Ametryn	0.383	LCS	P	0 - 30
LFB	Atrazine	11.1	LCS	P	0 - 30
LFB	Atrazine Desethyl	73.3	LCS	F	0 - 30
LFB	Azinphos Methyl	32.7	LCS	F	0 - 30
LFB	Bromacil	44.1	LCS	F	0 - 30
LFB	Butylate	10.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.69	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	19.1	LCS	P	0 - 30
LFB	Cyanazine	66.9	LCS	F	0 - 30
LFB	Demeton	1.37	LCS	P	0 - 30
LFB	Diazinon	11.0	LCS	P	0 - 30
LFB	Disulfoton	0.789	LCS	P	0 - 30
LFB	EPTC	13.5	LCS	P	0 - 30
LFB	Ethion	9.60	LCS	P	0 - 30
LFB	Ethoprop	1.45	LCS	P	0 - 30
LFB	Fenamiphos	42.2	LCS	F	0 - 30
LFB	Fipronil	16.0	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.77	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.24	LCS	P	0 - 30
LFB	Fonofos	19.1	LCS	P	0 - 30
LFB	Hexazinone	105	LCS	F	0 - 30
LFB	Malathion	4.91	LCS	P	0 - 30
LFB	Metalaxyl	44.8	LCS	F	0 - 30
LFB	Metolachlor	0.654	LCS	P	0 - 30
LFB	Metribuzin	34.4	LCS	F	0 - 30
LFB	Mevinphos	18.5	LCS	P	0 - 30
LFB	Molinate	10.7	LCS	P	0 - 30
LFB	Norflurazon	60.1	LCS	F	0 - 30
LFB	Parathion Ethyl	12.5	LCS	P	0 - 30
LFB	Parathion Methyl	18.6	LCS	P	0 - 30
LFB	Pendimethalin	15.8	LCS	P	0 - 30
LFB	Phorate	16.7	LCS	P	0 - 30
LFB	Prometon	10.7	LCS	P	0 - 30
LFB	Prometryn	5.75	LCS	P	0 - 30
LFB	Simazine	20.2	LCS	P	0 - 30
LFB	Terbufos	18.2	LCS	P	0 - 30
LFB	Terbuthylazine	14.4	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P344637

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989309	Chlordane	27.3	Spike	P	0 - 30
1989309	Toxaphene	5.88	Spike	P	0 - 30
LFB	Chlordane	11.1	LCS	P	0 - 30
LFB	Toxaphene	3.65	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P344375

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988880	AMPA	3.64	Spike	P	0 - 30
1988880	Endothall	2.49	Spike	P	0 - 30
1988880	Glufosinate	0.166	Spike	P	0 - 30
1988880	Glyphosate	6.83	Spike	P	0 - 30
1988880	Sucralose	7.21	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P344412

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989090	2,4-D	0.259	Spike	P	0 - 30
1989090	3-Hydroxycarbofuran	4.77	Spike	P	0 - 30
1989090	Acetaminophen	6.90	Spike	P	0 - 30
1989090	Aldicarb	9.83	Spike	P	0 - 30
1989090	Aldicarb Sulfone	6.01	Spike	P	0 - 30
1989090	Aldicarb Sulfoxide	9.64	Spike	P	0 - 30
1989090	Bentazon	3.30	Spike	P	0 - 30
1989090	Carbamazepine	3.47	Spike	P	0 - 30
1989090	Carbaryl	3.86	Spike	P	0 - 30
1989090	Carbofuran	0.871	Spike	P	0 - 30
1989090	Diuron	6.04	Spike	P	0 - 30
1989090	Fenuron	2.24	Spike	P	0 - 30
1989090	Fluridone	1.54	Spike	P	0 - 30
1989090	Hydrocodone	3.08	Spike	P	0 - 30
1989090	Imazapyr	7.57	Spike	P	0 - 30
1989090	Imidacloprid	7.03	Spike	P	0 - 30
1989090	Linuron	5.82	Spike	P	0 - 30
1989090	MCPP	3.58	Spike	P	0 - 30
1989090	Methiocarb	1.80	Spike	P	0 - 30
1989090	Methomyl	10.4	Spike	P	0 - 30
1989090	Oxamyl	6.87	Spike	P	0 - 30
1989090	Primidone	15.0	Spike	P	0 - 30
1989090	Propoxur	0.188	Spike	P	0 - 30
1989090	Pyraclostrobin	1.79	Spike	P	0 - 30
1989090	Triclopyr	5.92	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P344491

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989024	Color (true)	1.04	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P345071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989011	Total Alkalinity	0.856	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
 Batch ID: P345188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989011	TDS	3.95	Sample	P	0 - 10

Reference Method: SM 2540 C-97
 Batch ID: P345189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989100	TDS	1.23	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P345075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989011	Fluoride	0.472	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
 Batch ID: P345024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989013	Organic Carbon	0.440	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: 1989047
 Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	52.6	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1989048
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	55.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.7	P	30 - 160
EPA 8321B	Diuron-d6	72.2	P	30 - 160
EPA 8321B	Endothall-d6	177	F	50 - 160
EPA 8321B	Glyphosate 13C 15N	175	F	40 - 160
EPA 8321B	Primidone-d5	94.0	P	30 - 160
EPA 8321B	Sucralose-d6	51.5	P	40 - 160

Lab Sample ID: 1989049
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	62.4	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	43.4	P	34 - 101
EPA 8276	Decachlorobiphenyl	50.6	P	31 - 108
EPA 8276	PCNB	92.6	P	62 - 142

Lab Sample ID: 1989050
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	100	P	71 - 126
EPA 8270D	Terbufos-d10	103	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A83602
Included Lab Sample IDs: 1989022, 1989023, 1989024, 1989031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115
Color (true)	101	102	P/P	90 - 115
Color (true)	98.9	99.9	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A83605
Included Lab Sample IDs: 1989022, 1989023, 1989024, 1989031

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: A83633
Included Lab Sample IDs: 1989027, 1989028, 1989029, 1989033

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83635

Included Lab Sample IDs: 1989025, 1989026, 1989032, 1989120

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83665

Included Lab Sample IDs: 1989025, 1989032, 1989120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83668

Included Lab Sample IDs: 1989025, 1989026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.9	99.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83681

Included Lab Sample IDs: 1989053

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83682

Included Lab Sample IDs: 1989032, 1989120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.0	97.4	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83715

Included Lab Sample IDs: 1989053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.4	99.8	P/P	90 - 110
Iron	101	100	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	98.5	96.6	P/P	90 - 110
Sodium	97.1	98.0	P/P	90 - 110
Zinc	99.7	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83729

Included Lab Sample IDs: 1989026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A83732

Included Lab Sample IDs: 1989022, 1989023, 1989024, 1989031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	93.1	103	P/P	90 - 110
Sulfate	91.6	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83734

Included Lab Sample IDs: 1989025, 1989026, 1989032, 1989120

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

Reference Method: EPA 8321B

Run ID: A83769

Included Lab Sample IDs: 1989047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	104	104	P/P	60 - 150
Acetaminophen	106	103	P/P	60 - 150
Aldicarb	97.9	101	P/P	60 - 150
Aldicarb Sulfone	106	104	P/P	50 - 150
Aldicarb Sulfoxide	112	116	P/P	50 - 150
Carbamazepine	110	108	P/P	60 - 150
Carbaryl	113	109	P/P	60 - 150
Carbofuran	109	109	P/P	50 - 150
Diuron	113	119	P/P	60 - 150
Fenuron	119	115	P/P	60 - 150
Fluridone	113	116	P/P	60 - 160
Hydrocodone	125	123	P/P	60 - 150
Imazapyr	117	113	P/P	50 - 150
Imidacloprid	111	102	P/P	60 - 150
Linuron	106	109	P/P	60 - 150
Methiocarb	108	115	P/P	50 - 150
Methomyl	103	108	P/P	50 - 150
Oxamyl	93.5	102	P/P	50 - 150
Primidone	114	97.1	P/P	60 - 150
Propoxur	107	106	P/P	50 - 150
Pyraclostrobin	117	116	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A83798

Included Lab Sample IDs: 1989025, 1989026, 1989032, 1989120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.8	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A83798

Included Lab Sample IDs: 1989025, 1989026, 1989032, 1989120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.9	99.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A83812

Included Lab Sample IDs: 1989022, 1989023, 1989024, 1989031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.1	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A83812

Included Lab Sample IDs: 1989022, 1989023, 1989024, 1989031

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

Reference Method: EPA 8276

Run ID: A83873

Included Lab Sample IDs: 1989049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.7		P	80 - 120
Toxaphene	97.9		P	80 - 120

Reference Method: EPA 8321B

Run ID: A83883

Included Lab Sample IDs: 1989048

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	123	110	P/P	50 - 150
Bentazon	124	127	P/P	50 - 150
MCP	125	133	P/P	50 - 150
Triclopyr	121	131	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A83902

Included Lab Sample IDs: 1989048

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	103	103	P/P	60 - 160
Endothall	104	109	P/P	60 - 160
Glufosinate	102	93.2	P/P	60 - 160
Glyphosate	95.8	94.1	P/P	60 - 160
Sucralose	122	93.8	P/P	60 - 160

Reference Method: EPA 8270D

Run ID: A83927

Included Lab Sample IDs: 1989049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A83927

Included Lab Sample IDs: 1989049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	97.2		P	80 - 120
Beta-BHC	93.1		P	80 - 120
Carbophenothion	100		P	80 - 120
Chlorothalonil	99.5		P	80 - 120
Cypermethrin	89.8		P	80 - 120
DDD-p,p'	99.7		P	80 - 120
DDE-p,p'	97.6		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	93.7		P	80 - 120
Dicofol	106		P	80 - 120
Dieldrin	90.0		P	80 - 120
Endosulfan I	93.6		P	80 - 120
Endosulfan II	89.7		P	80 - 120
Endosulfan Sulfate	92.7		P	80 - 120
Endrin	91.2		P	80 - 120
Endrin Aldehyde	93.4		P	80 - 120
Endrin Ketone	96.9		P	80 - 120
Gamma-BHC	98.2		P	80 - 120
Gamma-Chlordane	98.6		P	80 - 120
Heptachlor	94.8		P	80 - 120
Heptachlor Epoxide	99.0		P	80 - 120
Methoxychlor	105		P	80 - 120
Mirex	97.7		P	80 - 120
Permethrin	93.3		P	80 - 120
Trifluralin	99.1		P	80 - 120

Reference Method: EPA 8270D

Run ID: A84167

Included Lab Sample IDs: 1989050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	93.7		P	80 - 120
Alachlor	97.3		P	80 - 120
Ametryn	90.0		P	80 - 120
Atrazine	94.5		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	95.1		P	80 - 120
Bromacil	94.4		P	80 - 120
Butylate	94.9		P	80 - 120
Chlorpyrifos Ethyl	105		P	80 - 120
Chlorpyrifos Methyl	96.7		P	80 - 120
Cyanazine	87.6		P	80 - 120
Demeton	95.5		P	80 - 120
Diazinon	94.5		P	80 - 120
Disulfoton	93.2		P	80 - 120
EPTC	95.2		P	80 - 120
Ethion	94.2		P	80 - 120
Ethoprop	96.7		P	80 - 120
Fenamiphos	98.2		P	80 - 120
Fipronil	92.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A84167
Included Lab Sample IDs: 1989050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Sulfide	96.0		P	80 - 120
Fipronil Sulfone	96.1		P	80 - 120
Fonofos	96.1		P	80 - 120
Hexazinone	90.3		P	80 - 120
Malathion	98.5		P	80 - 120
Metalaxyl	98.9		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	99.0		P	80 - 120
Mevinphos	94.5		P	80 - 120
Molinate	94.9		P	80 - 120
Norflurazon	95.4		P	80 - 120
Parathion Ethyl	94.0		P	80 - 120
Parathion Methyl	98.4		P	80 - 120
Pendimethalin	98.9		P	80 - 120
Phorate	91.9		P	80 - 120
Prometon	95.1		P	80 - 120
Prometryn	97.6		P	80 - 120
Simazine	91.7		P	80 - 120
Terbufos	93.6		P	80 - 120
Terbutylazine	95.1		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				0.402	
EPA 200.7 Rev. 4.4	Calcium	101	103 99.0			1.06
	Iron	107	105 103 104			0.840
	Magnesium	103	105 101			1.09
	Potassium	102	98.1 95.9 97.3			0.992
	Sodium	97.7	99.0 95.0			0.855
	Zinc	102	100 98.0 98.9			0.883
EPA 200.8 Rev. 5.4	Arsenic	104	106 103 104			0.720
	Cadmium	105	104 104 104			0.157
	Chromium	101	102 99.2 99.7			0.551
	Copper	99.4	99.0 95.3 95.9			0.629
	Lead	101	102 99.7 100			0.519
	Nickel	103	103 98.3 99.6			1.32
	Silver	105	104 105 105			0.386
EPA 300.0 Rev. 2.1	Chloride	101	100 101		0.535	
	Sulfate	102	98.6 102		0.907	
EPA 350.1 Rev. 2.0	Ammonia-N	101	103 105			1.86
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	106 112			6.16
	Kjeldahl Nitrogen	102	97.8 97.0			0.597
EPA 353.2 Rev. 2.0	NO2NO3-N	101	102 102			0.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 365.1 Rev. 2.0	Total-P	105		98.9	103			3.91
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.5		93.8	96.3			2.34
EPA 8270D	Acetochlor	90.6	85.5	90.1	87.0	5.74		3.49
	Alachlor	93.4	88.1	82.4	77.5	5.80		6.09
	Aldrin	62.3	60.4	59.0	56.9	2.99		3.58
	Alpha-BHC	75.6	74.9	73.4	71.3	0.887		2.98
	Alpha-Chlordane	83.2	77.5	79.9	75.6	7.05		5.60
	Ametryn	88.7	88.3	98.9	95.1	0.383		2.95
	Atrazine	106	94.9			11.1		8.28
	Atrazine Desethyl	110	51.0	57.9	103	73.3		46.7
	Azinphos Methyl	127	90.9	106	123	32.7		14.4
	Beta-BHC	124	112	114	105	9.90		8.42
	Bromacil	78.3	50.0	64.3	78.7	44.1		20.1
	Butylate	41.9	46.5	28.7	36.9	10.4		25.0
	Carbophenothion	113	105	111	124	7.27		11.0
	Chlorothalonil	27.9	63.8	125	95.5	78.3		26.8
	Chlorpyrifos Ethyl	101	94.6	101	102	6.69		1.13
	Chlorpyrifos Methyl	99.8	82.4	94.2	105	19.1		11.1
	Cyanazine	188	93.7	80.0	163	66.9		68.6
	Cypermethrin	99.4	91.9	98.4	99.1	7.80		0.749
	DDD-p,p'	112	95.2	95.8	93.8	16.0		2.17
	DDE-p,p'	88.6	78.7	81.4	76.3	11.9		6.48
	DDT-p,p'	95.2	74.9	80.5	78.2	23.9		2.96
	Delta-BHC	122	131	130	122	7.22		6.81
	Demeton	67.2	68.2	56.5	82.8	1.37		37.8
	Diazinon	97.7	87.5	93.0	102	11.0		9.14
	Dicofol	82.5	79.8	74.7	73.7	3.29		1.32
	Dieldrin	88.0	76.8	93.8	89.2	13.6		4.99
	Disulfoton	92.6	93.3	74.4	109	0.789		37.4
	Endosulfan I	94.0	92.2	101	89.8	1.88		11.4
	Endosulfan II	105	86.8	107	98.2	19.3		8.70
	Endosulfan Sulfate	101	116	81.9	79.8	14.1		2.58
	Endrin	93.3	80.3	84.8	63.0	15.0		29.5
	Endrin Aldehyde	113	104	82.8	74.5	8.44		10.6
	Endrin Ketone	102	99.7	95.1	95.9	1.97		0.857
	EPTC	41.4	47.4	27.6	37.5	13.5		30.2
	Ethion	97.5	88.6	101	102	9.60		0.494
	Ethoprop	83.5	82.3	78.1	100	1.45		24.8
	Fenamiphos	102	66.4	77.2	95.9	42.2		21.7
	Fipronil	87.1	74.2	64.4	71.9	16.0		11.0
	Fipronil Sulfide	84.3	81.2	66.3	76.2	3.77		13.9
	Fipronil Sulfone	77.5	75.0	30.3	65.0	3.24		43.7
	Fonofos	84.6	69.8	78.7	108	19.1		31.6
	Gamma-BHC	93.8	93.0	96.8	81.7	0.944		16.8
	Gamma-Chlordane	81.9	75.9	78.5	74.2	7.55		5.54
	Heptachlor	65.0	63.7	61.5	59.5	2.02		3.30
	Heptachlor Epoxide	83.2	78.7	81.4	78.1	5.63		4.14
	Hexazinone	101	31.3	82.2	99.6	105		19.2
	Malathion	104	99.1	110	109	4.91		0.603
	Metalaxyl	95.5	60.5	88.9	91.0	44.8		2.36
	Methoxychlor	104	95.8	90.2	86.5	8.53		4.16
	Metolachlor	92.7	92.1	93.8	83.1	0.654		11.8
	Metribuzin	154	109	153	190	34.4		21.8
	Mevinphos	71.3	59.2	62.8	85.0	18.5		30.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Mirex	75.9	67.9	69.1	71.6	11.2	3.62
	Molinate	49.5	55.1	39.9	48.7	10.7	19.8
	Norflurazon	86.8	46.7	54.9	50.2	60.1	8.91
	Parathion Ethyl	93.9	82.9	94.4	99.4	12.5	5.12
	Parathion Methyl	99.6	82.6	99.7	111	18.6	10.3
	Pendimethalin	116	98.9	118	116	15.8	2.51
	Permethrin	84.8	83.4	82.6	84.3	1.64	2.06
	Phorate	77.7	65.7	67.8	96.0	16.7	34.4
	Prometon	88.1	79.2	90.7	90.3	10.7	0.447
	Prometryn	90.5	85.4	91.6	88.4	5.75	3.60
	Simazine	104	84.9	95.5	105	20.2	9.03
	Terbufos	89.7	74.8	80.5	109	18.2	30.1
	Terbutylazine	98.6	85.3	94.4	94.6	14.4	0.132
	Trifluralin	76.0	72.7	71.4	74.2	4.46	3.80
EPA 8276	Chlordane	76.3	68.3	54.4	75.6	11.1	27.3
	Toxaphene	81.1	78.2	73.6	69.4	3.65	5.88
EPA 8321B	2,4-D	95.1		70.6	70.8		0.259
	3-Hydroxycarbofuran	101		112	107		4.77
	Acetaminophen	106		116	108		6.90
	Aldicarb	111		105	95.3		9.83
	Aldicarb Sulfone	109		126	119		6.01
	Aldicarb Sulfoxide	117		104	94.6		9.64
	AMPA	100		29.7	27.5		3.64
	Bentazon	95.6		43.6	42.0		3.30
	Carbamazepine	109		106	102		3.47
	Carbaryl	91.7		70.9	68.2		3.86
	Carbofuran	91.9		74.9	74.3		0.871
	Diuron	97.6		95.0	81.7		6.04
	Endothall	103		104	106		2.49
	Fenuron	127		109	106		2.24
	Fluridone	98.6		87.2	85.7		1.54
	Glufosinate	99.2		102	102		0.166
	Glyphosate	94.7		32.7	35.4		6.83
	Hydrocodone	123		140	136		3.08
	Imazapyr	118		130	112		7.57
	Imidacloprid	111		216	200		7.03
	Linuron	103		94.2	88.9		5.82
	MCPP	104		71.6	69.1		3.58
	Methiocarb	92.0		87.4	85.8		1.80
	Methomyl	99.5		91.1	82.1		10.4
	Oxamyl	94.0		85.3	79.6		6.87
	Primidone	107		119	102		15.0
	Propoxur	90.2		73.4	73.2		0.188
	Pyraclostrobin	105		94.4	92.7		1.79
	Sucralose	100		91.4	98.3		7.21
	Triclopyr	110		80.6	75.9		5.92
SM 2120 B	Color (true)					1.04	
SM 2320 B-97	Total Alkalinity	105				0.856	
SM 2540 C-97	TDS					3.95	
	TDS					1.23	
SM 4500 F-C-97	Fluoride	95.1		94.5	95.0		0.472
SM 5310 B-00	Organic Carbon	100		102	103		0.440

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1989022, 1989023, 1989024, 1989031
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1989053
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1989053
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1989022, 1989023, 1989024, 1989031
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1989022, 1989023, 1989024, 1989031
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1989025, 1989026, 1989032, 1989120
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1989025, 1989026, 1989032, 1989120
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1989025, 1989026, 1989032, 1989120
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1989025, 1989026, 1989032, 1989120
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1989027, 1989028, 1989029, 1989033
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1989049
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1989050
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1989049
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1989047
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1989048
SM 2120 B / E31780	True Color measured at 450 nm	1989022, 1989023, 1989024, 1989031
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1989022, 1989023, 1989024, 1989031
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1989022, 1989023, 1989024, 1989031
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1989022, 1989023, 1989024, 1989031
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1989022, 1989023, 1989024, 1989031
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1989025, 1989026, 1989032, 1989120

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	05/02/2018			05/02/2018 17:27	William L. Brown IV	1989022, 1989023, 1989024, 1989031
EPA 200.7 Rev. 4.4	05/02/2018	05/03/2018 14:30	Elliott D. Healy	05/07/2018 14:31	Betina Topolski	1989053
EPA 200.8 Rev. 5.4	05/02/2018	05/03/2018 14:30	Elliott D. Healy	05/04/2018 20:16	Nadine Brooks	1989053
EPA 300.0 Rev. 2.1	05/02/2018			05/08/2018 01:48	Lipi Saha	1989022
	05/02/2018			05/08/2018 02:00	Lipi Saha	1989023
	05/02/2018			05/08/2018 02:12	Lipi Saha	1989024
	05/02/2018			05/08/2018 02:24	Lipi Saha	1989031
EPA 350.1 Rev. 2.0	05/02/2018			05/07/2018 12:33	Ping Hua	1989025
	05/02/2018			05/07/2018 12:34	Ping Hua	1989026
	05/02/2018			05/07/2018 12:36	Ping Hua	1989032
	05/02/2018			05/07/2018 12:46	Ping Hua	1989120
EPA 351.2 Rev. 2.0	05/02/2018	05/03/2018 13:30	Adrian Shelby	05/04/2018 12:27	Joseph Suarez	1989025
	05/02/2018	05/03/2018 13:30	Adrian Shelby	05/04/2018 12:28	Joseph Suarez	1989026
	05/02/2018	05/03/2018 13:30	Adrian Shelby	05/04/2018 15:02	Joseph Suarez	1989032
	05/02/2018	05/03/2018 13:30	Adrian Shelby	05/04/2018 15:09	Joseph Suarez	1989120
EPA 353.2 Rev. 2.0	05/02/2018			05/03/2018 12:42	Lauren Bottorf	1989025
	05/02/2018			05/03/2018 12:43	Lauren Bottorf	1989026
	05/02/2018			05/03/2018 12:44	Lauren Bottorf	1989032
	05/02/2018			05/03/2018 12:47	Lauren Bottorf	1989120
EPA 365.1 Rev. 2.0	05/02/2018	05/03/2018 13:11	Sima Feizi	05/04/2018 10:48	Beverly Y. Sanders	1989025
	05/02/2018	05/03/2018 13:11	Sima Feizi	05/04/2018 10:50	Beverly Y. Sanders	1989032
	05/02/2018	05/03/2018 13:11	Sima Feizi	05/04/2018 10:52	Beverly Y. Sanders	1989120
	05/02/2018	05/03/2018 13:11	Sima Feizi	05/07/2018 11:35	Beverly Y. Sanders	1989026
EPA 365.1 Rev. 2.0 dissolved	05/02/2018			05/02/2018 14:55	Megan Treadwell	1989027
	05/02/2018			05/02/2018 14:56	Megan Treadwell	1989028
	05/02/2018			05/02/2018 14:57	Megan Treadwell	1989029
	05/02/2018			05/02/2018 14:58	Megan Treadwell	1989033
EPA 8270D	05/02/2018	05/04/2018 08:42	Dinesh Mishra	05/16/2018 19:01	Marek Topolski	1989050
	05/02/2018	05/04/2018 12:51	Rasheda Ghaffari	05/08/2018 21:02	Vandana T. Nagar	1989049
EPA 8276	05/02/2018	05/04/2018 12:51	Rasheda Ghaffari	05/08/2018 17:57	John P. Burgos	1989049
EPA 8321B	05/02/2018	05/03/2018 10:00	Hoor Shaik	05/06/2018 18:56	Juyoung Kim	1989047
	05/02/2018	05/03/2018 10:00	Hoor Shaik	05/07/2018 03:01	Juyoung Kim	1989048
	05/02/2018	05/03/2018 10:00	Hoor Shaik	05/09/2018 10:23	Juyoung Kim	1989048
	05/02/2018	05/03/2018 17:00	Hoor Shaik	05/04/2018 00:22	Juyoung Kim	1989048
SM 2120 B	05/02/2018			05/02/2018 15:36	Tanya Welborn	1989024
	05/02/2018			05/02/2018 16:12	Tanya Welborn	1989022
	05/02/2018			05/02/2018 16:20	Tanya Welborn	1989023, 1989031
SM 2320 B-97	05/02/2018			05/10/2018 00:42	Dale L. Simmons	1989022
	05/02/2018			05/10/2018 00:51	Dale L. Simmons	1989023
	05/02/2018			05/10/2018 01:02	Dale L. Simmons	1989024

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	05/02/2018			05/10/2018 01:11	Dale L. Simmons	1989031
SM 2540 C-97	05/02/2018			05/05/2018 23:12	Yijie Li	1989022, 1989023, 1989024, 1989031
SM 2540 D-97	05/02/2018			05/05/2018 23:12	Yijie Li	1989022, 1989023, 1989024, 1989031
SM 4500 F-C-97	05/02/2018			05/10/2018 00:42	Dale L. Simmons	1989022
	05/02/2018			05/10/2018 00:51	Dale L. Simmons	1989023
	05/02/2018			05/10/2018 01:02	Dale L. Simmons	1989024
	05/02/2018			05/10/2018 01:11	Dale L. Simmons	1989031
	05/02/2018			05/09/2018 23:27	Megan Treadwell	1989025
	05/02/2018			05/09/2018 23:39	Megan Treadwell	1989026
	05/02/2018			05/10/2018 00:16	Megan Treadwell	1989032
SM 5310 B-00	05/02/2018			05/10/2018 01:05	Megan Treadwell	1989120