

Chemical Analysis Report

NW-DIST-2018-02-23-01

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

Event Description: **Holmes RUN**
Request ID: **RQ-2018-02-12-41**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 30-MAR-2018 12:11

A handwritten signature in black ink, appearing to read "Liang Lin", is shown 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: Sand Hammock Pond at Cent

Collection Date/Time: 02/22/2018 12:05

Field ID: G3NW0077

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1969917	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P340517	
	EPA 300.0 Rev. 2.1	Chloride	3.6		mg Cl/L	P340797	
		Sulfate	0.24	I	mg SO4/L	P340801	
	SM 2120 B	Color (true)	34		PCU	P340503	
	SM 2320 B-97	Total Alkalinity	3.5		mg CaCO3/L	P340920	
	SM 2540 C-97	TDS	20	I	mg/L	P340839	
	SM 2540 D-97	TSS	2	U	mg/L	P341043	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P341124	MS
1969919	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P340969	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P340611	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.039		mg N/L	P340715	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P340637	
	SM 5310 B-00	Organic Carbon	4.6		mg C/L	P340633	
1969921	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P340518	

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: EAST PITTMAN CREEK UP

Collection Date/Time: 02/22/2018 13:10

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1969911	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P340517	
	EPA 300.0 Rev. 2.1	Chloride	3.9		mg Cl/L	P340796	
		Sulfate	0.62		mg SO4/L	P340800	
	SM 2120 B	Color (true)	85		PCU	P340503	
	SM 2320 B-97	Total Alkalinity	10		mg CaCO3/L	P340920	
	SM 2540 C-97	TDS	42		mg/L	P340839	
	SM 2540 D-97	TSS	5	I	mg/L	P341043	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P341124	MS
1969912	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P340969	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P340611	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.60		mg N/L	P340715	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P340637	
	SM 5310 B-00	Organic Carbon	7.0		mg C/L	P340633	
1969913	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P340518	
1969952	EPA 8321B	2,4-D	0.0020	U	ug/L	P340489	
		Sucralose**	0.024	I	ug/L	P340408	
		Bentazon	8.0E-04	U	ug/L	P340489	MS
		MCP	0.0020	U	ug/L	P340489	MS
		Triclopyr**	0.0040	U	ug/L	P340489	
		Imidacloprid	0.0020	U	ug/L	P340489	MS
		Diuron	0.0020	U	ug/L	P340489	
		Pyraclostrobin**	0.0020	U	ug/L	P340489	
		Primidone**	0.0040	U	ug/L	P340489	

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1969952	EPA 8321B	Linuron	0.0040	U	ug/L	P340489	
		Acetaminophen**	0.0080	U	ug/L	P340489	
		Fenuron	0.0080	U	ug/L	P340489	
		Imazapyr**	0.021		ug/L	P340489	
		Carbamazepine**	4.0E-04	U	ug/L	P340489	
		Fluridone**	8.0E-04	U	ug/L	P340489	
		Glyphosate**	0.10	U	ug/L	P340488	
		AMPA**	0.10	U	ug/L	P340488	
		Aldicarb	0.020	U	ug/L	P340489	
		Aldicarb Sulfone	0.0020	U	ug/L	P340489	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P340489	
		Carbaryl	0.0020	U	ug/L	P340489	
		Carbofuran	0.0020	U	ug/L	P340489	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P340489	
		Methiocarb	0.0020	U	ug/L	P340489	
		Methomyl	0.0020	U	ug/L	P340489	
		Oxamyl	0.0020	U	ug/L	P340489	
1969961	EPA 8270D	Propoxur	0.0020	U	ug/L	P340489	
		Aldrin	4.3	U	ng/L	P340538	
		Alpha-BHC	2.1	U	ng/L	P340538	
		Beta-BHC	4.3	U	ng/L	P340538	
		Delta-BHC	4.3	U	ng/L	P340538	
		Gamma-BHC	4.3	U	ng/L	P340538	
		Carbophenothion	4.3	U	ng/L	P340538	
		Chlorothalonil	2.1	U	ng/L	P340538	RPD
		Cypermethrin	21	U	ng/L	P340538	
		DDD-p,p'	3.2	U	ng/L	P340538	
		DDE-p,p'	3.2	U	ng/L	P340538	
		DDT-p,p'	3.2	U	ng/L	P340538	
		Dieldrin	4.3	U	ng/L	P340538	
		Endosulfan I	4.3	U	ng/L	P340538	
		Endosulfan II	4.3	U	ng/L	P340538	
		Endosulfan Sulfate	2.1	U	ng/L	P340538	
		Endrin	2.1	U	ng/L	P340538	
		Endrin Aldehyde	2.1	U	ng/L	P340538	RPD
		Heptachlor	1.6	U	ng/L	P340538	
		Heptachlor Epoxide	2.1	U	ng/L	P340538	
		Methoxychlor	4.3	U	ng/L	P340538	
		Mirex	2.1	U	ng/L	P340538	
		Permethrin	11	U	ng/L	P340538	
		Trifluralin	1.1	U	ng/L	P340538	
		Alpha-Chlordane	1.1	U	ng/L	P340538	
		Gamma-Chlordane	1.1	U	ng/L	P340538	
		Endrin Ketone	2.1	U	ng/L	P340538	
		Dicofol	32	U	ng/L	P340538	

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1969961	EPA 8276	Chlordane**	2.7	U	ng/L	P340538	
		Toxaphene**	32	U	ng/L	P340538	
1969962	EPA 8270D	Alachlor	1.3		ng/L	P340620	
		Ametryn	0.32	U	ng/L	P340620	
		Atrazine	0.75	I	ng/L	P340620	
		Atrazine Desethyl	1.5	U	ng/L	P340620	
		Azinphos Methyl	2.2	U	ng/L	P340620	
		Bromacil	0.49	U	ng/L	P340620	
		Butylate	0.39	U	ng/L	P340620	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P340620	
		Chlorpyrifos Methyl	0.098	U	ng/L	P340620	
		Demeton	2.0	U	ng/L	P340620	
		Diazinon	0.12	U	ng/L	P340620	
		Disulfoton	0.49	U	ng/L	P340620	
		EPTC	1.2	U	ng/L	P340620	
		Ethion	0.15	U	ng/L	P340620	
		Ethoprop	0.098	U	ng/L	P340620	MS
		Fenamiphos	0.25	U	ng/L	P340620	
		Fipronil	0.25	U	ng/L	P340620	
		Fipronil Sulfide	0.15	U	ng/L	P340620	
		Fipronil Sulfone	0.15	U	ng/L	P340620	
		Hexazinone	0.49	U	ng/L	P340620	
		Malathion	0.34	U	ng/L	P340620	
		Metribuzin	0.20	U	ng/L	P340620	
		Mevinphos	0.49	U	ng/L	P340620	
		Molinate	0.29	U	ng/L	P340620	
		Norflurazon	0.49	U	ng/L	P340620	
		Pendimethalin	0.98	U	ng/L	P340620	
		Phorate	0.25	U	ng/L	P340620	
		Prometon	0.88	U	ng/L	P340620	
		Prometryn	0.20	U	ng/L	P340620	
		Simazine	0.49	U	ng/L	P340620	
		Terbufos	0.098	U	ng/L	P340620	
		Terbuthylazine	0.42	U	ng/L	P340620	
		Fonofos	0.20	U	ng/L	P340620	
		Metalaxyl	0.25	U	ng/L	P340620	
		Metolachlor	0.48	I	ng/L	P340620	
		Acetochlor	0.26	I	ng/L	P340620	
		Cyanazine	0.49	U	ng/L	P340620	
		Parathion Ethyl	0.25	U	ng/L	P340620	
		Parathion Methyl	0.25	U	ng/L	P340620	
1969963	EPA 200.7 Rev. 4.4	Calcium	4.51		mg/L	P340753	
		Iron	1.28E+03		ug/L	P340753	
		Magnesium	1.41		mg/L	P340753	
		Potassium	0.88	I	mg/L	P340753	

Field ID: G3NW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1969963	EPA 200.7 Rev. 4.4	Sodium	2.3		mg/L	P340753	
		Zinc	5.0	U	ug/L	P340753	
	EPA 200.8 Rev. 5.4	Arsenic	0.53		ug/L	P340753	
		Cadmium	0.038	I	ug/L	P340753	
		Chromium	0.47	I	ug/L	P340753	
		Copper	0.43	I	ug/L	P340753	MS
		Lead	0.28		ug/L	P340753	
		Nickel	0.48	I	ug/L	P340753	
		Silver	0.010	U	ug/L	P340753	

Ref. Method and Comment:

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

EPA 8321B: Pyraclostrobin was detected in the method blank.

EPA 8270D: Duplicate matrix spike was lost in preparation and is not reported.

Sample Location: LIMESTONE BRANCH UPSTREAM

Collection Date/Time: 02/22/2018 14:15

Field ID: G3NW0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1969914	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P340517	
	EPA 300.0 Rev. 2.1	Chloride	3.7	A	mg Cl/L	P340797	
		Sulfate	1.8	A	mg SO4/L	P340801	
	SM 2120 B	Color (true)	35		PCU	P340503	
	SM 2320 B-97	Total Alkalinity	62	A	mg CaCO3/L	P340920	
	SM 2540 C-97	TDS	82		mg/L	P340839	
	SM 2540 D-97	TSS	3	I	mg/L	P341043	
	SM 4500 F-C-97	Fluoride	0.037	IJ	mg F/L	P341124	MS
	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P340969	
		Kjeldahl Nitrogen	0.29		mg N/L	P340611	
1969915	EPA 353.2 Rev. 2.0	NO2NO3-N	0.39		mg N/L	P340715	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P340637	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P340633	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P340518	
	EPA 200.7 Rev. 4.4	Calcium	25.4		mg/L	P340753	
		Iron	500		ug/L	P340753	
		Magnesium	1.64		mg/L	P340753	
		Potassium	0.61	I	mg/L	P340753	
		Sodium	2.2		mg/L	P340753	
		Zinc	5.0	U	ug/L	P340753	
	EPA 200.8 Rev. 5.4	Arsenic	0.39		ug/L	P340753	
		Cadmium	0.020	U	ug/L	P340753	
		Chromium	0.75	I	ug/L	P340753	
		Copper	0.48	I	ug/L	P340753	MS
		Lead	0.22		ug/L	P340753	
		Nickel	0.37	I	ug/L	P340753	
		Silver	0.010	U	ug/L	P340753	

Field ID: G3NW0023

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment:							
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							
SM 4500 F-C-97: Refer to the narrative for an explanation of QC Codes.							

Sample Location: SIKES CREEK UPSTREAM

Collection Date/Time: 02/22/2018 14:55

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1969918	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P340517	
	EPA 300.0 Rev. 2.1	Chloride	3.3		mg Cl/L	P340797	
		Sulfate	0.60		mg SO4/L	P340801	
	SM 2120 B	Color (true)	230		PCU	P340503	
	SM 2320 B-97	Total Alkalinity	11		mg CaCO3/L	P340920	
	SM 2540 C-97	TDS	76		mg/L	P340839	
	SM 2540 D-97	TSS	4	I	mg/L	P341043	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P341124	MS
	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P340969	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95		mg N/L	P340611	
1969920	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P340715	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P340637	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P340633	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P340518	
	dissolved						

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: P340517

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P340753

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: P340753

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: P340753

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: P340796

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340797

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340800

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340801

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340969

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340611

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340715

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340637

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340637

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340518

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

Reference Method: EPA 8270D
Batch ID: P340538

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: P340620

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P340620

Component	Result	Code	Units
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P340538

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

Reference Method: EPA 8321B

Batch ID: P340408

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P340488

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: P340489

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	0.0080	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	0.0097		ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P340503

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P340920

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

Reference Method: SM 2540 C-97
Batch ID: P340839

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341043

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P341124

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P340633

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: P340753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.1		P	85 - 115
Iron	102		P	85 - 115
Magnesium	101		P	85 - 115
Potassium	100		P	85 - 115
Sodium	105		P	85 - 115
Zinc	95.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	108		P	85 - 115
Chromium	105		P	85 - 115
Copper	106		P	85 - 115
Lead	111		P	85 - 115
Nickel	104		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340796

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340800

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340801

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340969

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340715

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: EPA 8270D
Batch ID: P340538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	32.6	29.9	P/P	24 - 89.0
Alpha-BHC	91.3	91.7	P/P	58 - 117
Alpha-Chlordane	83.2	79.6	P/P	56 - 115
Beta-BHC	112	97.2	P/P	55 - 137
Carbophenothion	93.8	91.0	P/P	37 - 145
Chlorothalonil	72.1	95.5	P/P	26 - 163
Cypermethrin	82.2	72.2	P/P	42 - 156
DDD-p,p'	98.3	95.1	P/P	59 - 129
DDE-p,p'	86.3	81.5	P/P	52 - 117
DDT-p,p'	91.2	87.1	P/P	48 - 128
Delta-BHC	126	111	P/P	59 - 158
Dicofol	83.8	79.2	P/P	19 - 124
Dieldrin	92.4	87.7	P/P	57 - 126
Endosulfan I	91.4	91.0	P/P	59 - 133
Endosulfan II	97.9	94.1	P/P	58 - 148
Endosulfan Sulfate	91.1	86.3	P/P	56 - 135

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P340538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	93.2	89.5	P/P	50 - 140
Endrin Aldehyde	98.4	100	P/P	47 - 141
Endrin Ketone	99.0	93.3	P/P	63 - 123
Gamma-BHC	100	97.2	P/P	59 - 132
Gamma-Chlordane	79.6	75.1	P/P	55 - 112
Heptachlor	64.7	62.4	P/P	45 - 102
Heptachlor Epoxide	85.9	82.1	P/P	61 - 116
Methoxychlor	94.8	89.1	P/P	60 - 133
Mirex	75.0	70.3	P/P	40 - 98.0
Permethrin	80.5	73.4	P/P	45 - 131
Trifluralin	82.7	78.2	P/P	38 - 179

Reference Method: EPA 8270D
Batch ID: P340620

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	107	105	P/P	74 - 119
Alachlor	110	105	P/P	75 - 118
Ametryn	109	102	P/P	59 - 137
Atrazine	106	101	P/P	73 - 120
Atrazine Desethyl	93.0	84.2	P/P	19 - 129
Azinphos Methyl	112	108	P/P	65 - 181
Bromacil	84.7	82.5	P/P	43 - 123
Butylate	65.3	57.1	P/P	28 - 85.0
Chlorpyrifos Ethyl	91.4	88.8	P/P	55 - 112
Chlorpyrifos Methyl	93.0	89.1	P/P	35 - 124
Cyanazine	146	136	P/P	26 - 262
Demeton	80.3	78.4	P/P	43 - 122
Diazinon	110	105	P/P	72 - 120
Disulfoton	95.9	82.8	P/P	45 - 137
EPTC	67.6	59.1	P/P	28 - 95.0
Ethion	122	112	P/P	63 - 127
Ethoprop	96.2	90.5	P/P	63 - 109
Fenamiphos	99.5	97.6	P/P	66 - 136
Fipronil	112	111	P/P	63 - 126
Fipronil Sulfide	94.9	92.3	P/P	59 - 123
Fipronil Sulfone	90.2	85.8	P/P	56 - 122
Fonofos	85.8	84.0	P/P	64 - 114
Hexazinone	108	101	P/P	49 - 144
Malathion	93.1	99.4	P/P	68 - 131
Metalaxyl	109	104	P/P	57 - 126
Metolachlor	108	102	P/P	75 - 118
Metribuzin	131	113	P/P	46 - 169
Mevinphos	82.0	81.0	P/P	34 - 126
Molinate	76.8	68.6	P/P	37 - 101
Norflurazon	103	102	P/P	63 - 127
Parathion Ethyl	96.7	94.1	P/P	78 - 109
Parathion Methyl	103	99.3	P/P	74 - 123
Pendimethalin	112	109	P/P	51 - 130
Phorate	86.4	64.3	P/P	53 - 116
Prometon	103	98.3	P/P	66 - 124
Prometryn	112	106	P/P	66 - 124

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P340620

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	110	105	P/P	62 - 134
Terbufos	85.6	84.0	P/P	59 - 115
Terbutylazine	98.4	95.6	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P340538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	64.5	64.3	P/P	47 - 125
Toxaphene	94.1	89.9	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P340408

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

Reference Method: EPA 8321B
Batch ID: P340488

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	103		P	40 - 150
Glyphosate	101		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P340489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	66.1		P	40 - 150
3-Hydroxycarbofuran	93.9		P	40 - 150
Acetaminophen	94.3		P	30 - 150
Aldicarb	78.1		P	30 - 150
Aldicarb Sulfone	101		P	40 - 150
Aldicarb Sulfoxide	101		P	40 - 150
Bentazon	68.2		P	30 - 150
Carbamazepine	79.2		P	40 - 150
Carbaryl	64.5		P	40 - 150
Carbofuran	66.8		P	40 - 150
Diuron	63.5		P	40 - 150
Fenuron	97.2		P	40 - 150
Fluridone	79.1		P	40 - 150
Imazapyr	72.2		P	40 - 150
Imidacloprid	88.2		P	40 - 160
Linuron	73.0		P	40 - 150
MCPP	66.7		P	40 - 150
Methiocarb	65.2		P	40 - 150
Methomyl	96.8		P	40 - 150
Oxamyl	95.8		P	40 - 150
Primidone	94.3		P	40 - 150
Propoxur	66.9		P	40 - 150
Pyraclostrobin	64.6		P	40 - 150
Triclopyr	65.3		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
 Batch ID: P340920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.1		P	95 - 108

Reference Method: SM 4500 F-C-97
 Batch ID: P341124

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.6		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P340633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P340753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969569	Calcium	99.6		P	80 - 120
1969569	Iron	106		P	80 - 120
1969569	Magnesium	99.5		P	80 - 120
1969569	Potassium	97.4		P	80 - 120
1969569	Sodium	101		P	80 - 120
1969569	Zinc	99.1		P	80 - 120
1969846	Calcium	95.0		P	80 - 120
1969846	Iron	103	101	P/P	80 - 120
1969846	Magnesium	97.9		P	80 - 120
1969846	Potassium	100	97.3	P/P	80 - 120
1969846	Sodium	100	97.5	P/P	80 - 120
1969846	Zinc	98.0	95.1	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P340753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969569	Arsenic	100		P	80 - 120
1969569	Cadmium	107		P	80 - 120
1969569	Chromium	100		P	80 - 120
1969569	Copper	123		F	80 - 120
1969569	Lead	109		P	80 - 120
1969569	Nickel	96.6		P	80 - 120
1969569	Silver	97.8		P	80 - 120
1969846	Arsenic	94.5	102	P/P	80 - 120
1969846	Cadmium	102	111	P/P	80 - 120
1969846	Chromium	89.9	98.4	P/P	80 - 120
1969846	Copper	88.0	95.0	P/P	80 - 120
1969846	Lead	101	110	P/P	80 - 120
1969846	Nickel	87.9	96.1	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969846	Silver	93.2	100	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969665	Chloride	96.1		P	90 - 110
1969667	Chloride	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969914	Chloride	97.1		P	90 - 110
1969917	Chloride	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969665	Sulfate	98.2		P	90 - 110
1969667	Sulfate	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969914	Sulfate	97.7		P	90 - 110
1969917	Sulfate	97.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340969

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969903	Ammonia-N	94.1	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969919	Kjeldahl Nitrogen	104	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969919	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P340637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969915	Total-P	99.8	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P340518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969905	O-Phosphate-P	97.0	98.7	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P340538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969984	Aldrin	65.3	68.6	P/P	26 - 96.0
1969984	Alpha-BHC	90.9	74.0	P/P	51 - 123
1969984	Alpha-Chlordane	82.9	85.9	P/P	45 - 120
1969984	Beta-BHC	110	106	P/P	43 - 146
1969984	Carbophenothion	89.6	105	P/P	26 - 179
1969984	Chlorothalonil	103	66.0	P/P	10 - 215
1969984	Cypermethrin	81.0	85.1	P/P	35 - 169
1969984	DDD-p,p'	94.5	99.0	P/P	49 - 131
1969984	DDE-p,p'	83.0	85.9	P/P	39 - 127
1969984	DDT-p,p'	88.4	92.5	P/P	49 - 120
1969984	Delta-BHC	138	139	P/P	49 - 187
1969984	Dicofol	81.5	75.3	P/P	10 - 129
1969984	Dieldrin	86.6	87.0	P/P	46 - 132
1969984	Endosulfan I	96.7	95.1	P/P	57 - 130
1969984	Endosulfan II	97.8	99.2	P/P	52 - 148
1969984	Endosulfan Sulfate	88.1	87.2	P/P	55 - 129
1969984	Endrin	94.8	83.0	P/P	45 - 133
1969984	Endrin Aldehyde	82.7	60.7	P/P	26 - 140
1969984	Endrin Ketone	94.9	96.7	P/P	60 - 125
1969984	Gamma-BHC	138	126	P/P	50 - 145
1969984	Gamma-Chlordane	78.8	82.3	P/P	44 - 118
1969984	Heptachlor	63.7	64.3	P/P	35 - 106
1969984	Heptachlor Epoxide	84.9	85.8	P/P	52 - 123
1969984	Methoxychlor	91.7	91.5	P/P	54 - 132
1969984	Mirex	79.0	85.8	P/P	36 - 107
1969984	Permethrin	80.8	86.0	P/P	47 - 135
1969984	Trifluralin	83.0	86.5	P/P	32 - 228

Reference Method: EPA 8270D
 Batch ID: P340620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969682	Acetochlor	85.4		P	67 - 125
1969682	Alachlor	89.9		P	69 - 123
1969682	Ametryn	87.5		P	52 - 151
1969682	Atrazine	110		P	71 - 125
1969682	Atrazine Desethyl	92.0		P	10 - 129
1969682	Azinphos Methyl	122		P	48 - 200
1969682	Bromacil	66.7		P	46 - 130
1969682	Butylate	40.0		P	10 - 85.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P340620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969682	Chlorpyrifos Ethyl	87.7		P	54 - 115
1969682	Chlorpyrifos Methyl	100		P	44 - 117
1969682	Cyanazine	241		P	10 - 262
1969682	Demeton	84.6		P	24 - 145
1969682	Diazinon	101		P	66 - 129
1969682	Disulfoton	88.0		P	45 - 139
1969682	EPTC	34.6		P	10 - 86.0
1969682	Ethion	93.9		P	59 - 133
1969682	Ethoprop	116		F	54 - 116
1969682	Fenamiphos	76.4		P	55 - 140
1969682	Fipronil	93.9		P	37 - 142
1969682	Fipronil Sulfide	94.4		P	37 - 130
1969682	Fipronil Sulfone	81.8		P	18 - 143
1969682	Fonofos	108		P	55 - 118
1969682	Hexazinone	118		P	62 - 140
1969682	Malathion	73.0		P	64 - 132
1969682	Metalaxyl	102		P	55 - 129
1969682	Metolachlor	93.6		P	56 - 137
1969682	Metribuzin	194		P	16 - 218
1969682	Mevinphos	108		P	34 - 129
1969682	Molinate	56.0		P	16 - 99.0
1969682	Norflurazon	78.2		P	43 - 135
1969682	Parathion Ethyl	97.8		P	71 - 112
1969682	Parathion Methyl	110		P	65 - 127
1969682	Pendimethalin	108		P	35 - 159
1969682	Phorate	92.6		P	41 - 129
1969682	Prometon	101		P	56 - 140
1969682	Prometryn	92.2		P	65 - 130
1969682	Simazine	85.6		P	54 - 148
1969682	Terbufos	113		P	53 - 126
1969682	Terbuthylazine	101		P	73 - 114

Reference Method: EPA 8276
Batch ID: P340538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970021	Chlordane	75.5	68.5	P/P	41 - 134
1970021	Toxaphene	98.9	99.0	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P340408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969523	Sucralose	122	127	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P340488

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969656	AMPA	93.8	94.4	P/P	40 - 150
1969656	Glyphosate	84.5	99.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P340489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969855	2,4-D	52.7	53.4	P/P	40 - 150
1969855	3-Hydroxycarbofuran	109	105	P/P	40 - 150
1969855	Acetaminophen	130	147	P/P	30 - 150
1969855	Aldicarb	69.6	72.1	P/P	30 - 150
1969855	Aldicarb Sulfone	137	141	P/P	40 - 150
1969855	Aldicarb Sulfoxide	99.9	107	P/P	40 - 150
1969855	Bentazon	22.0	21.7	F/F	30 - 150
1969855	Carbamazepine	71.6	85.5	P/P	40 - 150
1969855	Carbaryl	49.5	52.1	P/P	40 - 150
1969855	Carbofuran	46.9	62.7	P/P	40 - 150
1969855	Diuron	66.2	65.8	P/P	40 - 150
1969855	Fenuron	86.4	80.3	P/P	40 - 150
1969855	Fluridone	73.7	68.8	P/P	40 - 150
1969855	Imazapyr	61.0	60.6	P/P	40 - 150
1969855	Imidacloprid	203	208	F/F	40 - 160
1969855	Linuron	75.1	82.8	P/P	40 - 150
1969855	MCPP	37.5	36.4	F/F	40 - 150
1969855	Methiocarb	68.3	72.1	P/P	40 - 150
1969855	Methomyl	98.1	96.2	P/P	40 - 150
1969855	Oxamyl	99.8	103	P/P	40 - 150
1969855	Primidone	103	101	P/P	40 - 150
1969855	Propoxur	45.8	59.3	P/P	40 - 150
1969855	Pyraclostrobin	55.2	66.2	P/P	40 - 150
1969855	Triclopyr	45.8	47.4	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P341124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969914	Fluoride	91.0	92.1	F/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P340633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1969879	Organic Carbon	106		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969901	Turbidity	7.48	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P340753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969846	Calcium	0.786	Spike	P	0 - 20
1969846	Iron	2.53	Spike	P	0 - 20
1969846	Magnesium	3.02	Spike	P	0 - 20
1969846	Potassium	2.46	Spike	P	0 - 20
1969846	Sodium	1.51	Spike	P	0 - 20
1969846	Zinc	2.88	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969846	Arsenic	8.01	Spike	P	0 - 20
1969846	Cadmium	8.61	Spike	P	0 - 20
1969846	Chromium	8.57	Spike	P	0 - 20
1969846	Copper	7.31	Spike	P	0 - 20
1969846	Lead	8.24	Spike	P	0 - 20
1969846	Nickel	8.95	Spike	P	0 - 20
1969846	Silver	7.15	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969665	Chloride	2.17	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969914	Chloride	0.0588	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969665	Sulfate	1.96	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969914	Sulfate	0.293	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969903	Ammonia-N	3.65	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969919	Kjeldahl Nitrogen	3.09	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969919	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969915	Total-P	0.506	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969905	O-Phosphate-P	1.23	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P340538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969984	Aldrin	4.98	Spike	P	0 - 30
1969984	Alpha-BHC	20.5	Spike	P	0 - 30
1969984	Alpha-Chlordane	3.57	Spike	P	0 - 30
1969984	Beta-BHC	3.83	Spike	P	0 - 30
1969984	Carbophenothion	15.7	Spike	P	0 - 30
1969984	Chlorothalonil	43.8	Spike	F	0 - 30
1969984	Cypermethrin	4.93	Spike	P	0 - 30
1969984	DDD-p,p'	4.63	Spike	P	0 - 30
1969984	DDE-p,p'	3.44	Spike	P	0 - 30
1969984	DDT-p,p'	4.46	Spike	P	0 - 30
1969984	Delta-BHC	0.443	Spike	P	0 - 30
1969984	Dicofol	7.86	Spike	P	0 - 30
1969984	Dieldrin	0.545	Spike	P	0 - 30
1969984	Endosulfan I	1.59	Spike	P	0 - 30
1969984	Endosulfan II	1.43	Spike	P	0 - 30
1969984	Endosulfan Sulfate	1.10	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P340538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969984	Endrin	13.3	Spike	P	0 - 30
1969984	Endrin Aldehyde	30.7	Spike	F	0 - 30
1969984	Endrin Ketone	1.91	Spike	P	0 - 30
1969984	Gamma-BHC	8.68	Spike	P	0 - 30
1969984	Gamma-Chlordane	4.45	Spike	P	0 - 30
1969984	Heptachlor	0.930	Spike	P	0 - 30
1969984	Heptachlor Epoxide	1.08	Spike	P	0 - 30
1969984	Methoxychlor	0.252	Spike	P	0 - 30
1969984	Mirex	8.19	Spike	P	0 - 30
1969984	Permethrin	6.27	Spike	P	0 - 30
1969984	Trifluralin	4.18	Spike	P	0 - 30
LFB	Aldrin	8.74	LCS	P	0 - 30
LFB	Alpha-BHC	0.423	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.38	LCS	P	0 - 30
LFB	Beta-BHC	14.2	LCS	P	0 - 30
LFB	Carbophenothion	3.00	LCS	P	0 - 30
LFB	Chlorothalonil	28.0	LCS	P	0 - 30
LFB	Cypermethrin	12.9	LCS	P	0 - 30
LFB	DDD-p,p'	3.28	LCS	P	0 - 30
LFB	DDE-p,p'	5.70	LCS	P	0 - 30
LFB	DDT-p,p'	4.66	LCS	P	0 - 30
LFB	Delta-BHC	12.8	LCS	P	0 - 30
LFB	Dicofol	5.65	LCS	P	0 - 30
LFB	Dieldrin	5.13	LCS	P	0 - 30
LFB	Endosulfan I	0.504	LCS	P	0 - 30
LFB	Endosulfan II	3.98	LCS	P	0 - 30
LFB	Endosulfan Sulfate	5.49	LCS	P	0 - 30
LFB	Endrin	3.99	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.70	LCS	P	0 - 30
LFB	Endrin Ketone	5.88	LCS	P	0 - 30
LFB	Gamma-BHC	3.09	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.90	LCS	P	0 - 30
LFB	Heptachlor	3.54	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.53	LCS	P	0 - 30
LFB	Methoxychlor	6.18	LCS	P	0 - 30
LFB	Mirex	6.40	LCS	P	0 - 30
LFB	Permethrin	9.20	LCS	P	0 - 30
LFB	Trifluralin	5.64	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P340620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Acetochlor	1.78	LCS	P	0 - 30
LFB	Alachlor	4.55	LCS	P	0 - 30
LFB	Ametryn	6.28	LCS	P	0 - 30
LFB	Atrazine	5.18	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.91	LCS	P	0 - 30
LFB	Azinphos Methyl	3.81	LCS	P	0 - 30
LFB	Bromacil	2.63	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P340620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Butylate	13.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.95	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.30	LCS	P	0 - 30
LFB	Cyanazine	7.50	LCS	P	0 - 30
LFB	Demeton	2.38	LCS	P	0 - 30
LFB	Diazinon	4.37	LCS	P	0 - 30
LFB	Disulfoton	14.7	LCS	P	0 - 30
LFB	EPTC	13.4	LCS	P	0 - 30
LFB	Ethion	8.91	LCS	P	0 - 30
LFB	Ethoprop	6.11	LCS	P	0 - 30
LFB	Fenamiphos	1.93	LCS	P	0 - 30
LFB	Fipronil	1.08	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.83	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.92	LCS	P	0 - 30
LFB	Fonofos	2.14	LCS	P	0 - 30
LFB	Hexazinone	7.27	LCS	P	0 - 30
LFB	Malathion	6.49	LCS	P	0 - 30
LFB	Metalaxyl	5.29	LCS	P	0 - 30
LFB	Metolachlor	5.06	LCS	P	0 - 30
LFB	Metribuzin	14.5	LCS	P	0 - 30
LFB	Mevinphos	1.24	LCS	P	0 - 30
LFB	Molinate	11.4	LCS	P	0 - 30
LFB	Norflurazon	0.791	LCS	P	0 - 30
LFB	Parathion Ethyl	2.71	LCS	P	0 - 30
LFB	Parathion Methyl	3.21	LCS	P	0 - 30
LFB	Pendimethalin	2.65	LCS	P	0 - 30
LFB	Phorate	29.3	LCS	P	0 - 30
LFB	Prometon	4.54	LCS	P	0 - 30
LFB	Prometryn	5.01	LCS	P	0 - 30
LFB	Simazine	4.78	LCS	P	0 - 30
LFB	Terbufos	1.85	LCS	P	0 - 30
LFB	Terbutylazine	2.84	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P340538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970021	Chlordane	9.73	Spike	P	0 - 30
1970021	Toxaphene	0.0494	Spike	P	0 - 30
LFB	Chlordane	0.238	LCS	P	0 - 30
LFB	Toxaphene	4.58	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P340408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969523	Sucralose	3.42	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P340488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969656	AMPA	0.691	Spike	P	0 - 30
1969656	Glyphosate	15.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P340489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969855	2,4-D	1.27	Spike	P	0 - 30
1969855	3-Hydroxycarbofuran	3.80	Spike	P	0 - 30
1969855	Acetaminophen	12.1	Spike	P	0 - 30
1969855	Aldicarb	3.61	Spike	P	0 - 30
1969855	Aldicarb Sulfone	2.74	Spike	P	0 - 30
1969855	Aldicarb Sulfoxide	6.48	Spike	P	0 - 30
1969855	Bentazon	1.40	Spike	P	0 - 30
1969855	Carbamazepine	17.7	Spike	P	0 - 30
1969855	Carbaryl	5.26	Spike	P	0 - 30
1969855	Carbofuran	29.0	Spike	P	0 - 30
1969855	Diuron	0.546	Spike	P	0 - 30
1969855	Fenuron	7.22	Spike	P	0 - 30
1969855	Fluridone	6.84	Spike	P	0 - 30
1969855	Imazapyr	0.625	Spike	P	0 - 30
1969855	Imidacloprid	2.45	Spike	P	0 - 30
1969855	Linuron	9.77	Spike	P	0 - 30
1969855	MCPP	2.95	Spike	P	0 - 30
1969855	Methiocarb	5.49	Spike	P	0 - 30
1969855	Methomyl	1.98	Spike	P	0 - 30
1969855	Oxamyl	2.94	Spike	P	0 - 30
1969855	Primidone	2.38	Spike	P	0 - 30
1969855	Propoxur	25.6	Spike	P	0 - 30
1969855	Pyraclostrobin	16.5	Spike	P	0 - 30
1969855	Triclopyr	3.30	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P340503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969901	Color (true)	0.843	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P340920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969914	Total Alkalinity	2.85	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P340839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969901	TDS	1.17	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P341124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969914	Fluoride	1.05	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P340633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1969879	Organic Carbon	0.322	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: 1969952
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	56.6	P	30 - 160
EPA 8321B	2,4-D-d3	56.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	131	P	30 - 160
EPA 8321B	Acetaminophen-d4	131	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.9	P	30 - 160
EPA 8321B	Diuron-d6	68.7	P	30 - 160
EPA 8321B	Diuron-d6	68.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.5	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	96.5	P	40 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	134	P	40 - 160

Lab Sample ID: 1969953
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	50.1	P	30 - 160

Lab Sample ID: 1969961
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
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Quality Assurance Report Surrogates

Lab Sample ID: 1969961
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	59.5	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	40.7	P	34 - 101
EPA 8276	Decachlorobiphenyl	50.0	P	31 - 108
EPA 8276	PCNB	120	P	62 - 142

Lab Sample ID: 1969962
Field Sample ID: G3NW0157

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	109	P	71 - 126
EPA 8270D	Terbufos-d10	87.3	P	50 - 130

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A82259
Included Lab Sample IDs: 1969911, 1969914, 1969917, 1969918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.3	99.0	P/P	85 - 115
Color (true)	98.8	97.2	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82260
Included Lab Sample IDs: 1969911, 1969914, 1969917, 1969918

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82262
Included Lab Sample IDs: 1969913, 1969916, 1969921, 1969922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.8	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82294
Included Lab Sample IDs: 1969952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	106	102	P/P	60 - 150
Glyphosate	114	105	P/P	60 - 150

Reference Method: SM 5310 B-00
Run ID: A82301
Included Lab Sample IDs: 1969912, 1969915, 1969919, 1969920

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	97.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A82322

Included Lab Sample IDs: 1969911, 1969914, 1969917, 1969918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.2	96.9	P/P	90 - 110
Chloride	99.6	98.2	P/P	90 - 110
Sulfate	100	99.4	P/P	90 - 110
Sulfate	99.4	97.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A82330

Included Lab Sample IDs: 1969912, 1969915, 1969919, 1969920

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82334

Included Lab Sample IDs: 1969912, 1969915, 1969919, 1969920

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82373

Included Lab Sample IDs: 1969963, 1969964

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.7	98.5	P/P	90 - 110
Cadmium	100	103	P/P	90 - 110
Chromium	91.5	94.4	P/P	90 - 110
Copper	94.8	93.9	P/P	90 - 110
Lead	102	104	P/P	90 - 110
Nickel	95.5	93.8	P/P	90 - 110
Silver	97.5	98.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A82374

Included Lab Sample IDs: 1969963, 1969964

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.3	99.0	P/P	90 - 110
Iron	100	99.4	P/P	90 - 110
Magnesium	100	99.2	P/P	90 - 110
Potassium	107	106	P/P	90 - 110
Sodium	99.3	99.4	P/P	90 - 110
Zinc	103	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82386

Included Lab Sample IDs: 1969912, 1969915, 1969919, 1969920

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A82414
 Included Lab Sample IDs: 1969952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	109	107	P/P	60 - 150

Reference Method: SM 2320 B-97
 Run ID: A82421
 Included Lab Sample IDs: 1969911, 1969914, 1969917, 1969918

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.6	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A82430
 Included Lab Sample IDs: 1969912, 1969915, 1969919, 1969920

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	104	P/P	90 - 110

Reference Method: EPA 8276
 Run ID: A82433
 Included Lab Sample IDs: 1969961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	103		P	80 - 120
Toxaphene	102		P	80 - 120

Reference Method: EPA 8321B
 Run ID: A82436
 Included Lab Sample IDs: 1969952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.7	96.4	P/P	50 - 150
3-Hydroxycarbofuran	105	107	P/P	60 - 150
Acetaminophen	99.9	100	P/P	60 - 150
Aldicarb	111	142	P/P	60 - 150
Aldicarb Sulfone	103	104	P/P	50 - 150
Aldicarb Sulfoxide	105	107	P/P	50 - 150
Bentazon	102	102	P/P	50 - 150
Carbamazepine	102	86.7	P/P	60 - 150
Carbaryl	124	106	P/P	60 - 150
Carbofuran	119	83.2	P/P	50 - 150
Diuron	113	110	P/P	60 - 150
Fenuron	105	106	P/P	60 - 150
Fluridone	120	116	P/P	60 - 160
Imazapyr	107	94.9	P/P	50 - 150
Imidacloprid	105	95.6	P/P	60 - 150
Linuron	113	108	P/P	60 - 150
MCPP	98.0	92.5	P/P	50 - 150
Methiocarb	105	99.0	P/P	50 - 150
Methomyl	102	104	P/P	50 - 150
Oxamyl	102	106	P/P	50 - 150
Primidone	103	101	P/P	60 - 150
Propoxur	111	81.7	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A82436

Included Lab Sample IDs: 1969952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	98.5	93.0	P/P	60 - 150
Triclopyr	105	88.8	P/P	50 - 150

Reference Method: SM 4500 F-C-97

Run ID: A82484

Included Lab Sample IDs: 1969911, 1969914, 1969917, 1969918

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

Reference Method: EPA 8270D

Run ID: A82500

Included Lab Sample IDs: 1969961

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.3		P	80 - 120
Alpha-BHC	98.9		P	80 - 120
Alpha-Chlordane	97.7		P	80 - 120
Beta-BHC	85.1		P	80 - 120
Carbophenothion	97.8		P	80 - 120
Chlorothalonil	104		P	80 - 120
Cypermethrin	87.5		P	80 - 120
DDD-p,p'	98.1		P	80 - 120
DDE-p,p'	99.8		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	92.4		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	96.3		P	80 - 120
Endosulfan I	99.2		P	80 - 120
Endosulfan II	95.0		P	80 - 120
Endosulfan Sulfate	90.6		P	80 - 120
Endrin	98.6		P	80 - 120
Endrin Aldehyde	97.7		P	80 - 120
Endrin Ketone	97.0		P	80 - 120
Gamma-BHC	96.4		P	80 - 120
Gamma-Chlordane	95.4		P	80 - 120
Heptachlor	95.9		P	80 - 120
Heptachlor Epoxide	97.0		P	80 - 120
Methoxychlor	99.9		P	80 - 120
Mirex	98.9		P	80 - 120
Permethrin	91.0		P	80 - 120
Trifluralin	98.6		P	80 - 120

Reference Method: EPA 8270D

Run ID: A82651

Included Lab Sample IDs: 1969962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	105		P	80 - 120
Alachlor	106		P	80 - 120
Ametryn	107		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A82651
Included Lab Sample IDs: 1969962

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	98.8		P	80 - 120
Atrazine Desethyl	95.5		P	80 - 120
Azinphos Methyl	103		P	80 - 120
Bromacil	106		P	80 - 120
Butylate	109		P	80 - 120
Chlorpyrifos Ethyl	96.2		P	80 - 120
Chlorpyrifos Methyl	97.9		P	80 - 120
Cyanazine	95.5		P	80 - 120
Demeton	98.0		P	80 - 120
Diazinon	103		P	80 - 120
Disulfoton	93.3		P	80 - 120
EPTC	105		P	80 - 120
Ethion	101		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	99.1		P	80 - 120
Fipronil	103		P	80 - 120
Fipronil Sulfide	95.3		P	80 - 120
Fipronil Sulfone	95.5		P	80 - 120
Fonofos	92.8		P	80 - 120
Hexazinone	93.9		P	80 - 120
Malathion	92.8		P	80 - 120
Metaxyl	101		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	88.7		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	105		P	80 - 120
Norflurazon	104		P	80 - 120
Parathion Ethyl	91.5		P	80 - 120
Parathion Methyl	90.9		P	80 - 120
Pendimethalin	98.8		P	80 - 120
Phorate	96.8		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	108		P	80 - 120
Simazine	93.3		P	80 - 120
Terbufos	94.1		P	80 - 120
Terbuthylazine	101		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				7.48	
EPA 200.7 Rev. 4.4	Calcium	99.1	99.6	95.0		0.786
	Iron	102	106	103		2.53
	Magnesium	101	99.5	97.9		3.02

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 200.7 Rev. 4.4	Potassium	100		97.4	100	97.3		2.46
	Sodium	105		101	100	97.5		1.51
	Zinc	95.7		99.1	98.0	95.1		2.88
EPA 200.8 Rev. 5.4	Arsenic	104		100	94.5	102		8.01
	Cadmium	108		107	102	111		8.61
	Chromium	105		100	89.9	98.4		8.57
	Copper	106		123	88.0	95.0		7.31
	Lead	111		109	101	110		8.24
	Nickel	104		96.6	87.9	96.1		8.95
	Silver	101		97.8	93.2	100		7.15
EPA 300.0 Rev. 2.1	Chloride	97.7		96.1	97.5		2.17	
	Chloride	96.7		97.1	97.5		0.0588	
	Sulfate	97.6		98.2	97.9		1.96	
	Sulfate	97.7		97.7	97.7		0.293	
EPA 350.1 Rev. 2.0	Ammonia-N	97.1		94.1	98.8			3.65
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		104	99.5			3.09
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102		104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	99.3		99.8	99.2			0.506
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9		97.0	98.7			1.23
EPA 8270D	Acetochlor	107	105	85.4		1.78		
	Alachlor	110	105	89.9		4.55		
	Aldrin	32.6	29.9	65.3	68.6	8.74		4.98
	Alpha-BHC	91.3	91.7	90.9	74.0	0.423		20.5
	Alpha-Chlordane	83.2	79.6	82.9	85.9	4.38		3.57
	Ametryn	109	102	87.5		6.28		
	Atrazine	106	101	110		5.18		
	Atrazine Desethyl	93.0	84.2	92.0		9.91		
	Azinphos Methyl	112	108	122		3.81		
	Beta-BHC	112	97.2	110	106	14.2		3.83
	Bromacil	84.7	82.5	66.7		2.63		
	Butylate	65.3	57.1	40.0		13.4		
	Carbophenothion	93.8	91.0	89.6	105	3.00		15.7
	Chlorothalonil	72.1	95.5	103	66.0	28.0		43.8
	Chlorpyrifos Ethyl	91.4	88.8	87.7		2.95		
	Chlorpyrifos Methyl	93.0	89.1	100		4.30		
	Cyanazine	146	136	241		7.50		
	Cypermethrin	82.2	72.2	81.0	85.1	12.9		4.93
	DDD-p,p'	98.3	95.1	94.5	99.0	3.28		4.63
	DDE-p,p'	86.3	81.5	83.0	85.9	5.70		3.44
	DDT-p,p'	91.2	87.1	88.4	92.5	4.66		4.46
	Delta-BHC	126	111	138	139	12.8		0.443
	Demeton	80.3	78.4	84.6		2.38		
	Diazinon	110	105	101		4.37		
	Dicofol	83.8	79.2	81.5	75.3	5.65		7.86
	Dieldrin	92.4	87.7	86.6	87.0	5.13		0.545
	Disulfoton	95.9	82.8	88.0		14.7		
	Endosulfan I	91.4	91.0	96.7	95.1	0.504		1.59
	Endosulfan II	97.9	94.1	97.8	99.2	3.98		1.43
	Endosulfan Sulfate	91.1	86.3	88.1	87.2	5.49		1.10
	Endrin	93.2	89.5	94.8	83.0	3.99		13.3
	Endrin Aldehyde	98.4	100	82.7	60.7	1.70		30.7
	Endrin Ketone	99.0	93.3	94.9	96.7	5.88		1.91
	EPTC	67.6	59.1	34.6		13.4		
	Ethion	122	112	93.9		8.91		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270D	Ethoprop	96.2	90.5	116		6.11		
	Fenamiphos	99.5	97.6	76.4		1.93		
	Fipronil	112	111	93.9		1.08		
	Fipronil Sulfide	94.9	92.3	94.4		2.83		
	Fipronil Sulfone	90.2	85.8	81.8		4.92		
	Fonofos	85.8	84.0	108		2.14		
	Gamma-BHC	100	97.2	138	126	3.09		8.68
	Gamma-Chlordane	79.6	75.1	78.8	82.3	5.90		4.45
	Heptachlor	64.7	62.4	63.7	64.3	3.54		0.930
	Heptachlor Epoxide	85.9	82.1	84.9	85.8	4.53		1.08
	Hexazinone	108	101	118		7.27		
	Malathion	93.1	99.4	73.0		6.49		
	Metalaxyl	109	104	102		5.29		
	Methoxychlor	94.8	89.1	91.7	91.5	6.18		0.252
	Metolachlor	108	102	93.6		5.06		
	Metribuzin	131	113	194		14.5		
	Mevinphos	82.0	81.0	108		1.24		
	Mirex	75.0	70.3	79.0	85.8	6.40		8.19
	Molinate	76.8	68.6	56.0		11.4		
	Norflurazon	103	102	78.2		0.791		
	Parathion Ethyl	96.7	94.1	97.8		2.71		
	Parathion Methyl	103	99.3	110		3.21		
	Pendimethalin	112	109	108		2.65		
	Permethrin	80.5	73.4	80.8	86.0	9.20		6.27
	Phorate	86.4	64.3	92.6		29.3		
	Prometon	103	98.3	101		4.54		
	Prometryn	112	106	92.2		5.01		
	Simazine	110	105	85.6		4.78		
	Terbufos	85.6	84.0	113		1.85		
	Terbuthylazine	98.4	95.6	101		2.84		
	Trifluralin	82.7	78.2	83.0	86.5	5.64		4.18
EPA 8276	Chlordane	64.5	64.3	75.5	68.5	0.238		9.73
	Toxaphene	94.1	89.9	98.9	99.0	4.58		0.0494
EPA 8321B	2,4-D	66.1		52.7	53.4			1.27
	3-Hydroxycarbofuran	93.9		109	105			3.80
	Acetaminophen	94.3		130	147			12.1
	Aldicarb	78.1		69.6	72.1			3.61
	Aldicarb Sulfone	101		137	141			2.74
	Aldicarb Sulfoxide	101		99.9	107			6.48
	AMPA	103		93.8	94.4			0.691
	Bentazon	68.2		22.0	21.7			1.40
	Carbamazepine	79.2		85.5	71.6			17.7
	Carbaryl	64.5		49.5	52.1			5.26
	Carbofuran	66.8		46.9	62.7			29.0
	Diuron	63.5		65.8	66.2			0.546
	Fenuron	97.2		80.3	86.4			7.22
	Fluridone	79.1		68.8	73.7			6.84
	Glyphosate	101		84.5	99.1			15.9
	Imazapyr	72.2		60.6	61.0			0.625
	Imidacloprid	88.2		208	203			2.45
	Linuron	73.0		82.8	75.1			9.77
	MCPP	66.7		37.5	36.4			2.95
	Methiocarb	65.2		72.1	68.3			5.49
	Methomyl	96.8		98.1	96.2			1.98

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Oxamyl	95.8	99.8	103		2.94
	Primidone	94.3	101	103		2.38
	Propoxur	66.9	45.8	59.3		25.6
	Pyraclostrobin	64.6	66.2	55.2		16.5
	Sucralose	113	122	127		3.42
	Triclopyr	65.3	45.8	47.4		3.30
SM 2120 B	Color (true)				0.843	
SM 2320 B-97	Total Alkalinity	99.1			2.85	
SM 2540 C-97	TDS				1.17	
SM 4500 F-C-97	Fluoride	96.6	91.0	92.1		1.05
SM 5310 B-00	Organic Carbon	95.0	106			0.322

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1969911, 1969914, 1969917, 1969918
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1969963, 1969964
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1969963, 1969964
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1969911, 1969914, 1969917, 1969918
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1969911, 1969914, 1969917, 1969918
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1969912, 1969915, 1969919, 1969920
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1969912, 1969915, 1969919, 1969920
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1969912, 1969915, 1969919, 1969920
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1969912, 1969915, 1969919, 1969920
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1969913, 1969916, 1969921, 1969922
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1969961
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1969962
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1969961
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1969953
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1969952
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1969952
SM 2120 B / E31780	True Color measured at 450 nm	1969911, 1969914, 1969917, 1969918
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1969911, 1969914, 1969917, 1969918
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1969911, 1969914, 1969917, 1969918
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1969911, 1969914, 1969917, 1969918
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1969911, 1969914, 1969917, 1969918
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1969912, 1969915, 1969919, 1969920

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	02/23/2018			02/23/2018 13:31	Tanya Welborn	1969911, 1969914, 1969917, 1969918
EPA 200.7 Rev. 4.4	02/23/2018	02/28/2018	Elliott D. Healy	03/01/2018	Betina Topolski	1969963, 1969964
EPA 200.8 Rev. 5.4	02/23/2018	02/28/2018	Elliott D. Healy	03/01/2018	Nadine Brooks	1969963, 1969964
EPA 300.0 Rev. 2.1	02/23/2018			03/01/2018	Julia Storbeck	1969911, 1969914, 1969917, 1969918
EPA 350.1 Rev. 2.0	02/23/2018			03/05/2018	Ping Hua	1969912, 1969915, 1969919, 1969920
EPA 351.2 Rev. 2.0	02/23/2018	02/27/2018	Adrian Shelby	03/02/2018	Joseph Suarez	1969912, 1969915, 1969919, 1969920
EPA 353.2 Rev. 2.0	02/23/2018			02/28/2018	Beverly Y. Sanders	1969912, 1969915, 1969919, 1969920
EPA 365.1 Rev. 2.0	02/23/2018	02/27/2018	Sima Feizi	02/28/2018	Lipi Saha	1969912, 1969915, 1969919, 1969920
EPA 365.1 Rev. 2.0 dissolved	02/23/2018			02/23/2018 15:46	Megan Treadwell	1969913
	02/23/2018			02/23/2018 15:47	Megan Treadwell	1969916
	02/23/2018			02/23/2018 15:48	Megan Treadwell	1969921, 1969922
EPA 8270D	02/23/2018	02/27/2018	John Kaba	02/28/2018	Vandana T. Nagar	1969962
	02/23/2018	02/28/2018	Fe-Val Siddell	03/02/2018	Marek Topolski	1969961
EPA 8276	02/23/2018	02/28/2018	Fe-Val Siddell	03/06/2018	John P. Burgos	1969961
EPA 8321B	02/23/2018	02/26/2018	Julie Michelle Frank	02/26/2018	Julie Michelle Frank	1969952
	02/23/2018	03/01/2018	Hoor Shaik	03/02/2018	Julie Michelle Frank	1969952
	02/23/2018	03/02/2018	Julie Michelle Frank	03/03/2018	Juyoung Kim	1969952
SM 2120 B	02/23/2018			02/23/2018 14:31	Tanya Welborn	1969911, 1969914
	02/23/2018			02/23/2018 14:32	Tanya Welborn	1969917
	02/23/2018			02/23/2018 14:52	Tanya Welborn	1969918
SM 2320 B-97	02/23/2018			03/04/2018	Dale L. Simmons	1969911, 1969914, 1969917, 1969918
SM 2540 C-97	02/23/2018			02/26/2018	Ping Hua	1969911, 1969914, 1969917, 1969918
SM 2540 D-97	02/23/2018			02/26/2018	Ping Hua	1969911, 1969914, 1969917, 1969918
SM 4500 F-C-97	02/23/2018			03/08/2018	Dale L. Simmons	1969911, 1969914, 1969917, 1969918
SM 5310 B-00	02/23/2018			02/27/2018	Megan Treadwell	1969912, 1969915, 1969919, 1969920