

Chemical Analysis Report

TLH-ROC-2018-02-28-02

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

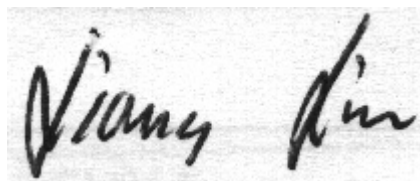
Event Description: **kit C-b_pesticides**
Request ID: **RQ-2018-01-22-51**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 09-APR-2018 14:15

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: D113 DI SOURCE

Collection Date/Time: 02/28/2018 08:33

Field ID: BLANK_02_28_2018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970739	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P340808	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P340950	
		Sulfate	0.20	U	mg SO4/L	P340951	
	SM 2120 B	Color (true)	2.5	U	PCU	P340813	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P341244	
	SM 2540 C-97	TDS	15	U	mg/L	P341150	
	SM 2540 D-97	TSS	2	U	mg/L	P340933	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P341247	
1970742	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P340975	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P340826	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P340885	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P340794	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P340978	
1970745	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P340820	
1970774	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P340926	
		Iron	30	U	ug/L	P340926	
		Magnesium	0.040	U	mg/L	P340926	
		Potassium	0.30	U	mg/L	P340926	
		Sodium	0.50	U	mg/L	P340926	
		Zinc	5.0	U	ug/L	P340926	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P341739	
		Cadmium	0.020	U	ug/L	P341739	
		Chromium	0.40	U	ug/L	P341739	
		Copper	0.20	U	ug/L	P341739	
		Lead	0.050	U	ug/L	P341739	
		Nickel	0.20	U	ug/L	P341739	
		Silver	0.010	U	ug/L	P340926	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for copper are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: D113 DI SOURCE

Collection Date/Time: 02/28/2018 08:33

Field ID: BLANK_02_28_2018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970762	EPA 8321B	2,4-D	0.0020	U	ug/L	P340489	
		Sucralose**	0.010	U	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: BLANK_02_28_2018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970762	EPA 8321B	Linuron	0.0040	U	ug/L	P340489	
		Acetaminophen**	0.0080	U	ug/L	P340489	
		Fenuron	0.0080	U	ug/L	P340489	
		Imazapyr**	0.0040	U	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	P340705	
		AMPA**	0.10	U	ug/L	P340705	
		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	
1970768	EPA 8270D	Propoxur	0.0020	U	ug/L	P340489	
		Aldrin	4.4	U	ng/L	P340923	
		Alpha-BHC	2.2	U	ng/L	P340923	
		Beta-BHC	4.4	U	ng/L	P340923	
		Delta-BHC	4.4	U	ng/L	P340923	
		Gamma-BHC	4.4	U	ng/L	P340923	
		Carbophenothion	4.4	U	ng/L	P340923	
		Chlorothalonil	2.2	U	ng/L	P340923	
		Cypermethrin	22	U	ng/L	P340923	
		DDD-p,p'	3.3	U	ng/L	P340923	
		DDE-p,p'	3.3	U	ng/L	P340923	
		DDT-p,p'	3.3	U	ng/L	P340923	
		Dieldrin	4.4	U	ng/L	P340923	
		Endosulfan I	4.4	U	ng/L	P340923	
		Endosulfan II	4.4	U	ng/L	P340923	
		Endosulfan Sulfate	2.2	U	ng/L	P340923	
		Endrin	2.2	U	ng/L	P340923	
		Endrin Aldehyde	2.2	U	ng/L	P340923	
		Heptachlor	1.6	U	ng/L	P340923	
		Heptachlor Epoxide	2.2	U	ng/L	P340923	
		Methoxychlor	4.4	U	ng/L	P340923	
		Mirex	2.2	U	ng/L	P340923	
		Permethrin	11	U	ng/L	P340923	
		Trifluralin	1.1	U	ng/L	P340923	
		Alpha-Chlordane	1.1	U	ng/L	P340923	
		Gamma-Chlordane	1.1	U	ng/L	P340923	
		Endrin Ketone	2.2	U	ng/L	P340923	
		Dicofol	33	U	ng/L	P340923	

Field ID: BLANK_02_28_2018

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970768	EPA 8276	Chlordane**	2.7	U	ng/L	P340923	
		Toxaphene**	33	U	ng/L	P340923	
1970771	EPA 8270D	Alachlor	0.24	U	ng/L	P340974	
		Ametryn	0.31	U	ng/L	P340974	
		Atrazine	0.24	U	ng/L	P340974	
		Atrazine Desethyl	1.4	U	ng/L	P340974	
		Azinphos Methyl	2.1	U	ng/L	P340974	
		Bromacil	0.47	UJ	ng/L	P340974	LCS
		Butylate	0.38	U	ng/L	P340974	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P340974	
		Chlorpyrifos Methyl	0.095	U	ng/L	P340974	
		Demeton	1.9	U	ng/L	P340974	
		Diazinon	0.12	U	ng/L	P340974	
		Disulfoton	0.47	U	ng/L	P340974	
		EPTC	1.2	U	ng/L	P340974	
		Ethion	0.14	U	ng/L	P340974	
		Ethoprop	0.095	U	ng/L	P340974	
		Fenamiphos	0.24	U	ng/L	P340974	
		Fipronil	0.24	U	ng/L	P340974	
		Fipronil Sulfide	0.14	U	ng/L	P340974	
		Fipronil Sulfone	0.14	U	ng/L	P340974	
		Hexazinone	0.47	U	ng/L	P340974	
		Malathion	0.33	U	ng/L	P340974	
		Metribuzin	0.19	UJ	ng/L	P340974	LCS, MS
		Mevinphos	0.47	U	ng/L	P340974	
		Molinate	0.28	U	ng/L	P340974	
		Norflurazon	0.47	U	ng/L	P340974	
		Pendimethalin	0.95	U	ng/L	P340974	
		Phorate	0.24	U	ng/L	P340974	
		Prometon	0.85	U	ng/L	P340974	
		Prometryn	0.19	U	ng/L	P340974	
		Simazine	0.47	U	ng/L	P340974	
		Terbufos	0.095	U	ng/L	P340974	
		Terbuthylazine	0.40	U	ng/L	P340974	
		Fonofos	0.19	U	ng/L	P340974	
		Metalaxyl	0.24	U	ng/L	P340974	
		Metolachlor	0.24	U	ng/L	P340974	
		Acetochlor	0.24	U	ng/L	P340974	
		Cyanazine	0.47	U	ng/L	P340974	
		Parathion Ethyl	0.24	U	ng/L	P340974	
		Parathion Methyl	0.24	U	ng/L	P340974	

Ref. Method and Comment:

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

EPA 8270D: Insufficient sample available to perform duplicate matrix spikes.

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

EPA 8270D: MS accuracy for Atrazine, Simazine and Fipronil Sulfone not assessed due to high content of these parameters in the sample spiked.

Refer to the narrative for an explanation of QC Codes.

Sample Location: Gully Branch 80m north of Gully Branch Rd. Collection Date/Time: 02/28/2018 13:55

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970740	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P340808	
	EPA 300.0 Rev. 2.1	Chloride	8.4		mg Cl/L	P340950	
		Sulfate	5.5		mg SO4/L	P340951	
	SM 2120 B	Color (true)	270		PCU	P340813	
	SM 2320 B-97	Total Alkalinity	1.2	I	mg CaCO3/L	P341244	
	SM 2540 C-97	TDS	81		mg/L	P341151	
	SM 2540 D-97	TSS	2	U	mg/L	P340934	
1970743	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P341247	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P340975	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.95		mg N/L	P340826	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P340885	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P340794	
1970746	SM 5310 B-00	Organic Carbon	33		mg C/L	P340978	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P340820	
1970775	EPA 200.7 Rev. 4.4	Calcium	5.72		mg/L	P340926	
		Iron	1.06E+03		ug/L	P340926	
		Magnesium	1.30		mg/L	P340926	
		Potassium	0.36	I	mg/L	P340926	
		Sodium	4.7		mg/L	P340926	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P340926	
		Arsenic	0.35		ug/L	P341739	
		Cadmium	0.033	I	ug/L	P341739	
		Chromium	0.66	I	ug/L	P341739	
		Copper	0.30	I	ug/L	P342450	
		Lead	0.38		ug/L	P341739	
		Nickel	0.50	I	ug/L	P341739	
		Silver	0.010	U	ug/L	P340926	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for copper are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Gully Branch 80m north of Gully Branch Rd. Collection Date/Time: 02/28/2018 13:55

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970763	EPA 8321B	2,4-D	0.0020	U	ug/L	P340489	
		Sucralose**	0.010	U	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: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970763	EPA 8321B	Linuron	0.0040	U	ug/L	P340489	
		Acetaminophen**	0.0080	U	ug/L	P340489	
		Fenuron	0.0080	U	ug/L	P340489	
		Imazapyr**	0.0040	U	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	P340705	
		AMPA**	0.10	U	ug/L	P340705	
		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	
1970769	EPA 8270D	Oxamyl	0.0020	U	ug/L	P340489	
		Propoxur	0.0020	U	ug/L	P340489	
		Aldrin	4.2	U	ng/L	P340923	
		Alpha-BHC	2.1	U	ng/L	P340923	
		Beta-BHC	4.2	U	ng/L	P340923	
		Delta-BHC	4.2	U	ng/L	P340923	
		Gamma-BHC	4.2	U	ng/L	P340923	
		Carbophenothion	4.2	U	ng/L	P340923	
		Chlorothalonil	2.1	U	ng/L	P340923	
		Cypermethrin	21	U	ng/L	P340923	
		DDD-p,p'	3.1	U	ng/L	P340923	
		DDE-p,p'	3.1	U	ng/L	P340923	
		DDT-p,p'	3.1	U	ng/L	P340923	
		Dieldrin	4.2	U	ng/L	P340923	
		Endosulfan I	4.2	U	ng/L	P340923	
		Endosulfan II	4.2	U	ng/L	P340923	
		Endosulfan Sulfate	2.1	U	ng/L	P340923	
		Endrin	2.1	U	ng/L	P340923	
		Endrin Aldehyde	2.1	U	ng/L	P340923	
		Heptachlor	1.6	U	ng/L	P340923	
		Heptachlor Epoxide	2.1	U	ng/L	P340923	
		Methoxychlor	4.2	U	ng/L	P340923	
		Mirex	2.1	U	ng/L	P340923	
		Permethrin	10	U	ng/L	P340923	
		Trifluralin	1.0	U	ng/L	P340923	
		Alpha-Chlordane	1.0	U	ng/L	P340923	
		Gamma-Chlordane	1.0	U	ng/L	P340923	
		Endrin Ketone	2.1	U	ng/L	P340923	
		Dicofol	31	U	ng/L	P340923	

Field ID: G2TLHR0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970769	EPA 8276	Chlordane**	2.6	UJ	ng/L	P340923	SUR
		Toxaphene**	31	UJ	ng/L	P340923	SUR
1970772	EPA 8270D	Alachlor	0.25	U	ng/L	P340974	
		Ametryn	0.33	U	ng/L	P340974	
		Atrazine	0.69	I	ng/L	P340974	
		Atrazine Desethyl	1.5	U	ng/L	P340974	
		Azinphos Methyl	2.3	U	ng/L	P340974	
		Bromacil	0.50	UJ	ng/L	P340974	LCS
		Butylate	0.40	U	ng/L	P340974	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P340974	
		Chlorpyrifos Methyl	0.10	U	ng/L	P340974	
		Demeton	2.0	U	ng/L	P340974	
		Diazinon	0.13	U	ng/L	P340974	
		Disulfoton	0.50	U	ng/L	P340974	
		EPTC	1.3	U	ng/L	P340974	
		Ethion	0.15	U	ng/L	P340974	
		Ethoprop	0.10	U	ng/L	P340974	
		Fenamiphos	0.25	U	ng/L	P340974	
		Fipronil	0.25	U	ng/L	P340974	
		Fipronil Sulfide	0.15	U	ng/L	P340974	
		Fipronil Sulfone	0.15	U	ng/L	P340974	
		Hexazinone	0.50	U	ng/L	P340974	
		Malathion	0.35	U	ng/L	P340974	
		Metribuzin	0.20	UJ	ng/L	P340974	LCS, MS
		Mevinphos	0.50	U	ng/L	P340974	
		Molinate	0.30	U	ng/L	P340974	
		Norflurazon	0.50	U	ng/L	P340974	
		Pendimethalin	1.0	U	ng/L	P340974	
		Phorate	0.25	U	ng/L	P340974	
		Prometon	0.91	U	ng/L	P340974	
		Prometryn	0.20	U	ng/L	P340974	
		Simazine	0.50	U	ng/L	P340974	
		Terbufos	0.10	U	ng/L	P340974	
		Terbuthylazine	0.43	U	ng/L	P340974	
		Fonofos	0.20	U	ng/L	P340974	
		Metalaxyl	0.25	U	ng/L	P340974	
		Metolachlor	0.25	U	ng/L	P340974	
		Acetochlor	0.25	U	ng/L	P340974	
		Cyanazine	0.50	U	ng/L	P340974	
		Parathion Ethyl	0.25	U	ng/L	P340974	
		Parathion Methyl	0.25	U	ng/L	P340974	

Ref. Method and Comment:

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

EPA 8270D: Insufficient sample available to perform duplicate matrix spikes.

EPA 8276: Refer to the narrative for an explanation of QC Codes. Insufficient sample available to perform duplicate matrix spikes.

EPA 8270D: MS accuracy for Atrazine, Simazine and Fipronil Sulfone not assessed due to high content of these parameters in the sample spiked.

Refer to the narrative for an explanation of QC Codes.

Sample Location: Gully Branch 80m north of Gully Branch Rd. Collection Date/Time: 02/28/2018 14:05

Field ID: G2TLHR0006DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970741	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P340808	
	EPA 300.0 Rev. 2.1	Chloride	8.2		mg Cl/L	P340950	
		Sulfate	5.4		mg SO4/L	P340951	
	SM 2120 B	Color (true)	270		PCU	P340813	
	SM 2320 B-97	Total Alkalinity	0.87	I	mg CaCO3/L	P341244	
	SM 2540 C-97	TDS	79		mg/L	P341151	
	SM 2540 D-97	TSS	2	U	mg/L	P340934	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P341247	
1970744	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P340975	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P340826	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P340885	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P340866	
	SM 5310 B-00	Organic Carbon	33		mg C/L	P340978	
1970747	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P340820	
1970776	EPA 200.7 Rev. 4.4	Calcium	5.71		mg/L	P340926	
		Iron	1.07E+03		ug/L	P340926	
		Magnesium	1.31		mg/L	P340926	
		Potassium	0.35	I	mg/L	P340926	
		Sodium	4.8		mg/L	P340926	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P340926	
		Arsenic	0.36		ug/L	P341739	
		Cadmium	0.030	I	ug/L	P341739	
		Chromium	0.69	I	ug/L	P341739	
		Copper	0.31	I	ug/L	P342450	
		Lead	0.39		ug/L	P341739	
		Nickel	0.52	I	ug/L	P341739	
		Silver	0.010	U	ug/L	P340926	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for copper are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Gully Branch 80m north of Gully Branch Rd. Collection Date/Time: 02/28/2018 14:05

Field ID: G2TLHR0006DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970764	EPA 8321B	2,4-D	0.0020	U	ug/L	P340489	
		Sucralose**	0.010	U	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: G2TLHR0006DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970764	EPA 8321B	Linuron	0.0040	U	ug/L	P340489	
		Acetaminophen**	0.0080	U	ug/L	P340489	
		Fenuron	0.0080	U	ug/L	P340489	
		Imazapyr**	0.0040	U	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	P340705	
		AMPA**	0.10	U	ug/L	P340705	
		Aldicarb	0.020	U	ug/L	P340782	
		Aldicarb Sulfone	0.0020	U	ug/L	P340782	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P340782	
		Carbaryl	0.0020	U	ug/L	P340782	
		Carbofuran	0.0020	U	ug/L	P340782	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P340782	
		Methiocarb	0.0020	U	ug/L	P340782	
		Methomyl	0.0020	U	ug/L	P340782	
		Oxamyl	0.0020	U	ug/L	P340782	
1970770	EPA 8270D	Propoxur	0.0020	U	ug/L	P340782	
		Aldrin	4.2	U	ng/L	P340923	
		Alpha-BHC	2.1	U	ng/L	P340923	
		Beta-BHC	4.2	U	ng/L	P340923	
		Delta-BHC	4.2	U	ng/L	P340923	
		Gamma-BHC	4.2	U	ng/L	P340923	
		Carbophenothion	4.2	U	ng/L	P340923	
		Chlorothalonil	2.1	U	ng/L	P340923	
		Cypermethrin	21	U	ng/L	P340923	
		DDD-p,p'	3.2	U	ng/L	P340923	
		DDE-p,p'	3.2	U	ng/L	P340923	
		DDT-p,p'	3.2	U	ng/L	P340923	
		Dieldrin	4.2	U	ng/L	P340923	
		Endosulfan I	4.2	U	ng/L	P340923	
		Endosulfan II	4.2	U	ng/L	P340923	
		Endosulfan Sulfate	2.1	U	ng/L	P340923	
		Endrin	2.1	U	ng/L	P340923	
		Endrin Aldehyde	2.1	U	ng/L	P340923	
		Heptachlor	1.6	U	ng/L	P340923	
		Heptachlor Epoxide	2.1	U	ng/L	P340923	
		Methoxychlor	4.2	U	ng/L	P340923	
		Mirex	2.1	U	ng/L	P340923	
		Permethrin	11	U	ng/L	P340923	
		Trifluralin	1.1	U	ng/L	P340923	
		Alpha-Chlordane	1.1	U	ng/L	P340923	
		Gamma-Chlordane	1.1	U	ng/L	P340923	
		Endrin Ketone	2.1	U	ng/L	P340923	
		Dicofol	32	U	ng/L	P340923	

Field ID: G2TLHR0006DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1970770	EPA 8276	Chlordane**	2.6	UJ	ng/L	P340923	SUR
		Toxaphene**	32	UJ	ng/L	P340923	SUR
1970773	EPA 8270D	Alachlor	0.24	U	ng/L	P340974	
		Ametryn	0.31	U	ng/L	P340974	
		Atrazine	0.62	I	ng/L	P340974	
		Atrazine Desethyl	1.5	U	ng/L	P340974	
		Azinphos Methyl	2.2	U	ng/L	P340974	
		Bromacil	0.48	UJ	ng/L	P340974	LCS
		Butylate	0.39	U	ng/L	P340974	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P340974	
		Chlorpyrifos Methyl	0.097	U	ng/L	P340974	
		Demeton	1.9	U	ng/L	P340974	
		Diazinon	0.12	U	ng/L	P340974	
		Disulfoton	0.48	U	ng/L	P340974	
		EPTC	1.2	U	ng/L	P340974	
		Ethion	0.15	U	ng/L	P340974	
		Ethoprop	0.097	U	ng/L	P340974	
		Fenamiphos	0.24	U	ng/L	P340974	
		Fipronil	0.24	U	ng/L	P340974	
		Fipronil Sulfide	0.15	U	ng/L	P340974	
		Fipronil Sulfone	0.15	U	ng/L	P340974	
		Hexazinone	0.48	U	ng/L	P340974	
		Malathion	0.34	U	ng/L	P340974	
		Metribuzin	0.19	UJ	ng/L	P340974	LCS, MS
		Mevinphos	0.48	U	ng/L	P340974	
		Molinate	0.29	U	ng/L	P340974	
		Norflurazon	0.48	U	ng/L	P340974	
		Pendimethalin	0.97	U	ng/L	P340974	
		Phorate	0.24	U	ng/L	P340974	
		Prometon	0.87	U	ng/L	P340974	
		Prometryn	0.19	U	ng/L	P340974	
		Simazine	0.48	U	ng/L	P340974	
		Terbufos	0.097	U	ng/L	P340974	
		Terbuthylazine	0.41	U	ng/L	P340974	
		Fonofos	0.19	U	ng/L	P340974	
		Metalaxyl	0.24	U	ng/L	P340974	
		Metolachlor	0.24	U	ng/L	P340974	
		Acetochlor	0.24	U	ng/L	P340974	
		Cyanazine	0.48	U	ng/L	P340974	
		Parathion Ethyl	0.24	U	ng/L	P340974	
		Parathion Methyl	0.24	U	ng/L	P340974	

Ref. Method and Comment:

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

EPA 8270D: Insufficient sample available to perform duplicate matrix spikes.

EPA 8276: Refer to the narrative for an explanation of QC Codes. Insufficient sample available to perform duplicate matrix spikes.

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340808

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P340926

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: P340926

Component	Result	Code	Units
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341739

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.32	I	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342450

Component	Result	Code	Units
Copper	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340950

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340951

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340975

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340975

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340826

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340885

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340794

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340866

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340820

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

Reference Method: EPA 8270D
Batch ID: P340923

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P340923

Component	Result	Code	Units
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: P340974

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P340974

Component	Result	Code	Units
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P340923

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: 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	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P340705

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: P340782

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P340813

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P341244

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

Reference Method: SM 2540 C-97
Batch ID: P341150

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P341151

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P340933

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P340934

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P341247

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
 Batch ID: P340978

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: P340926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	107		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	105		P	85 - 115
Sodium	103		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P340926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	98.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P341739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	101		P	85 - 115
Copper	103		P	85 - 115
Lead	100		P	85 - 115
Nickel	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P342450

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	107		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P340950

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P340951

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P340975

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P340826

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P340885

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P340794

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P340866

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P340820

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.3		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P340923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	52.1	51.6	P/P	24 - 89.0
Alpha-BHC	93.2	89.6	P/P	58 - 117
Alpha-Chlordane	99.1	97.0	P/P	56 - 115
Beta-BHC	117	104	P/P	55 - 137
Carbophenothion	106	102	P/P	37 - 145
Chlorothalonil	94.2	95.0	P/P	26 - 163
Cypermethrin	90.6	95.6	P/P	42 - 156
DDD-p,p'	103	103	P/P	59 - 129
DDE-p,p'	95.4	94.8	P/P	52 - 117
DDT-p,p'	103	97.8	P/P	48 - 128
Delta-BHC	123	128	P/P	59 - 158
Dicofol	79.5	91.6	P/P	19 - 124
Dieldrin	103	97.1	P/P	57 - 126
Endosulfan I	102	109	P/P	59 - 133
Endosulfan II	113	114	P/P	58 - 148
Endosulfan Sulfate	115	117	P/P	56 - 135

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P340923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	104	97.5	P/P	50 - 140
Endrin Aldehyde	111	106	P/P	47 - 141
Endrin Ketone	99.3	99.8	P/P	63 - 123
Gamma-BHC	104	95.6	P/P	59 - 132
Gamma-Chlordane	95.8	93.8	P/P	55 - 112
Heptachlor	80.6	80.9	P/P	45 - 102
Heptachlor Epoxide	96.7	93.5	P/P	61 - 116
Methoxychlor	101	98.8	P/P	60 - 133
Mirex	76.0	77.9	P/P	40 - 98.0
Permethrin	95.7	94.5	P/P	45 - 131
Trifluralin	90.2	86.8	P/P	38 - 179

Reference Method: EPA 8270D
Batch ID: P340974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	93.7	97.7	P/P	74 - 119
Alachlor	95.6	100	P/P	75 - 118
Ametryn	94.2	84.6	P/P	59 - 137
Atrazine	96.6	104	P/P	73 - 120
Atrazine Desethyl	116	118	P/P	19 - 129
Azinphos Methyl	113	118	P/P	65 - 181
Bromacil	39.3	52.1	F/P	43 - 123
Butylate	63.3	61.2	P/P	28 - 85.0
Chlorpyrifos Ethyl	91.8	99.7	P/P	55 - 112
Chlorpyrifos Methyl	98.1	105	P/P	35 - 124
Cyanazine	252	253	P/P	26 - 262
Demeton	75.2	90.8	P/P	43 - 122
Diazinon	98.4	103	P/P	72 - 120
Disulfoton	78.2	95.0	P/P	45 - 137
EPTC	61.4	60.1	P/P	28 - 95.0
Ethion	87.8	86.4	P/P	63 - 127
Ethoprop	97.9	102	P/P	63 - 109
Fenamiphos	94.8	102	P/P	66 - 136
Fipronil	96.1	102	P/P	63 - 126
Fipronil Sulfide	93.8	102	P/P	59 - 123
Fipronil Sulfone	88.6	94.6	P/P	56 - 122
Fonofos	94.7	98.6	P/P	64 - 114
Hexazinone	110	118	P/P	49 - 144
Malathion	91.6	95.0	P/P	68 - 131
Metalaxyl	94.3	101	P/P	57 - 126
Metolachlor	95.9	101	P/P	75 - 118
Metribuzin	169	189	P/F	46 - 169
Mevinphos	84.5	88.9	P/P	34 - 126
Molinate	67.0	67.9	P/P	37 - 101
Norflurazon	90.3	95.1	P/P	63 - 127
Parathion Ethyl	92.0	98.5	P/P	78 - 109
Parathion Methyl	100	104	P/P	74 - 123
Pendimethalin	104	112	P/P	51 - 130
Phorate	84.4	92.3	P/P	53 - 116
Prometon	87.4	92.2	P/P	66 - 124
Prometryn	93.9	100	P/P	66 - 124

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P340974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	105	110	P/P	62 - 134
Terbufos	90.3	98.6	P/P	59 - 115
Terbutylazine	96.3	103	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P340923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	58.2	64.3	P/P	47 - 125
Toxaphene	82.8	85.9	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: 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

Reference Method: EPA 8321B
Batch ID: P340705

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	115		P	40 - 150
Glyphosate	111		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
 Batch ID: P340782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	92.4		P	40 - 150
Aldicarb	67.9		P	30 - 150
Aldicarb Sulfone	105		P	40 - 150
Aldicarb Sulfoxide	114		P	40 - 150
Carbaryl	61.8		P	40 - 150
Carbofuran	52.7		P	40 - 150
Methiocarb	63.7		P	40 - 150
Methomyl	103		P	40 - 150
Oxamyl	94.5		P	40 - 150
Propoxur	44.3		P	40 - 150

Reference Method: SM 2320 B-97
 Batch ID: P341244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
 Batch ID: P341247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	93.6		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P340978

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P340926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970525	Calcium	102		P	80 - 120
1970525	Iron	106		P	80 - 120
1970525	Magnesium	102		P	80 - 120
1970525	Potassium	103		P	80 - 120
1970525	Sodium	102		P	80 - 120
1970525	Zinc	99.5		P	80 - 120
1970841	Calcium	107		P	80 - 120
1970841	Iron	108	110	P/P	80 - 120
1970841	Magnesium	109		P	80 - 120
1970841	Potassium	103	106	P/P	80 - 120
1970841	Sodium	106		P	80 - 120
1970841	Zinc	102	102	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970525	Silver	97.9		P	80 - 120
1970841	Silver	99.8	98.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970810	Arsenic	102	101	P/P	80 - 120
1970810	Cadmium	106	104	P/P	80 - 120
1970810	Chromium	98.9	99.2	P/P	80 - 120
1970810	Copper	97.9	107	P/P	80 - 120
1970810	Lead	100	101	P/P	80 - 120
1970810	Nickel	96.2	96.4	P/P	80 - 120
1970843	Arsenic	99.0		P	80 - 120
1970843	Cadmium	102		P	80 - 120
1970843	Chromium	97.3		P	80 - 120
1970843	Copper	101		P	80 - 120
1970843	Lead	101		P	80 - 120
1970843	Nickel	94.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970842	Copper	99.0		P	80 - 120
1978259	Copper	96.9	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970708	Chloride	93.5		P	90 - 110
1970709	Chloride	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970708	Sulfate	95.6		P	90 - 110
1970709	Sulfate	98.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970244	Ammonia-N	91.9	90.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340826

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970712	Kjeldahl Nitrogen	101	98.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340885

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970711	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970712	Total-P	98.2	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340866

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970790	Total-P	96.0	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970715	O-Phosphate-P	96.7	98.2	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P340923

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970930	Aldrin	61.8		P	26 - 96.0
1970930	Alpha-BHC	97.8		P	51 - 123
1970930	Alpha-Chlordane	100		P	45 - 120
1970930	Beta-BHC	119		P	43 - 146
1970930	Carbophenothion	117		P	26 - 179
1970930	Chlorothalonil	78.4		P	10 - 215
1970930	Cypermethrin	102		P	35 - 169
1970930	DDD-p,p'	108		P	49 - 131
1970930	DDE-p,p'	97.4		P	39 - 127
1970930	DDT-p,p'	99.4		P	49 - 120
1970930	Delta-BHC	142		P	49 - 187
1970930	Dicofol	94.5		P	10 - 129
1970930	Dieldrin	103		P	46 - 132
1970930	Endosulfan I	111		P	57 - 130
1970930	Endosulfan II	119		P	52 - 148
1970930	Endosulfan Sulfate	129		P	55 - 129
1970930	Endrin	95.9		P	45 - 133
1970930	Endrin Aldehyde	98.7		P	26 - 140
1970930	Endrin Ketone	113		P	60 - 125
1970930	Gamma-BHC	107		P	50 - 145
1970930	Gamma-Chlordane	98.5		P	44 - 118
1970930	Heptachlor	81.1		P	35 - 106
1970930	Heptachlor Epoxide	97.8		P	52 - 123
1970930	Methoxychlor	95.2		P	54 - 132
1970930	Mirex	82.0		P	36 - 107
1970930	Permethrin	99.2		P	47 - 135
1970930	Trifluralin	91.2		P	32 - 228

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P340974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970458	Acetochlor	100	92.9	P/P	67 - 125
1970458	Alachlor	100	97.8	P/P	69 - 123
1970458	Ametryn	109	107	P/P	52 - 151
1970458	Atrazine Desethyl	124	112	P/P	10 - 129
1970458	Azinphos Methyl	126	101	P/P	48 - 200
1970458	Bromacil	94.6	81.2	P/P	46 - 130
1970458	Butylate	70.1	58.3	P/P	10 - 85.0
1970458	Chlorpyrifos Ethyl	102	93.7	P/P	54 - 115
1970458	Chlorpyrifos Methyl	109	99.8	P/P	44 - 117
1970458	Cyanazine	234	209	P/P	10 - 262
1970458	Demeton	82.0	79.5	P/P	24 - 145
1970458	Diazinon	109	102	P/P	66 - 129
1970458	Disulfoton	88.9	81.2	P/P	45 - 139
1970458	EPTC	69.5	57.2	P/P	10 - 86.0
1970458	Ethion	89.9	83.7	P/P	59 - 133
1970458	Ethoprop	113	102	P/P	54 - 116
1970458	Fenamiphos	102	87.9	P/P	55 - 140
1970458	Fipronil	106	92.9	P/P	37 - 142
1970458	Fipronil Sulfide	108	94.4	P/P	37 - 130
1970458	Fonofos	107	96.7	P/P	55 - 118
1970458	Hexazinone	110	107	P/P	62 - 140
1970458	Malathion	106	92.8	P/P	64 - 132
1970458	Metalaxyl	107	93.7	P/P	55 - 129
1970458	Metolachlor	102	95.3	P/P	56 - 137
1970458	Metribuzin	227	215	F/P	16 - 218
1970458	Mevinphos	101	85.2	P/P	34 - 129
1970458	Molinate	74.3	63.1	P/P	16 - 99.0
1970458	Norflurazon	100	88.4	P/P	43 - 135
1970458	Parathion Ethyl	104	94.5	P/P	71 - 112
1970458	Parathion Methyl	114	101	P/P	65 - 127
1970458	Pendimethalin	120	112	P/P	35 - 159
1970458	Phorate	97.2	89.3	P/P	41 - 129
1970458	Prometon	102	95.7	P/P	56 - 140
1970458	Prometryn	101	95.7	P/P	65 - 130
1970458	Terbufos	104	95.1	P/P	53 - 126
1970458	Terbuthylazine	106	100	P/P	73 - 114

Reference Method: EPA 8276
Batch ID: P340923

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970930	Chlordane	78.0		P	41 - 134
1970930	Toxaphene	96.6		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

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: EPA 8321B
Batch ID: P340705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970290	AMPA	109	104	P/P	40 - 150
1970290	Glyphosate	111	113	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P340782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970898	3-Hydroxycarbofuran	100	102	P/P	40 - 150
1970898	Aldicarb	63.9	71.5	P/P	30 - 150
1970898	Aldicarb Sulfone	120	124	P/P	40 - 150
1970898	Aldicarb Sulfoxide	102	108	P/P	40 - 150
1970898	Carbaryl	55.3	56.6	P/P	40 - 150
1970898	Carbofuran	58.3	48.5	P/P	40 - 150
1970898	Methiocarb	63.5	70.2	P/P	40 - 150
1970898	Methomyl	86.3	87.7	P/P	40 - 150
1970898	Oxamyl	85.6	88.1	P/P	40 - 150
1970898	Propoxur	50.8	42.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P341247

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971272	Fluoride	95.1	96.0	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P340978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1970711	Organic Carbon	98.6	98.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P340808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970707	Turbidity	2.74	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P340926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970841	Calcium	0.282	Spike	P	0 - 20
1970841	Iron	1.08	Spike	P	0 - 20
1970841	Magnesium	0.255	Spike	P	0 - 20
1970841	Potassium	1.36	Spike	P	0 - 20
1970841	Sodium	0.198	Spike	P	0 - 20
1970841	Zinc	0.0450	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970841	Silver	1.46	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970810	Arsenic	1.11	Spike	P	0 - 20
1970810	Cadmium	2.08	Spike	P	0 - 20
1970810	Chromium	0.235	Spike	P	0 - 20
1970810	Copper	2.21	Spike	P	0 - 20
1970810	Lead	0.547	Spike	P	0 - 20
1970810	Nickel	0.199	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978259	Copper	3.82	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970708	Chloride	2.04	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P340951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970708	Sulfate	0.914	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P340975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970244	Ammonia-N	0.839	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P340826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970712	Kjeldahl Nitrogen	2.76	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P340885

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970711	NO2NO3-N	0.647	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970712	Total-P	4.94	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P340866

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970790	Total-P	0.585	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P340820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970715	O-Phosphate-P	0.763	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P340923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Aldrin	1.14	LCS	P	0 - 30
LFB	Alpha-BHC	3.93	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.14	LCS	P	0 - 30
LFB	Beta-BHC	11.6	LCS	P	0 - 30
LFB	Carbophenothion	3.89	LCS	P	0 - 30
LFB	Chlorothalonil	0.836	LCS	P	0 - 30
LFB	Cypermethrin	5.33	LCS	P	0 - 30
LFB	DDD-p,p'	0.721	LCS	P	0 - 30
LFB	DDE-p,p'	0.593	LCS	P	0 - 30
LFB	DDT-p,p'	4.76	LCS	P	0 - 30
LFB	Delta-BHC	3.80	LCS	P	0 - 30
LFB	Dicofol	14.0	LCS	P	0 - 30
LFB	Dieldrin	5.46	LCS	P	0 - 30
LFB	Endosulfan I	6.93	LCS	P	0 - 30
LFB	Endosulfan II	1.13	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.77	LCS	P	0 - 30
LFB	Endrin	6.87	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.29	LCS	P	0 - 30
LFB	Endrin Ketone	0.490	LCS	P	0 - 30
LFB	Gamma-BHC	8.30	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.04	LCS	P	0 - 30
LFB	Heptachlor	0.361	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.34	LCS	P	0 - 30
LFB	Methoxychlor	2.34	LCS	P	0 - 30
LFB	Mirex	2.56	LCS	P	0 - 30
LFB	Permethrin	1.28	LCS	P	0 - 30
LFB	Trifluralin	3.84	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P340974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970458	Acetochlor	7.74	Spike	P	0 - 30
1970458	Alachlor	2.45	Spike	P	0 - 30
1970458	Ametryn	1.60	Spike	P	0 - 30
1970458	Atrazine	11.0	Spike	P	0 - 30
1970458	Atrazine Desethyl	7.47	Spike	P	0 - 30
1970458	Azinphos Methyl	21.5	Spike	P	0 - 30
1970458	Bromacil	10.3	Spike	P	0 - 30
1970458	Butylate	18.3	Spike	P	0 - 30
1970458	Chlorpyrifos Ethyl	8.41	Spike	P	0 - 30
1970458	Chlorpyrifos Methyl	8.44	Spike	P	0 - 30
1970458	Cyanazine	11.3	Spike	P	0 - 30
1970458	Demeton	3.09	Spike	P	0 - 30
1970458	Diazinon	6.86	Spike	P	0 - 30
1970458	Disulfoton	9.02	Spike	P	0 - 30
1970458	EPTC	19.4	Spike	P	0 - 30
1970458	Ethion	7.24	Spike	P	0 - 30
1970458	Ethoprop	9.87	Spike	P	0 - 30
1970458	Fenamiphos	15.3	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P340974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970458	Fipronil	10.9	Spike	P	0 - 30
1970458	Fipronil Sulfide	9.95	Spike	P	0 - 30
1970458	Fipronil Sulfone	12.3	Spike	P	0 - 30
1970458	Fonofos	10.2	Spike	P	0 - 30
1970458	Hexazinone	2.85	Spike	P	0 - 30
1970458	Malathion	12.9	Spike	P	0 - 30
1970458	Metalaxyl	12.9	Spike	P	0 - 30
1970458	Metolachlor	6.53	Spike	P	0 - 30
1970458	Metribuzin	5.67	Spike	P	0 - 30
1970458	Mevinphos	16.7	Spike	P	0 - 30
1970458	Molinate	16.3	Spike	P	0 - 30
1970458	Norflurazon	12.6	Spike	P	0 - 30
1970458	Parathion Ethyl	9.65	Spike	P	0 - 30
1970458	Parathion Methyl	12.7	Spike	P	0 - 30
1970458	Pendimethalin	6.31	Spike	P	0 - 30
1970458	Phorate	8.56	Spike	P	0 - 30
1970458	Prometon	6.41	Spike	P	0 - 30
1970458	Prometryn	5.13	Spike	P	0 - 30
1970458	Simazine	8.31	Spike	P	0 - 30
1970458	Terbufos	8.51	Spike	P	0 - 30
1970458	Terbutylazine	5.72	Spike	P	0 - 30
LFB	Acetochlor	4.16	LCS	P	0 - 30
LFB	Alachlor	4.82	LCS	P	0 - 30
LFB	Ametryn	10.8	LCS	P	0 - 30
LFB	Atrazine	7.49	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.96	LCS	P	0 - 30
LFB	Azinphos Methyl	4.84	LCS	P	0 - 30
LFB	Bromacil	27.9	LCS	P	0 - 30
LFB	Butylate	3.39	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	8.17	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.89	LCS	P	0 - 30
LFB	Cyanazine	0.141	LCS	P	0 - 30
LFB	Demeton	18.8	LCS	P	0 - 30
LFB	Diazinon	4.70	LCS	P	0 - 30
LFB	Disulfoton	19.4	LCS	P	0 - 30
LFB	EPTC	2.08	LCS	P	0 - 30
LFB	Ethion	1.60	LCS	P	0 - 30
LFB	Ethoprop	4.19	LCS	P	0 - 30
LFB	Fenamiphos	6.93	LCS	P	0 - 30
LFB	Fipronil	5.79	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.21	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.53	LCS	P	0 - 30
LFB	Fonofos	4.02	LCS	P	0 - 30
LFB	Hexazinone	6.69	LCS	P	0 - 30
LFB	Malathion	3.73	LCS	P	0 - 30
LFB	Metalaxyl	7.06	LCS	P	0 - 30
LFB	Metolachlor	4.98	LCS	P	0 - 30
LFB	Metribuzin	11.2	LCS	P	0 - 30
LFB	Mevinphos	5.03	LCS	P	0 - 30
LFB	Molinate	1.26	LCS	P	0 - 30
LFB	Norflurazon	5.21	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P340974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Parathion Ethyl	6.78	LCS	P	0 - 30
LFB	Parathion Methyl	3.80	LCS	P	0 - 30
LFB	Pendimethalin	6.99	LCS	P	0 - 30
LFB	Phorate	9.03	LCS	P	0 - 30
LFB	Prometon	5.37	LCS	P	0 - 30
LFB	Prometryn	6.53	LCS	P	0 - 30
LFB	Simazine	4.33	LCS	P	0 - 30
LFB	Terbufos	8.77	LCS	P	0 - 30
LFB	Terbutylazine	6.32	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P340923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	10.0	LCS	P	0 - 30
LFB	Toxaphene	3.69	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

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

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P340489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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: EPA 8321B
Batch ID: P340705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970290	AMPA	4.46	Spike	P	0 - 30
1970290	Glyphosate	1.95	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P340782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970898	3-Hydroxycarbofuran	1.89	Spike	P	0 - 30
1970898	Aldicarb	11.2	Spike	P	0 - 30
1970898	Aldicarb Sulfone	3.98	Spike	P	0 - 30
1970898	Aldicarb Sulfoxide	5.58	Spike	P	0 - 30
1970898	Carbaryl	2.24	Spike	P	0 - 30
1970898	Carbofuran	18.3	Spike	P	0 - 30
1970898	Methiocarb	10.1	Spike	P	0 - 30
1970898	Methomyl	1.69	Spike	P	0 - 30
1970898	Oxamyl	2.94	Spike	P	0 - 30
1970898	Propoxur	17.0	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P340813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970707	Color (true)	2.18	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971272	Total Alkalinity	0.0945	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P341150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970535	TDS	1.98	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P341151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970832	TDS	1.42	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P341247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971272	Fluoride	0.480	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P340978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1970711	Organic Carbon	0.224	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: 1970762
Field Sample ID: BLANK_02_28_2018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	49.7	P	30 - 160
EPA 8321B	2,4-D-d3	49.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.7	P	30 - 160
EPA 8321B	Diuron-d6	78.4	P	30 - 160
EPA 8321B	Diuron-d6	78.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	95.1	P	40 - 160
EPA 8321B	Primidone-d5	93.8	P	30 - 160
EPA 8321B	Primidone-d5	93.8	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	40 - 160

Lab Sample ID: 1970763
Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	39.1	P	30 - 160
EPA 8321B	2,4-D-d3	39.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	150	P	30 - 160
EPA 8321B	Acetaminophen-d4	150	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1970763

Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	52.3	P	30 - 160
EPA 8321B	Diuron-d6	52.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	75.0	P	40 - 160
EPA 8321B	Primidone-d5	79.6	P	30 - 160
EPA 8321B	Primidone-d5	79.6	P	30 - 160
EPA 8321B	Sucralose-d6	153	P	40 - 160

Lab Sample ID: 1970764

Field Sample ID: G2TLHR0006DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	38.7	P	30 - 160
EPA 8321B	2,4-D-d3	38.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	148	P	30 - 160
EPA 8321B	Acetaminophen-d4	148	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.6	P	30 - 160
EPA 8321B	Diuron-d6	51.7	P	30 - 160
EPA 8321B	Diuron-d6	51.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	73.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	73.6	P	40 - 160
EPA 8321B	Primidone-d5	71.7	P	30 - 160
EPA 8321B	Primidone-d5	71.7	P	30 - 160
EPA 8321B	Sucralose-d6	148	P	40 - 160

Lab Sample ID: 1970765

Field Sample ID: BLANK_02_28_2018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	79.3	P	30 - 160

Lab Sample ID: 1970766

Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	48.6	P	30 - 160

Lab Sample ID: 1970767

Field Sample ID: G2TLHR0006DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	37.7	P	30 - 160

Lab Sample ID: 1970768

Field Sample ID: BLANK_02_28_2018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	76.1	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	70.9	P	34 - 101
EPA 8276	Decachlorobiphenyl	75.8	P	31 - 108
EPA 8276	PCNB	133	P	62 - 142

Quality Assurance Report Surrogates

Lab Sample ID: 1970769
Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	73.2	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	56.5	P	34 - 101
EPA 8276	Decachlorobiphenyl	71.1	P	31 - 108
EPA 8276	PCNB	151	F	62 - 142

Lab Sample ID: 1970770
Field Sample ID: G2TLHR0006DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	81.1	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	62.2	P	34 - 101
EPA 8276	Decachlorobiphenyl	68.1	P	31 - 108
EPA 8276	PCNB	165	F	62 - 142

Lab Sample ID: 1970771
Field Sample ID: BLANK_02_28_2018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	113	P	71 - 126
EPA 8270D	Terbufos-d10	99.2	P	50 - 130

Lab Sample ID: 1970772
Field Sample ID: G2TLHR0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	111	P	71 - 126
EPA 8270D	Terbufos-d10	115	P	50 - 130

Lab Sample ID: 1970773
Field Sample ID: G2TLHR0006DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	100	P	71 - 126
EPA 8270D	Terbufos-d10	111	P	50 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82322
Included Lab Sample IDs: 1970739, 1970740, 1970741

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.4	97.6	P/P	90 - 110
Sulfate	101	98.5	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82364
Included Lab Sample IDs: 1970762, 1970763, 1970764

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

Reference Method: EPA 8321B

Run ID: A82364

Included Lab Sample IDs: 1970762, 1970763, 1970764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.2	88.4	P/P	60 - 150
Glyphosate	94.9	93.4	P/P	60 - 150

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A82369

Included Lab Sample IDs: 1970739, 1970740, 1970741

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.0	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A82370

Included Lab Sample IDs: 1970739, 1970740, 1970741

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	85 - 115
Color (true)	101	99.6	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A82372

Included Lab Sample IDs: 1970745, 1970746, 1970747

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82396

Included Lab Sample IDs: 1970742, 1970743

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A82408

Included Lab Sample IDs: 1970742, 1970743, 1970744

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

Reference Method: EPA 8321B

Run ID: A82414

Included Lab Sample IDs: 1970762, 1970763, 1970764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	107	108	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82422

Included Lab Sample IDs: 1970744

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82431

Included Lab Sample IDs: 1970742, 1970743, 1970744

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.5	99.1	P/P	90 - 110
Ammonia-N	99.2	98.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A82435

Included Lab Sample IDs: 1970742, 1970743, 1970744

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	95.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A82436

Included Lab Sample IDs: 1970762, 1970763, 1970764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.4	102	P/P	50 - 150
3-Hydroxycarbofuran	105	107	P/P	60 - 150
3-Hydroxycarbofuran	111	106	P/P	60 - 150
Acetaminophen	100	109	P/P	60 - 150
Acetaminophen	109	103	P/P	60 - 150
Aldicarb	111	142	P/P	60 - 150
Aldicarb	129	116	P/P	60 - 150
Aldicarb Sulfone	103	104	P/P	50 - 150
Aldicarb Sulfone	111	104	P/P	50 - 150
Aldicarb Sulfoxide	105	107	P/P	50 - 150
Aldicarb Sulfoxide	99.8	102	P/P	50 - 150
Bentazon	102	106	P/P	50 - 150
Carbamazepine	110	85.8	P/P	60 - 150
Carbamazepine	86.7	110	P/P	60 - 150
Carbaryl	103	116	P/P	60 - 150
Carbaryl	124	106	P/P	60 - 150
Carbofuran	119	83.2	P/P	50 - 150
Carbofuran	80.7	111	P/P	50 - 150
Diuron	109	107	P/P	60 - 150
Diuron	110	109	P/P	60 - 150
Fenuron	103	106	P/P	60 - 150
Fenuron	106	103	P/P	60 - 150
Fluridone	116	124	P/P	60 - 160
Fluridone	124	111	P/P	60 - 160
Imazapyr	94.9	96.2	P/P	50 - 150
Imazapyr	96.2	91.9	P/P	50 - 150
Imidacloprid	104	97.1	P/P	60 - 150
Imidacloprid	95.6	104	P/P	60 - 150
Linuron	106	99.6	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A82436

Included Lab Sample IDs: 1970762, 1970763, 1970764

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	108	106	P/P	60 - 150
MCP	92.5	86.9	P/P	50 - 150
Methiocarb	101	102	P/P	50 - 150
Methiocarb	105	99.0	P/P	50 - 150
Methomyl	102	104	P/P	50 - 150
Methomyl	109	96.0	P/P	50 - 150
Oxamyl	102	106	P/P	50 - 150
Oxamyl	108	101	P/P	50 - 150
Primidone	101	109	P/P	60 - 150
Primidone	109	107	P/P	60 - 150
Propoxur	111	81.7	P/P	50 - 150
Propoxur	78.4	102	P/P	50 - 150
Pyraclostrobin	93.0	93.6	P/P	60 - 150
Pyraclostrobin	93.6	93.3	P/P	60 - 150
Triclopyr	88.8	85.4	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82456

Included Lab Sample IDs: 1970742, 1970743, 1970744

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.4	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82511

Included Lab Sample IDs: 1970774, 1970775, 1970776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	99.0	100	P/P	90 - 110
Silver	99.7	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A82512

Included Lab Sample IDs: 1970774, 1970775, 1970776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	100	P/P	95 - 105
Calcium	99.3	102	P/P	90 - 110
Iron	101	101	P/P	95 - 105
Iron	102	104	P/P	90 - 110
Magnesium	102	104	P/P	90 - 110
Magnesium	102	101	P/P	95 - 105
Potassium	101	99.7	P/P	95 - 105
Potassium	101	102	P/P	90 - 110
Sodium	100	102	P/P	90 - 110
Sodium	101	100	P/P	95 - 105
Zinc	101	102	P/P	90 - 110
Zinc	101	99.7	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A82513

Included Lab Sample IDs: 1970739, 1970740, 1970741

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.2	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A82513

Included Lab Sample IDs: 1970739, 1970740, 1970741

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.1	109	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A82574

Included Lab Sample IDs: 1970768, 1970769, 1970770

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	110		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 8270D

Run ID: A82632

Included Lab Sample IDs: 1970768, 1970769, 1970770

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.1		P	80 - 120
Alpha-BHC	98.0		P	80 - 120
Alpha-Chlordane	99.2		P	80 - 120
Beta-BHC	99.1		P	80 - 120
Carbophenothion	96.4		P	80 - 120
Chlorothalonil	106		P	80 - 120
Cypermethrin	97.9		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	100		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	97.0		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	99.8		P	80 - 120
Endosulfan I	97.0		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	119		P	80 - 120
Endrin	94.2		P	80 - 120
Endrin Aldehyde	105		P	80 - 120
Endrin Ketone	109		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	99.1		P	80 - 120
Heptachlor	94.7		P	80 - 120
Heptachlor Epoxide	98.9		P	80 - 120
Methoxychlor	102		P	80 - 120
Mirex	94.1		P	80 - 120
Permethrin	94.5		P	80 - 120
Trifluralin	97.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A82686

Included Lab Sample IDs: 1970771, 1970772, 1970773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.0		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	95.8		P	80 - 120
Atrazine	93.0		P	80 - 120
Atrazine Desethyl	97.6		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Bromacil	97.9		P	80 - 120
Butylate	97.2		P	80 - 120
Chlorpyrifos Ethyl	97.5		P	80 - 120
Chlorpyrifos Methyl	98.6		P	80 - 120
Cyanazine	103		P	80 - 120
Demeton	95.1		P	80 - 120
Diazinon	97.3		P	80 - 120
Disulfoton	95.7		P	80 - 120
EPTC	98.7		P	80 - 120
Ethion	93.3		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	97.8		P	80 - 120
Fipronil	96.0		P	80 - 120
Fipronil Sulfide	96.4		P	80 - 120
Fipronil Sulfone	95.0		P	80 - 120
Fonofos	97.6		P	80 - 120
Hexazinone	93.2		P	80 - 120
Malathion	99.5		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	96.6		P	80 - 120
Molinate	98.4		P	80 - 120
Norflurazon	96.5		P	80 - 120
Parathion Ethyl	91.9		P	80 - 120
Parathion Methyl	94.2		P	80 - 120
Pendimethalin	99.1		P	80 - 120
Phorate	95.4		P	80 - 120
Prometon	97.9		P	80 - 120
Prometryn	101		P	80 - 120
Simazine	96.3		P	80 - 120
Terbufos	97.2		P	80 - 120
Terbutylazine	98.6		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82878

Included Lab Sample IDs: 1970774, 1970775, 1970776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	96.9	P/P	90 - 110
Cadmium	97.5	97.1	P/P	90 - 110
Chromium	97.1	95.6	P/P	90 - 110
Lead	98.0	96.8	P/P	90 - 110
Nickel	99.7	96.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82914

Included Lab Sample IDs: 1970774, 1970775, 1970776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	100	99.3	P/P	90 - 110
Lead	103	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83056

Included Lab Sample IDs: 1970775, 1970776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	105	102	P/P	90 - 110

* 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							2.74	
EPA 200.7 Rev. 4.4	Calcium	103		102	107				0.282
	Iron	107		106	108	110			1.08
	Magnesium	103		102	109				0.255
	Potassium	105		103	103	106			1.36
	Sodium	103		102	106				0.198
	Zinc	101		99.5	102	102			0.0450
EPA 200.8 Rev. 5.4	Arsenic	101		102	101	99.0			1.11
	Cadmium	102		106	104	102			2.08
	Chromium	101		98.9	99.2	97.3			0.235
	Copper	103		97.9	107	101			2.21
	Copper	107		99.0	96.9	101			3.82
	Lead	100		100	101	101			0.547
	Nickel	101		96.2	96.4	94.1			0.199
	Silver	98.4		97.9	99.8	98.3			1.46
EPA 300.0 Rev. 2.1	Chloride	95.7		93.5	97.8			2.04	
	Sulfate	97.1		95.6	98.0			0.914	
EPA 350.1 Rev. 2.0	Ammonia-N	94.3		91.9	90.5				0.839
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.2		101	98.0				2.76
EPA 353.2 Rev. 2.0	NO2NO3-N	103		103	104				0.647
EPA 365.1 Rev. 2.0	Total-P	107		98.2	105				4.94
	Total-P	101		96.0	95.4				0.585
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.3		96.7	98.2				0.763
EPA 8270D	Acetochlor	93.7	97.7	100	92.9		4.16		7.74
	Alachlor	95.6	100	100	97.8		4.82		2.45
	Aldrin	52.1	51.6	61.8			1.14		
	Alpha-BHC	93.2	89.6	97.8			3.93		
	Alpha-Chlordane	99.1	97.0	100			2.14		
	Ametryn	94.2	84.6	109	107		10.8		1.60
	Atrazine	96.6	104				7.49		11.0
	Atrazine Desethyl	116	118	124	112		1.96		7.47

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Azinphos Methyl	113	118	126	101	4.84	21.5
	Beta-BHC	117	104	119		11.6	
	Bromacil	39.3	52.1	94.6	81.2	27.9	10.3
	Butylate	63.3	61.2	70.1	58.3	3.39	18.3
	Carbophenothion	106	102	117		3.89	
	Chlorothalonil	94.2	95.0	78.4		0.836	
	Chlorpyrifos Ethyl	91.8	99.7	102	93.7	8.17	8.41
	Chlorpyrifos Methyl	98.1	105	109	99.8	6.89	8.44
	Cyanazine	252	253	234	209	0.141	11.3
	Cypermethrin	90.6	95.6	102		5.33	
	DDD-p,p'	103	103	108		0.721	
	DDE-p,p'	95.4	94.8	97.4		0.593	
	DDT-p,p'	103	97.8	99.4		4.76	
	Delta-BHC	123	128	142		3.80	
	Demeton	75.2	90.8	82.0	79.5	18.8	3.09
	Diazinon	98.4	103	109	102	4.70	6.86
	Dicofol	79.5	91.6	94.5		14.0	
	Dieldrin	103	97.1	103		5.46	
	Disulfoton	78.2	95.0	88.9	81.2	19.4	9.02
	Endosulfan I	102	109	111		6.93	
	Endosulfan II	113	114	119		1.13	
	Endosulfan Sulfate	115	117	129		1.77	
	Endrin	104	97.5	95.9		6.87	
	Endrin Aldehyde	111	106	98.7		5.29	
	Endrin Ketone	99.3	99.8	113		0.490	
	EPTC	61.4	60.1	69.5	57.2	2.08	19.4
	Ethion	87.8	86.4	89.9	83.7	1.60	7.24
	Ethoprop	97.9	102	113	102	4.19	9.87
	Fenamiphos	94.8	102	102	87.9	6.93	15.3
	Fipronil	96.1	102	106	92.9	5.79	10.9
	Fipronil Sulfide	93.8	102	108	94.4	8.21	9.95
	Fipronil Sulfone	88.6	94.6			6.53	12.3
	Fonofos	94.7	98.6	107	96.7	4.02	10.2
	Gamma-BHC	104	95.6	107		8.30	
	Gamma-Chlordane	95.8	93.8	98.5		2.04	
	Heptachlor	80.6	80.9	81.1		0.361	
	Heptachlor Epoxide	96.7	93.5	97.8		3.34	
	Hexazinone	110	118	110	107	6.69	2.85
	Malathion	91.6	95.0	106	92.8	3.73	12.9
	Metalaxyl	94.3	101	107	93.7	7.06	12.9
	Methoxychlor	101	98.8	95.2		2.34	
	Metolachlor	95.9	101	102	95.3	4.98	6.53
	Metribuzin	169	189	227	215	11.2	5.67
	Mevinphos	84.5	88.9	101	85.2	5.03	16.7
	Mirex	76.0	77.9	82.0		2.56	
	Molinate	67.0	67.9	74.3	63.1	1.26	16.3
	Norflurazon	90.3	95.1	100	88.4	5.21	12.6
	Parathion Ethyl	92.0	98.5	104	94.5	6.78	9.65
	Parathion Methyl	100	104	114	101	3.80	12.7
	Pendimethalin	104	112	120	112	6.99	6.31
	Permethrin	95.7	94.5	99.2		1.28	
	Phorate	84.4	92.3	97.2	89.3	9.03	8.56
	Prometon	87.4	92.2	102	95.7	5.37	6.41
	Prometryn	93.9	100	101	95.7	6.53	5.13

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Simazine	105	110			4.33	8.31
	Terbufos	90.3	98.6	104	95.1	8.77	8.51
	Terbuthylazine	96.3	103	106	100	6.32	5.72
	Trifluralin	90.2	86.8	91.2		3.84	
EPA 8276	Chlordane	58.2	64.3	78.0		10.0	
	Toxaphene	82.8	85.9	96.6		3.69	
EPA 8321B	2,4-D	66.1		52.7	53.4		1.27
	3-Hydroxycarbofuran	93.9		109	105		3.80
	3-Hydroxycarbofuran	92.4		100	102		1.89
	Acetaminophen	94.3		130	147		12.1
	Aldicarb	78.1		69.6	72.1		3.61
	Aldicarb	67.9		63.9	71.5		11.2
	Aldicarb Sulfone	101		137	141		2.74
	Aldicarb Sulfone	105		120	124		3.98
	Aldicarb Sulfoxide	101		99.9	107		6.48
	Aldicarb Sulfoxide	114		102	108		5.58
	AMPA	115		109	104		4.46
	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
	Carbaryl	61.8		55.3	56.6		2.24
	Carbofuran	66.8		46.9	62.7		29.0
	Carbofuran	52.7		58.3	48.5		18.3
	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	111		111	113		1.95
	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
	Methiocarb	63.7		63.5	70.2		10.1
	Methomyl	96.8		98.1	96.2		1.98
	Methomyl	103		86.3	87.7		1.69
	Oxamyl	95.8		99.8	103		2.94
	Oxamyl	94.5		85.6	88.1		2.94
	Primidone	94.3		101	103		2.38
	Propoxur	66.9		45.8	59.3		25.6
	Propoxur	44.3		50.8	42.9		17.0
	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)					2.18	
SM 2320 B-97	Total Alkalinity	102				0.0945	
SM 2540 C-97	TDS					1.98	
	TDS					1.42	
SM 4500 F-C-97	Fluoride	93.6		95.1	96.0		0.480
SM 5310 B-00	Organic Carbon	94.9		98.6	98.4		0.224

Reference Method Descriptions

Method / DoH Cert #

Description

Associated Samples

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1970739, 1970740, 1970741
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1970774, 1970775, 1970776
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1970774, 1970775, 1970776
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1970739, 1970740, 1970741
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1970739, 1970740, 1970741
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1970742, 1970743, 1970744
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1970742, 1970743, 1970744
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1970742, 1970743, 1970744
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1970742, 1970743, 1970744
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1970745, 1970746, 1970747
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1970768, 1970769, 1970770
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1970771, 1970772, 1970773
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1970768, 1970769, 1970770
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1970765, 1970766, 1970767
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1970762, 1970763, 1970764
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1970762, 1970763, 1970764
SM 2120 B / E31780	True Color measured at 450 nm	1970739, 1970740, 1970741
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1970739, 1970740, 1970741
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1970739, 1970740, 1970741
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1970739, 1970740, 1970741
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1970739, 1970740, 1970741
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1970742, 1970743, 1970744

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	02/28/2018			03/01/2018 15:23	DeAsia Armster	1970739, 1970740, 1970741
EPA 200.7 Rev. 4.4	02/28/2018	03/05/2018	Elliott D. Healy	03/08/2018	Betina Topolski	1970774, 1970775, 1970776
EPA 200.8 Rev. 5.4	02/28/2018	03/05/2018	Elliott D. Healy	03/08/2018	Nadine Brooks	1970774
	02/28/2018	03/05/2018	Elliott D. Healy	03/09/2018	Nadine Brooks	1970775, 1970776
	02/28/2018	03/19/2018	Elliott D. Healy	03/27/2018	Robert K Palmer	1970774, 1970775, 1970776
	02/28/2018	03/19/2018	Elliott D. Healy	03/28/2018	Robert K Palmer	1970774, 1970775, 1970776
	02/28/2018	03/29/2018	Elliott D. Healy	04/03/2018	Robert K Palmer	1970775, 1970776
EPA 300.0 Rev. 2.1	02/28/2018			03/02/2018	Julia Storbeck	1970739, 1970740, 1970741
EPA 350.1 Rev. 2.0	02/28/2018			03/05/2018	Ping Hua	1970742, 1970743, 1970744
EPA 351.2 Rev. 2.0	02/28/2018	03/02/2018	Adrian Shelby	03/06/2018	Joseph Suarez	1970742, 1970743, 1970744
EPA 353.2 Rev. 2.0	02/28/2018			03/02/2018	Lauren Bottorf	1970742, 1970743, 1970744
EPA 365.1 Rev. 2.0	02/28/2018	03/01/2018	Sima Feizi	03/02/2018	Lipi Saha	1970742, 1970743
	02/28/2018	03/02/2018	Sima Feizi	03/05/2018	Beverly Y. Sanders	1970744
EPA 365.1 Rev. 2.0 dissolved	02/28/2018			03/01/2018 15:49	Megan Treadwell	1970745
	02/28/2018			03/01/2018 15:50	Megan Treadwell	1970746
	02/28/2018			03/01/2018 15:57	Megan Treadwell	1970747
EPA 8270D	02/28/2018	03/05/2018	Fe-Val Siddell	03/08/2018	Vandana T. Nagar	1970768, 1970769, 1970770
	02/28/2018	03/05/2018	Rasheda Ghaffari	03/09/2018	Vandana T. Nagar	1970771, 1970772, 1970773
EPA 8276	02/28/2018	03/05/2018	Fe-Val Siddell	03/09/2018	John P. Burgos	1970768, 1970769, 1970770
EPA 8321B	02/28/2018	03/01/2018	Hoor Shaik	03/02/2018	Julie Michelle Frank	1970765, 1970766
	02/28/2018	03/01/2018	Hoor Shaik	03/03/2018	Julie Michelle Frank	1970763, 1970764
	02/28/2018	03/01/2018	Julie Michelle Frank	03/01/2018	Julie Michelle Frank	1970762, 1970763, 1970764
	02/28/2018	03/02/2018	Hoor Shaik	03/04/2018	Julie Michelle Frank	1970767
	02/28/2018	03/02/2018	Julie Michelle Frank	03/03/2018	Juyoung Kim	1970762, 1970763, 1970764
SM 2120 B	02/28/2018			03/01/2018 14:53	Tanya Welborn	1970739
	02/28/2018			03/01/2018 15:34	Tanya Welborn	1970740
	02/28/2018			03/01/2018 15:35	Tanya Welborn	1970741
SM 2320 B-97	02/28/2018			03/09/2018	Dale L. Simmons	1970739, 1970740, 1970741
SM 2540 C-97	02/28/2018			03/02/2018	DeAsia Armster	1970739, 1970740, 1970741
SM 2540 D-97	02/28/2018			03/02/2018	DeAsia Armster	1970739, 1970740, 1970741
SM 4500 F-C-97	02/28/2018			03/09/2018	Dale L. Simmons	1970739, 1970740, 1970741
SM 5310 B-00	02/28/2018			03/05/2018	Megan Treadwell	1970742, 1970743, 1970744