Chemical Analysis Report

SO-DIST-2018-03-09-01

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

Event Description: **Sarasota Gators**
Request ID: **RQ-2018-03-05-56**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
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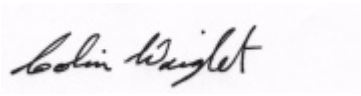
Certified by: Colin Wright, Program Administrator

Date Certified: 20-APR-2018 09:05



NON-CONFORMANCE REPORT INCLUDED

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: Curry(Tidal)@AlbeeFarm **Collection Date/Time: 03/08/2018 10:10**

Field ID: G3SD0066 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973470	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P341323	
	SM 2320 B-97	Total Alkalinity	154		mg CaCO3/L	P341725	
	SM 2540 D-97	TSS	4	I	mg/L	P341793	
	SM 4500 F-C-97	Fluoride	0.38		mg F/L	P341827	
1973472	EPA 350.1 Rev. 2.0	Ammonia-N	0.066		mg N/L	P341402	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P341433	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P341485	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P341452	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P341974	
1973474	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P341347	
1973560	EPA 200.7 Rev. 4.4	Iron	180	I	ug/L	P341449	
		Zinc	15	U	ug/L	P341449	
	EPA 200.8 Rev. 5.4	Arsenic	1.93		ug/L	P341449	
		Cadmium	0.060	U	ug/L	P341449	
		Chromium	2.8	I	ug/L	P341449	
		Copper	0.90	I	ug/L	P341449	
		Lead	0.15	U	ug/L	P341449	
		Nickel	1.8	I	ug/L	P341449	
		Silver	0.030	U	ug/L	P341449	

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: Curry(Tidal)@AlbeeFarm **Collection Date/Time: 03/08/2018 10:10**

Field ID: G3SD0066 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973508	EPA 8321B	Aldicarb	0.020	U	ug/L	P341188	
		Aldicarb Sulfone	0.0020	U	ug/L	P341188	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P341188	
		Carbaryl	0.0020	U	ug/L	P341188	
		Carbofuran	0.0020	U	ug/L	P341188	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P341188	
		Methiocarb	0.0020	U	ug/L	P341188	
		Methomyl	0.0020	U	ug/L	P341188	
		Oxamyl	0.0020	U	ug/L	P341188	
		Propoxur	0.0020	U	ug/L	P341188	
1973510		2,4-D	0.0048	I	ug/L	P341188	
		Sucralose**	1.1		ug/L	P341275	
		Bentazon	0.0044		ug/L	P341188	MS
		MCPP	0.0020	U	ug/L	P341188	MS
		Triclopyr**	0.0040	U	ug/L	P341188	MS
		Imidacloprid	0.0073	I	ug/L	P341188	
		Diuron	0.015		ug/L	P341188	
		Pyraclostrobin**	0.0020	U	ug/L	P341188	

Field ID: G3SD0066 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973510	EPA 8321B	Primidone**	0.0081	I	ug/L	P341188	
		Linuron	0.0040	U	ug/L	P341188	
		Acetaminophen**	0.0080	U	ug/L	P341188	
		Fenuron	0.0080	U	ug/L	P341188	
		Imazapyr**	0.17		ug/L	P341188	
		Carbamazepine**	0.0018		ug/L	P341188	
		Fluridone**	0.0060		ug/L	P341188	
		Glyphosate**	0.10	UJ	ug/L	P341274	SUR
		AMPA**	0.10	UJ	ug/L	P341274	SUR
1973512	EPA 8270D	Aldrin	4.1	U	ng/L	P341633	
		Alpha-BHC	2.0	U	ng/L	P341633	
		Beta-BHC	4.1	UJ	ng/L	P341633	LCS
		Delta-BHC	4.1	U	ng/L	P341633	
		Gamma-BHC	4.1	U	ng/L	P341633	
		Carbophenothion	4.1	U	ng/L	P341633	RPD
		Chlorothalonil	2.0	U	ng/L	P341633	RPD
		Cypermethrin	20	U	ng/L	P341633	
		DDD-p,p'	3.1	U	ng/L	P341633	
		DDE-p,p'	3.1	U	ng/L	P341633	
		DDT-p,p'	3.1	U	ng/L	P341633	
		Dieldrin	4.1	U	ng/L	P341633	
		Endosulfan I	4.1	U	ng/L	P341633	
		Endosulfan II	4.1	U	ng/L	P341633	
		Endosulfan Sulfate	2.0	U	ng/L	P341633	
		Endrin	2.0	U	ng/L	P341633	
		Endrin Aldehyde	2.0	UJ	ng/L	P341633	RPD
		Heptachlor	1.5	U	ng/L	P341633	
		Heptachlor Epoxide	2.0	U	ng/L	P341633	
		Methoxychlor	4.1	U	ng/L	P341633	
		Mirex	2.0	U	ng/L	P341633	
		Permethrin	10	U	ng/L	P341633	
		Trifluralin	1.0	U	ng/L	P341633	
		Alpha-Chlordane	1.0	U	ng/L	P341633	
		Gamma-Chlordane	1.0	U	ng/L	P341633	
		Endrin Ketone	2.0	U	ng/L	P341633	
		Dicofol	31	U	ng/L	P341633	
	EPA 8276	Chlordane**	2.6	U	ng/L	P341633	
		Toxaphene**	31	U	ng/L	P341633	
1973514	EPA 8270D	Alachlor	0.24	U	ng/L	P341343	
		Ametryn	2.1		ng/L	P341343	
		Atrazine	77		ng/L	P341343	
		Atrazine Desethyl	7.9		ng/L	P341343	
		Azinphos Methyl	2.2	U	ng/L	P341343	
		Bromacil	3.0		ng/L	P341343	
		Butylate	0.39	U	ng/L	P341343	

Field ID: G3SD0066 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973514	EPA 8270D	Chlorpyrifos Ethyl	0.24	U	ng/L	P341343	
		Chlorpyrifos Methyl	0.097	U	ng/L	P341343	
		Demeton	1.9	U	ng/L	P341343	
		Diazinon	0.12	U	ng/L	P341343	
		Disulfoton	0.48	U	ng/L	P341343	
		EPTC	1.2	U	ng/L	P341343	
		Ethion	0.15	U	ng/L	P341343	
		Ethoprop	0.097	U	ng/L	P341343	
		Fenamiphos	0.24	U	ng/L	P341343	
		Fipronil	0.24	U	ng/L	P341343	
		Fipronil Sulfide	0.15	U	ng/L	P341343	
		Fipronil Sulfone	0.44	I	ng/L	P341343	
		Hexazinone	6.7		ng/L	P341343	
		Malathion	0.34	U	ng/L	P341343	
		Metribuzin	2.7		ng/L	P341343	
		Mevinphos	0.48	U	ng/L	P341343	
		Molinate	0.29	U	ng/L	P341343	
		Norflurazon	2.1		ng/L	P341343	
		Pendimethalin	0.97	U	ng/L	P341343	
		Phorate	0.24	U	ng/L	P341343	
		Prometon	0.87	U	ng/L	P341343	
		Prometryn	0.19	U	ng/L	P341343	
		Simazine	0.48	U	ng/L	P341343	
		Terbufos	0.097	U	ng/L	P341343	
		Terbuthylazine	0.41	U	ng/L	P341343	
		Fonofos	0.19	U	ng/L	P341343	
		Metalaxyl	0.55	I	ng/L	P341343	
		Metolachlor	5.5		ng/L	P341343	
		Acetochlor	0.24	U	ng/L	P341343	
		Cyanazine	0.48	U	ng/L	P341343	
		Parathion Ethyl	0.24	U	ng/L	P341343	
		Parathion Methyl	0.24	U	ng/L	P341343	

Ref. Method and Comment:
EPA 8321B: Results confirmed in re-extraction. Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: Alligator @ Jacaranda **Collection Date/Time: 03/08/2018 11:10**

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973467	EPA 180.1 Rev. 2.0	Turbidity	2.6	A	NTU	P341323	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P341584	
		Sulfate	110		mg SO4/L	P341586	
	SM 2120 B	Color (true)	55		PCU	P341280	
	SM 2320 B-97	Total Alkalinity	272		mg CaCO3/L	P341624	
	SM 2540 C-97	TDS	627		mg/L	P341835	

Field ID: G2SD0026 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973467	SM 2540 D-97	TSS	6	I	mg/L	P341787	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P341829	
1973468	EPA 350.1 Rev. 2.0	Ammonia-N	0.087		mg N/L	P341874	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P341536	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P341529	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P341448	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P341972	
1973469	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.081		mg P/L	P341345	

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

Sample Location: Alligator Tidal @ US 41 **Collection Date/Time: 03/08/2018 11:35**

Field ID: G2SD0025 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973471	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P341323	
	SM 2320 B-97	Total Alkalinity	230	A	mg CaCO3/L	P341725	
	SM 2540 D-97	TSS	3	IA	mg/L	P341793	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P341827	
1973473	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P341875	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P341433	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.052		mg N/L	P341485	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P341383	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P341974	
1973475	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P341347	
1973561	EPA 200.7 Rev. 4.4	Iron	170	I	ug/L	P341449	
		Zinc	15	U	ug/L	P341449	
	EPA 200.8 Rev. 5.4	Arsenic	1.66		ug/L	P341449	
		Cadmium	0.060	U	ug/L	P341449	
		Chromium	1.2	U	ug/L	P342362	
		Copper	0.67	I	ug/L	P341449	
		Lead	0.15	U	ug/L	P341449	
		Nickel	1.3	I	ug/L	P342362	
		Silver	0.030	U	ug/L	P341449	

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

Sample Location: Alligator Tidal @ US 41 **Collection Date/Time: 03/08/2018 11:35**

Field ID: G2SD0025 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973509	EPA 8321B	Aldicarb	0.020	U	ug/L	P341188	
		Aldicarb Sulfone	0.0020	U	ug/L	P341188	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P341188	
		Carbaryl	0.0020	U	ug/L	P341188	
		Carbofuran	0.0020	U	ug/L	P341188	

Field ID: G2SD0025 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973509	EPA 8321B	3-Hydroxycarbofuran	0.0020	U	ug/L	P341188	
		Methiocarb	0.0020	U	ug/L	P341188	
		Methomyl	0.0020	U	ug/L	P341188	
		Oxamyl	0.0020	U	ug/L	P341188	
		Propoxur	0.0020	U	ug/L	P341188	
1973511		2,4-D	2.5		ug/L	P341188	
		Sucralose**	2.1		ug/L	P341275	
		Bentazon	0.0091		ug/L	P341188	MS
		MCPP	0.0020	U	ug/L	P341188	MS
		Triclopyr**	0.0040	U	ug/L	P341188	MS
		Imidacloprid	0.010		ug/L	P341188	
		Diuron	0.0020	U	ug/L	P341188	
		Pyraclostrobin**	0.0020	U	ug/L	P341188	
		Primidone**	0.026		ug/L	P341188	
		Linuron	0.0040	U	ug/L	P341188	
		Acetaminophen**	0.0080	U	ug/L	P341188	
		Fenuron	0.0080	U	ug/L	P341188	
		Imazapyr**	0.11		ug/L	P341188	
		Carbamazepine**	0.0093		ug/L	P341188	
		Fluridone**	0.0090		ug/L	P341188	
		Glyphosate**	0.10	UJ	ug/L	P341274	SUR
		AMPA**	0.10	UJ	ug/L	P341274	SUR
1973513	EPA 8270D	Aldrin	4.5	U	ng/L	P341633	
		Alpha-BHC	2.3	U	ng/L	P341633	
		Beta-BHC	4.5	UJ	ng/L	P341633	LCS
		Delta-BHC	4.5	U	ng/L	P341633	
		Gamma-BHC	4.5	U	ng/L	P341633	
		Carbophenothion	4.5	U	ng/L	P341633	RPD
		Chlorothalonil	2.3	U	ng/L	P341633	RPD
		Cypermethrin	23	U	ng/L	P341633	
		DDD-p,p'	3.4	U	ng/L	P341633	
		DDE-p,p'	3.4	U	ng/L	P341633	
		DDT-p,p'	3.4	U	ng/L	P341633	
		Dieldrin	4.5	U	ng/L	P341633	
		Endosulfan I	4.5	U	ng/L	P341633	
		Endosulfan II	4.5	U	ng/L	P341633	
		Endosulfan Sulfate	2.3	U	ng/L	P341633	
		Endrin	2.3	U	ng/L	P341633	
		Endrin Aldehyde	2.3	UJ	ng/L	P341633	RPD
		Heptachlor	1.7	U	ng/L	P341633	
		Heptachlor Epoxide	2.3	U	ng/L	P341633	
		Methoxychlor	4.5	U	ng/L	P341633	
		Mirex	2.3	U	ng/L	P341633	
		Permethrin	11	U	ng/L	P341633	
		Trifluralin	1.1	U	ng/L	P341633	

Field ID: G2SD0025 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973513	EPA 8270D	Alpha-Chlordane	1.1	U	ng/L	P341633	
		Gamma-Chlordane	1.1	U	ng/L	P341633	
		Endrin Ketone	2.3	U	ng/L	P341633	
		Dicofol	34	U	ng/L	P341633	
	EPA 8276	Chlordane**	2.8	U	ng/L	P341633	
		Toxaphene**	34	U	ng/L	P341633	
1973515	EPA 8270D	Alachlor	0.24	U	ng/L	P341343	
		Ametryn	2.7		ng/L	P341343	
		Atrazine	30		ng/L	P341343	
		Atrazine Desethyl	5.3	I	ng/L	P341343	
		Azinphos Methyl	2.1	U	ng/L	P341343	
		Bromacil	0.48	U	ng/L	P341343	
		Butylate	0.38	U	ng/L	P341343	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P341343	
		Chlorpyrifos Methyl	0.096	U	ng/L	P341343	
		Demeton	1.9	U	ng/L	P341343	
		Diazinon	0.12	U	ng/L	P341343	
		Disulfoton	0.48	U	ng/L	P341343	
		EPTC	1.2	U	ng/L	P341343	
		Ethion	0.14	U	ng/L	P341343	
		Ethoprop	0.096	U	ng/L	P341343	
		Fenamiphos	0.24	U	ng/L	P341343	
		Fipronil	0.24	U	ng/L	P341343	
		Fipronil Sulfide	0.29	I	ng/L	P341343	
		Fipronil Sulfone	1.1		ng/L	P341343	
		Hexazinone	22		ng/L	P341343	
		Malathion	0.33	U	ng/L	P341343	
		Metribuzin	0.33	I	ng/L	P341343	
		Mevinphos	0.48	U	ng/L	P341343	
		Molinate	0.29	U	ng/L	P341343	
		Norflurazon	0.48	U	ng/L	P341343	
		Pendimethalin	0.96	U	ng/L	P341343	
		Phorate	0.24	U	ng/L	P341343	
		Prometon	0.86	U	ng/L	P341343	
		Prometryn	0.19	U	ng/L	P341343	
		Simazine	0.91	I	ng/L	P341343	
		Terbufos	0.096	U	ng/L	P341343	
		Terbuthylazine	0.41	U	ng/L	P341343	
		Fonofos	0.19	U	ng/L	P341343	
		Metalaxyl	38		ng/L	P341343	
		Metolachlor	0.24	U	ng/L	P341343	
		Acetochlor	0.24	U	ng/L	P341343	
		Cyanazine	0.48	U	ng/L	P341343	
		Parathion Ethyl	0.24	U	ng/L	P341343	
		Parathion Methyl	0.24	U	ng/L	P341343	

Field ID: G2SD0025 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

Ref. Method and Comment:
EPA 8321B: Results confirmed in re-extraction. Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: Woodmere Creek@Heron Rd **Collection Date/Time: 03/08/2018 12:35**

Field ID: G2SD0027 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973506	EPA 8321B	2,4-D	0.0020	U	ug/L	P341188	
		Sucralose**	2.3		ug/L	P341275	
		Bentazon	0.011		ug/L	P341188	MS
		MCPP	0.0034	I	ug/L	P341188	MS
		Triclopyr**	0.0040	U	ug/L	P341188	MS
		Imidacloprid	0.019		ug/L	P341188	
		Diuron	0.0020	U	ug/L	P341188	
		Primidone**	0.0040	U	ug/L	P341188	
		Linuron	0.0040	U	ug/L	P341188	
		Acetaminophen**	0.0080	U	ug/L	P341188	
		Fenuron	0.0080	U	ug/L	P341188	
		Imazapyr**	0.46		ug/L	P341188	
		Carbamazepine**	0.016		ug/L	P341188	
		Fluridone**	8.0E-04	U	ug/L	P341188	

Sample Location: Gottfried@DeerCrkMobile **Collection Date/Time: 03/08/2018 13:10**

Field ID: G2SD0028 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973507	EPA 8321B	2,4-D	0.0020	U	ug/L	P341188	
		Sucralose**	0.13		ug/L	P341275	
		Bentazon	9.7E-04	I	ug/L	P341188	MS
		MCPP	0.0020	U	ug/L	P341188	MS
		Triclopyr**	0.0040	U	ug/L	P341188	MS
		Imidacloprid	0.0020	U	ug/L	P341188	
		Diuron	0.0020	U	ug/L	P341188	
		Primidone**	0.0040	U	ug/L	P341188	
		Linuron	0.0040	U	ug/L	P341188	
		Acetaminophen**	0.0080	U	ug/L	P341188	
		Fenuron	0.0080	U	ug/L	P341188	
		Imazapyr**	0.056		ug/L	P341188	
		Carbamazepine**	5.3E-04	I	ug/L	P341188	
		Fluridone**	0.0023	I	ug/L	P341188	

Non-Conformance Report

NCR ID: 6930

Event(s)	Job(s)	Sample(s)	Test(s)
SO-DIST-2018-03-09-01	TLH-2018-03-09-19	1973512	

Non-Conformance Report

NCR ID: 6930

Event(s) **Job(s)** **Sample(s)** **Test(s)**

NCR Type: SHIPPING/RECEIVING **NCR Category: Receiving**

Observation: Sample received with cracked cap.

Resolution: Container marked with an X on label and broken cap replaced.

Authorized by/Date: Joshua Ayres 3/20/2018

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341323

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341449

Component	Result	Code	Units
Iron	30	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341449

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342362

Component	Result	Code	Units
Chromium	0.40	U	ug/L
Nickel	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341584

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341586

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341402

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341874

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341875

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341433

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341536

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341485

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341529

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341383

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341448

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341452

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341345

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341347

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

Reference Method: EPA 8270D
Batch ID: P341343

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P341343

Component	Result	Code	Units
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P341633

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 8276
Batch ID: P341633

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P341188

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	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P341274

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

Reference Method: EPA 8321B
Batch ID: P341275

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P341280

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P341624

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P341725

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

Reference Method: SM 2540 C-97
Batch ID: P341835

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341787

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341793

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P341827

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P341829

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P341972

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-00
Batch ID: P341974

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: P341449

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	109		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	80 - 120
Cadmium	102		P	80 - 120
Chromium	105		P	85 - 115
Copper	101		P	80 - 120
Lead	103		P	80 - 120
Nickel	101		P	80 - 120
Silver	107		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342362

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	106		P	70 - 130
Nickel	101		P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341584

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341586

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341402

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341874

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341875

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341433

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341536

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341485

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341529

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: P341383

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341448

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341452

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: P341345

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341347

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.5		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P341343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	98.2	95.6	P/P	74 - 119
Alachlor	99.4	96.1	P/P	75 - 118
Ametryn	107	105	P/P	59 - 137
Atrazine	101	92.4	P/P	73 - 120
Atrazine Desethyl	93.8	91.9	P/P	19 - 129
Azinphos Methyl	108	103	P/P	65 - 181
Bromacil	91.1	76.2	P/P	43 - 123
Butylate	51.7	53.2	P/P	28 - 85.0
Chlorpyrifos Ethyl	95.4	90.0	P/P	55 - 112
Chlorpyrifos Methyl	99.0	93.8	P/P	35 - 124
Cyanazine	135	121	P/P	26 - 262
Demeton	78.2	84.0	P/P	43 - 122
Diazinon	98.2	99.1	P/P	72 - 120
Disulfoton	79.4	85.7	P/P	45 - 137
EPTC	51.0	55.5	P/P	28 - 95.0
Ethion	83.9	86.8	P/P	63 - 127
Ethoprop	91.3	91.3	P/P	63 - 109
Fenamiphos	103	99.4	P/P	66 - 136
Fipronil	104	99.0	P/P	63 - 126
Fipronil Sulfide	104	92.6	P/P	59 - 123
Fipronil Sulfone	93.3	84.2	P/P	56 - 122
Fonofos	94.0	90.8	P/P	64 - 114
Hexazinone	101	100	P/P	49 - 144
Malathion	101	92.7	P/P	68 - 131
Metalaxyl	99.7	94.7	P/P	57 - 126
Metolachlor	95.8	93.1	P/P	75 - 118
Metribuzin	160	137	P/P	46 - 169
Mevinphos	84.8	80.4	P/P	34 - 126
Molinate	60.2	60.4	P/P	37 - 101
Norflurazon	98.9	94.3	P/P	63 - 127
Parathion Ethyl	93.2	93.2	P/P	78 - 109
Parathion Methyl	103	100	P/P	74 - 123
Pendimethalin	114	116	P/P	51 - 130
Phorate	90.4	88.3	P/P	53 - 116
Prometon	91.4	86.0	P/P	66 - 124
Prometryn	96.3	93.7	P/P	66 - 124
Simazine	103	98.1	P/P	62 - 134
Terbufos	88.6	89.6	P/P	59 - 115
Terbuthylazine	96.2	93.4	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P341633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	76.8	57.4	P/P	24 - 89.0
Alpha-BHC	90.3	84.0	P/P	58 - 117
Alpha-Chlordane	102	88.1	P/P	56 - 115
Beta-BHC	140	135	F/P	55 - 137
Carbophenothion	114	99.1	P/P	37 - 145
Chlorothalonil	114	95.6	P/P	26 - 163
Cypermethrin	104	104	P/P	42 - 156
DDD-p,p'	110	97.9	P/P	59 - 129

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P341633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDE-p,p'	102	88.0	P/P	52 - 117
DDT-p,p'	102	93.8	P/P	48 - 128
Delta-BHC	123	107	P/P	59 - 158
Dicofol	98.0	75.2	P/P	19 - 124
Dieldrin	107	91.2	P/P	57 - 126
Endosulfan I	106	86.9	P/P	59 - 133
Endosulfan II	140	109	P/P	58 - 148
Endosulfan Sulfate	123	118	P/P	56 - 135
Endrin	104	80.1	P/P	50 - 140
Endrin Aldehyde	112	75.2	P/P	47 - 141
Endrin Ketone	111	111	P/P	63 - 123
Gamma-BHC	111	119	P/P	59 - 132
Gamma-Chlordane	101	86.8	P/P	55 - 112
Heptachlor	78.7	70.6	P/P	45 - 102
Heptachlor Epoxide	101	88.2	P/P	61 - 116
Methoxychlor	103	103	P/P	60 - 133
Mirex	78.8	76.2	P/P	40 - 98.0
Permethrin	97.7	103	P/P	45 - 131
Trifluralin	86.5	86.5	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P341633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.6	70.1	P/P	47 - 125
Toxaphene	88.5	83.0	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P341188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	81.6		P	40 - 150
3-Hydroxycarbofuran	111		P	40 - 150
Acetaminophen	112		P	30 - 150
Aldicarb	85.5		P	30 - 150
Aldicarb Sulfone	110		P	40 - 150
Aldicarb Sulfoxide	118		P	40 - 150
Bentazon	89.8		P	30 - 150
Carbamazepine	76.0		P	40 - 150
Carbaryl	71.1		P	40 - 150
Carbofuran	66.3		P	40 - 150
Diuron	64.9		P	40 - 150
Fenuron	110		P	40 - 150
Fluridone	61.8		P	40 - 150
Imazapyr	83.6		P	40 - 150
Imidacloprid	106		P	40 - 160
Linuron	86.9		P	40 - 150
MCPP	79.7		P	40 - 150
Methiocarb	75.6		P	40 - 150
Methomyl	93.5		P	40 - 150
Oxamyl	104		P	40 - 150
Primidone	111		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P341188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propoxur	66.9		P	40 - 150
Pyraclostrobin	57.3		P	40 - 150
Triclopyr	84.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341274

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	98.4		P	40 - 150
Glyphosate	97.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	99.6		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P341624

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.7		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P341725

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.1		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P341827

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	93.6		P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P341829

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.0		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P341972

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P341974

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973056	Iron	108	109	P/P	80 - 120
1973056	Zinc	109	106	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973056	Arsenic	110	108	P/P	70 - 130
1973056	Cadmium	102	99.7	P/P	70 - 130
1973056	Chromium	92.7	93.2	P/P	70 - 130
1973056	Copper	102	100	P/P	70 - 130
1973056	Lead	111	109	P/P	70 - 130
1973056	Nickel	102	100	P/P	70 - 130
1973056	Silver	100	99.2	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342362

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1978070	Chromium	85.1	87.5	P/P	70 - 130
1978070	Nickel	100	103	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973751	Chloride	92.9		P	90 - 110
1974169	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973751	Sulfate	97.9		P	90 - 110
1974169	Sulfate	95.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972338	Ammonia-N	100	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973332	Ammonia-N	98.1	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973519	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973538	Kjeldahl Nitrogen	106	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973468	Kjeldahl Nitrogen	97.1	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973095	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973461	NO2NO3-N	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341383

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973001	Total-P	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973353	Total-P	99.0	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973472	Total-P	101	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973304	O-Phosphate-P	95.2	95.3	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341347

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973529	O-Phosphate-P	95.7	96.7	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P341343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972133	Acetochlor	92.8	96.6	P/P	67 - 125
1972133	Alachlor	90.1	89.0	P/P	69 - 123
1972133	Ametryn	105	110	P/P	52 - 151
1972133	Atrazine	92.5	93.5	P/P	71 - 125
1972133	Atrazine Desethyl	105	110	P/P	10 - 129
1972133	Azinphos Methyl	91.6	101	P/P	48 - 200
1972133	Bromacil	91.8	96.1	P/P	46 - 130
1972133	Butylate	34.4	42.9	P/P	10 - 85.0
1972133	Chlorpyrifos Ethyl	75.1	83.8	P/P	54 - 115
1972133	Chlorpyrifos Methyl	83.9	90.6	P/P	44 - 117
1972133	Cyanazine	115	122	P/P	10 - 262
1972133	Demeton	69.2	78.9	P/P	24 - 145
1972133	Diazinon	101	102	P/P	66 - 129
1972133	Disulfoton	71.3	72.2	P/P	45 - 139
1972133	EPTC	33.4	41.9	P/P	10 - 86.0
1972133	Ethion	89.5	84.4	P/P	59 - 133
1972133	Ethoprop	92.4	98.8	P/P	54 - 116
1972133	Fenamiphos	86.7	101	P/P	55 - 140
1972133	Fipronil	103	110	P/P	37 - 142
1972133	Fipronil Sulfide	89.9	103	P/P	37 - 130
1972133	Fipronil Sulfone	82.3	93.5	P/P	18 - 143
1972133	Fonofos	89.9	96.4	P/P	55 - 118
1972133	Hexazinone	108	117	P/P	62 - 140
1972133	Malathion	83.8	87.3	P/P	64 - 132
1972133	Metalaxyl	90.7	96.0	P/P	55 - 129
1972133	Metolachlor	83.7	90.2	P/P	56 - 137
1972133	Metribuzin	162	175	P/P	16 - 218
1972133	Mevinphos	83.5	91.6	P/P	34 - 129
1972133	Molinate	54.1	58.4	P/P	16 - 99.0
1972133	Norflurazon	93.0	103	P/P	43 - 135
1972133	Parathion Ethyl	88.4	96.2	P/P	71 - 112
1972133	Parathion Methyl	96.9	104	P/P	65 - 127
1972133	Pendimethalin	111	117	P/P	35 - 159
1972133	Phorate	79.3	77.7	P/P	41 - 129
1972133	Prometon	92.3	104	P/P	56 - 140
1972133	Prometryn	99.1	104	P/P	65 - 130
1972133	Simazine	107	116	P/P	54 - 148
1972133	Terbufos	83.9	90.0	P/P	53 - 126
1972133	Terbuthylazine	94.8	103	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P341633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973697	Aldrin	70.8	66.0	P/P	26 - 96.0
1973697	Alpha-BHC	97.8	96.6	P/P	51 - 123

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P341633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973697	Alpha-Chlordane	98.4	99.3	P/P	45 - 120
1973697	Beta-BHC	116	127	P/P	43 - 146
1973697	Carbophenothion	80.6	109	P/P	26 - 179
1973697	Chlorothalonil	89.2	155	P/P	10 - 215
1973697	Cypermethrin	97.8	110	P/P	35 - 169
1973697	DDD-p,p'	109	111	P/P	49 - 131
1973697	DDE-p,p'	102	96.4	P/P	39 - 127
1973697	DDT-p,p'	95.0	114	P/P	49 - 120
1973697	Delta-BHC	131	165	P/P	49 - 187
1973697	Dicofol	87.9	87.9	P/P	10 - 129
1973697	Dieldrin	99.4	94.2	P/P	46 - 132
1973697	Endosulfan I	104	108	P/P	57 - 130
1973697	Endosulfan II	116	141	P/P	52 - 148
1973697	Endosulfan Sulfate	93.0	106	P/P	55 - 129
1973697	Endrin	91.3	95.7	P/P	45 - 133
1973697	Endrin Aldehyde	95.3	32.1	P/P	26 - 140
1973697	Endrin Ketone	92.8	102	P/P	60 - 125
1973697	Gamma-BHC	110	104	P/P	50 - 145
1973697	Gamma-Chlordane	94.0	95.9	P/P	44 - 118
1973697	Heptachlor	70.9	70.4	P/P	35 - 106
1973697	Heptachlor Epoxide	99.6	102	P/P	52 - 123
1973697	Methoxychlor	96.7	95.6	P/P	54 - 132
1973697	Mirex	80.4	83.5	P/P	36 - 107
1973697	Permethrin	90.5	95.8	P/P	47 - 135
1973697	Trifluralin	84.4	87.5	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P341633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973512	Chlordane	69.2	61.7	P/P	41 - 134
1973512	Toxaphene	79.4	80.1	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P341188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973254	2,4-D	40.5	50.2	P/P	40 - 150
1973254	3-Hydroxycarbofuran	109	112	P/P	40 - 150
1973254	Acetaminophen	130	132	P/P	30 - 150
1973254	Aldicarb	80.1	84.7	P/P	30 - 150
1973254	Aldicarb Sulfone	121	122	P/P	40 - 150
1973254	Aldicarb Sulfoxide	93.9	92.9	P/P	40 - 150
1973254	Bentazon	25.7	27.3	F/F	30 - 150
1973254	Carbamazepine	82.8	78.6	P/P	40 - 150
1973254	Carbaryl	52.5	53.7	P/P	40 - 150
1973254	Carbofuran	63.3	63.1	P/P	40 - 150
1973254	Diuron	54.1	61.5	P/P	40 - 150
1973254	Fenuron	84.6	82.9	P/P	40 - 150
1973254	Fluridone	52.4	55.8	P/P	40 - 150
1973254	Imazapyr	74.0	61.6	P/P	40 - 150
1973254	Imidacloprid	148	152	P/P	40 - 160

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P341188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973254	Linuron	79.7	87.7	P/P	40 - 150
1973254	MCPP	33.9	39.1	F/F	40 - 150
1973254	Methiocarb	64.7	72.8	P/P	40 - 150
1973254	Methomyl	91.1	86.6	P/P	40 - 150
1973254	Oxamyl	91.5	88.7	P/P	40 - 150
1973254	Primidone	100	105	P/P	40 - 150
1973254	Propoxur	68.8	72.9	P/P	40 - 150
1973254	Pyraclostrobin	60.2	61.3	P/P	40 - 150
1973254	Triclopyr	34.2	40.8	F/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972973	AMPA	94.9	98.6	P/P	40 - 150
1972973	Glyphosate	104	102	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P341275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973254	Sucralose	91.8	103	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P341827

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1974337	Fluoride	92.3	93.3	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P341829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973287	Fluoride	94.2	95.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P341972

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973291	Organic Carbon	100	101	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P341974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973091	Organic Carbon	98.8	99.0	P/P	85 - 115

Quality Assurance Report
Precision

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973467	Turbidity	0.388	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973056	Iron	0.619	Spike	P	0 - 20
1973056	Zinc	1.22	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973056	Arsenic	1.85	Spike	P	0 - 20
1973056	Cadmium	1.49	Spike	P	0 - 20
1973056	Chromium	0.561	Spike	P	0 - 20
1973056	Copper	2.04	Spike	P	0 - 20
1973056	Lead	1.18	Spike	P	0 - 20
1973056	Nickel	1.87	Spike	P	0 - 20
1973056	Silver	1.09	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P342362

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978070	Chromium	2.75	Spike	P	0 - 20
1978070	Nickel	3.16	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973751	Chloride	0.166	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973751	Sulfate	0.138	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972338	Ammonia-N	0.670	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973332	Ammonia-N	1.47	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973519	Ammonia-N	0.0852	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973538	Kjeldahl Nitrogen	0.900	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973468	Kjeldahl Nitrogen	3.13	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973095	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973461	NO2NO3-N	0.477	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973001	Total-P	2.75	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973353	Total-P	2.80	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973472	Total-P	3.33	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973304	O-Phosphate-P	0.0817	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341347

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973529	O-Phosphate-P	0.794	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P341343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972133	Acetochlor	4.05	Spike	P	0 - 30
1972133	Alachlor	1.30	Spike	P	0 - 30
1972133	Ametryn	2.49	Spike	P	0 - 30
1972133	Atrazine	0.489	Spike	P	0 - 30
1972133	Atrazine Desethyl	4.55	Spike	P	0 - 30
1972133	Azinphos Methyl	10.2	Spike	P	0 - 30
1972133	Bromacil	4.61	Spike	P	0 - 30
1972133	Butylate	22.1	Spike	P	0 - 30
1972133	Chlorpyrifos Ethyl	10.9	Spike	P	0 - 30
1972133	Chlorpyrifos Methyl	7.72	Spike	P	0 - 30
1972133	Cyanazine	6.21	Spike	P	0 - 30
1972133	Demeton	13.1	Spike	P	0 - 30
1972133	Diazinon	0.906	Spike	P	0 - 30
1972133	Disulfoton	1.21	Spike	P	0 - 30
1972133	EPTC	22.8	Spike	P	0 - 30
1972133	Ethion	5.88	Spike	P	0 - 30
1972133	Ethoprop	6.72	Spike	P	0 - 30
1972133	Fenamiphos	15.4	Spike	P	0 - 30
1972133	Fipronil	7.00	Spike	P	0 - 30
1972133	Fipronil Sulfide	13.3	Spike	P	0 - 30
1972133	Fipronil Sulfone	12.8	Spike	P	0 - 30
1972133	Fonofos	6.96	Spike	P	0 - 30
1972133	Hexazinone	7.85	Spike	P	0 - 30
1972133	Malathion	4.15	Spike	P	0 - 30
1972133	Metalaxyl	5.72	Spike	P	0 - 30
1972133	Metolachlor	6.88	Spike	P	0 - 30
1972133	Metribuzin	7.76	Spike	P	0 - 30
1972133	Mevinphos	9.29	Spike	P	0 - 30
1972133	Molinate	7.55	Spike	P	0 - 30
1972133	Norflurazon	10.2	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P341343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972133	Parathion Ethyl	8.43	Spike	P	0 - 30
1972133	Parathion Methyl	7.05	Spike	P	0 - 30
1972133	Pendimethalin	5.13	Spike	P	0 - 30
1972133	Phorate	1.68	Spike	P	0 - 30
1972133	Prometon	11.6	Spike	P	0 - 30
1972133	Prometryn	4.46	Spike	P	0 - 30
1972133	Simazine	7.93	Spike	P	0 - 30
1972133	Terbufos	7.02	Spike	P	0 - 30
1972133	Terbuthylazine	7.90	Spike	P	0 - 30
LFB	Acetochlor	2.75	LCS	P	0 - 30
LFB	Alachlor	3.39	LCS	P	0 - 30
LFB	Ametryn	2.45	LCS	P	0 - 30
LFB	Atrazine	9.33	LCS	P	0 - 30
LFB	Atrazine Desethyl	2.07	LCS	P	0 - 30
LFB	Azinphos Methyl	5.53	LCS	P	0 - 30
LFB	Bromacil	17.8	LCS	P	0 - 30
LFB	Butylate	2.92	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	5.83	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.39	LCS	P	0 - 30
LFB	Cyanazine	10.7	LCS	P	0 - 30
LFB	Demeton	7.15	LCS	P	0 - 30
LFB	Diazinon	0.963	LCS	P	0 - 30
LFB	Disulfoton	7.59	LCS	P	0 - 30
LFB	EPTC	8.40	LCS	P	0 - 30
LFB	Ethion	3.48	LCS	P	0 - 30
LFB	Ethoprop	0.0397	LCS	P	0 - 30
LFB	Fenamiphos	3.71	LCS	P	0 - 30
LFB	Fipronil	5.07	LCS	P	0 - 30
LFB	Fipronil Sulfide	11.6	LCS	P	0 - 30
LFB	Fipronil Sulfone	10.2	LCS	P	0 - 30
LFB	Fonofos	3.41	LCS	P	0 - 30
LFB	Hexazinone	1.10	LCS	P	0 - 30
LFB	Malathion	8.20	LCS	P	0 - 30
LFB	Metalaxyl	5.14	LCS	P	0 - 30
LFB	Metolachlor	2.84	LCS	P	0 - 30
LFB	Metribuzin	15.4	LCS	P	0 - 30
LFB	Mevinphos	5.27	LCS	P	0 - 30
LFB	Molinate	0.246	LCS	P	0 - 30
LFB	Norflurazon	4.79	LCS	P	0 - 30
LFB	Parathion Ethyl	0.0201	LCS	P	0 - 30
LFB	Parathion Methyl	2.74	LCS	P	0 - 30
LFB	Pendimethalin	2.17	LCS	P	0 - 30
LFB	Phorate	2.41	LCS	P	0 - 30
LFB	Prometon	6.09	LCS	P	0 - 30
LFB	Prometryn	2.79	LCS	P	0 - 30
LFB	Simazine	5.17	LCS	P	0 - 30
LFB	Terbufos	1.19	LCS	P	0 - 30
LFB	Terbuthylazine	2.93	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P341633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973697	Aldrin	7.03	Spike	P	0 - 30
1973697	Alpha-BHC	1.21	Spike	P	0 - 30
1973697	Alpha-Chlordane	0.772	Spike	P	0 - 30
1973697	Beta-BHC	9.22	Spike	P	0 - 30
1973697	Carbophenothion	30.3	Spike	F	0 - 30
1973697	Chlorothalonil	53.9	Spike	F	0 - 30
1973697	Cypermethrin	12.1	Spike	P	0 - 30
1973697	DDD-p,p'	1.84	Spike	P	0 - 30
1973697	DDE-p,p'	5.22	Spike	P	0 - 30
1973697	DDT-p,p'	18.0	Spike	P	0 - 30
1973697	Delta-BHC	22.6	Spike	P	0 - 30
1973697	Dicofol	0.0291	Spike	P	0 - 30
1973697	Dieldrin	5.35	Spike	P	0 - 30
1973697	Endosulfan I	4.10	Spike	P	0 - 30
1973697	Endosulfan II	18.9	Spike	P	0 - 30
1973697	Endosulfan Sulfate	12.6	Spike	P	0 - 30
1973697	Endrin	4.70	Spike	P	0 - 30
1973697	Endrin Aldehyde	99.2	Spike	F	0 - 30
1973697	Endrin Ketone	9.30	Spike	P	0 - 30
1973697	Gamma-BHC	5.60	Spike	P	0 - 30
1973697	Gamma-Chlordane	1.74	Spike	P	0 - 30
1973697	Heptachlor	0.648	Spike	P	0 - 30
1973697	Heptachlor Epoxide	2.63	Spike	P	0 - 30
1973697	Methoxychlor	1.05	Spike	P	0 - 30
1973697	Mirex	3.84	Spike	P	0 - 30
1973697	Permethrin	5.72	Spike	P	0 - 30
1973697	Trifluralin	3.63	Spike	P	0 - 30
LFB	Aldrin	28.9	LCS	P	0 - 30
LFB	Alpha-BHC	7.28	LCS	P	0 - 30
LFB	Alpha-Chlordane	15.0	LCS	P	0 - 30
LFB	Beta-BHC	4.13	LCS	P	0 - 30
LFB	Carbophenothion	13.8	LCS	P	0 - 30
LFB	Chlorothalonil	17.7	LCS	P	0 - 30
LFB	Cypermethrin	0.686	LCS	P	0 - 30
LFB	DDD-p,p'	11.5	LCS	P	0 - 30
LFB	DDE-p,p'	15.0	LCS	P	0 - 30
LFB	DDT-p,p'	8.61	LCS	P	0 - 30
LFB	Delta-BHC	14.0	LCS	P	0 - 30
LFB	Dicofol	26.3	LCS	P	0 - 30
LFB	Dieldrin	16.1	LCS	P	0 - 30
LFB	Endosulfan I	20.0	LCS	P	0 - 30
LFB	Endosulfan II	24.5	LCS	P	0 - 30
LFB	Endosulfan Sulfate	4.06	LCS	P	0 - 30
LFB	Endrin	25.6	LCS	P	0 - 30
LFB	Endrin Aldehyde	39.3	LCS	F	0 - 30
LFB	Endrin Ketone	0.122	LCS	P	0 - 30
LFB	Gamma-BHC	7.15	LCS	P	0 - 30
LFB	Gamma-Chlordane	14.7	LCS	P	0 - 30
LFB	Heptachlor	10.8	LCS	P	0 - 30
LFB	Heptachlor Epoxide	13.9	LCS	P	0 - 30
LFB	Methoxychlor	0.0196	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P341633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	3.44	LCS	P	0 - 30
LFB	Permethrin	4.88	LCS	P	0 - 30
LFB	Trifluralin	0.0223	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P341633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973512	Chlordane	11.4	Spike	P	0 - 30
1973512	Toxaphene	0.901	Spike	P	0 - 30
LFB	Chlordane	10.2	LCS	P	0 - 30
LFB	Toxaphene	6.44	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973254	2,4-D	19.8	Spike	P	0 - 30
1973254	3-Hydroxycarbofuran	2.94	Spike	P	0 - 30
1973254	Acetaminophen	1.83	Spike	P	0 - 30
1973254	Aldicarb	5.56	Spike	P	0 - 30
1973254	Aldicarb Sulfone	0.264	Spike	P	0 - 30
1973254	Aldicarb Sulfoxide	1.02	Spike	P	0 - 30
1973254	Bentazon	6.00	Spike	P	0 - 30
1973254	Carbamazepine	5.13	Spike	P	0 - 30
1973254	Carbaryl	2.12	Spike	P	0 - 30
1973254	Carbofuran	0.218	Spike	P	0 - 30
1973254	Diuron	12.1	Spike	P	0 - 30
1973254	Fenuron	2.01	Spike	P	0 - 30
1973254	Fluridone	6.42	Spike	P	0 - 30
1973254	Imazapyr	18.4	Spike	P	0 - 30
1973254	Imidacloprid	2.63	Spike	P	0 - 30
1973254	Linuron	9.57	Spike	P	0 - 30
1973254	MCPP	14.3	Spike	P	0 - 30
1973254	Methiocarb	11.7	Spike	P	0 - 30
1973254	Methomyl	5.04	Spike	P	0 - 30
1973254	Oxamyl	3.12	Spike	P	0 - 30
1973254	Primidone	4.68	Spike	P	0 - 30
1973254	Propoxur	5.77	Spike	P	0 - 30
1973254	Pyraclostrobin	1.76	Spike	P	0 - 30
1973254	Triclopyr	17.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P341274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972973	AMPA	3.77	Spike	P	0 - 30
1972973	Glyphosate	2.04	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P341275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973254	Sucralose	10.7	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P341280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973351	Color (true)	9.19	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341624

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973287	Total Alkalinity	0.314	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P341725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973471	Total Alkalinity	0.388	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P341835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973594	TDS	5.85	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P341827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1974337	Fluoride	0.988	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P341829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973287	Fluoride	0.953	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P341972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973291	Organic Carbon	1.11	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 5310 B-00
Batch ID: P341974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973091	Organic Carbon	0.211	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: 1973506
Field Sample ID: G2SD0027

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.0	P	30 - 160
EPA 8321B	Diuron-d6	68.1	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	40 - 160

Lab Sample ID: 1973507
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	56.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	133	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.5	P	30 - 160
EPA 8321B	Diuron-d6	71.2	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	95.4	P	40 - 160

Lab Sample ID: 1973508
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	54.1	P	30 - 160

Lab Sample ID: 1973509
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	65.7	P	30 - 160

Lab Sample ID: 1973510
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	62.3	P	30 - 160
EPA 8321B	2,4-D-d3	62.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 1973510
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	76.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.8	P	30 - 160
EPA 8321B	Diuron-d6	70.8	P	30 - 160
EPA 8321B	Diuron-d6	70.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	15.0	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	15.0	F	40 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	40 - 160

Lab Sample ID: 1973511
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.6	P	30 - 160
EPA 8321B	2,4-D-d3	87.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.6	P	30 - 160
EPA 8321B	Diuron-d6	76.0	P	30 - 160
EPA 8321B	Diuron-d6	76.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	21.4	F	40 - 160
EPA 8321B	Glyphosate 13C 15N	21.4	F	40 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	91.4	P	40 - 160

Lab Sample ID: 1973512
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	79.2	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	54.5	P	34 - 101
EPA 8276	Decachlorobiphenyl	68.0	P	31 - 108
EPA 8276	PCNB	131	P	62 - 142

Lab Sample ID: 1973513
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	69.3	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	38.1	P	34 - 101
EPA 8276	Decachlorobiphenyl	58.2	P	31 - 108
EPA 8276	PCNB	108	P	62 - 142

Lab Sample ID: 1973514
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	114	P	71 - 126
EPA 8270D	Terbufos-d10	92.2	P	50 - 130

Quality Assurance Report
Surrogates

Lab Sample ID: 1973515
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	111	P	71 - 126
EPA 8270D	Terbufos-d10	92.6	P	50 - 130

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A82522
Included Lab Sample IDs: 1973467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.8	99.1	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82536
Included Lab Sample IDs: 1973467, 1973470, 1973471

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

Reference Method: EPA 8321B
Run ID: A82544
Included Lab Sample IDs: 1973506, 1973507, 1973510, 1973511

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	90.7	91.0	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82545
Included Lab Sample IDs: 1973469, 1973474, 1973475

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	99.2	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82556
Included Lab Sample IDs: 1973510, 1973511

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	97.5	P/P	70 - 130
Glyphosate	102	93.1	P/P	70 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A82557
Included Lab Sample IDs: 1973472

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A82566
Included Lab Sample IDs: 1973473

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A82579
Included Lab Sample IDs: 1973472, 1973473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A82605
Included Lab Sample IDs: 1973468

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: A82606
Included Lab Sample IDs: 1973468, 1973472

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	103	P/P	90 - 110
Total-P	103	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A82617
Included Lab Sample IDs: 1973560, 1973561

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82622
Included Lab Sample IDs: 1973467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	101	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A82628
Included Lab Sample IDs: 1973472, 1973473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	101	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-97
Run ID: A82634
Included Lab Sample IDs: 1973467

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A82647
Included Lab Sample IDs: 1973468

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.5	104	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A82650
Included Lab Sample IDs: 1973506, 1973507, 1973510, 1973511

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	93.7	P/P	50 - 150
2,4-D	109	99.6	P/P	50 - 150
3-Hydroxycarbofuran	114	122	P/P	60 - 150
Acetaminophen	109	104	P/P	60 - 150
Aldicarb	126	132	P/P	60 - 150
Aldicarb Sulfone	114	117	P/P	50 - 150
Aldicarb Sulfoxide	120	121	P/P	50 - 150
Bentazon	115	119	P/P	50 - 150
Bentazon	119	109	P/P	50 - 150
Carbamazepine	93.0	93.4	P/P	60 - 150
Carbaryl	111	120	P/P	60 - 150
Carbofuran	100	130	P/P	50 - 150
Diuron	109	115	P/P	60 - 150
Fenuron	106	109	P/P	60 - 150
Fluridone	109	118	P/P	60 - 160
Imazapyr	101	98.2	P/P	50 - 150
Imidacloprid	109	117	P/P	60 - 150
Linuron	114	127	P/P	60 - 150
MCPP	96.7	99.6	P/P	50 - 150
MCPP	99.6	95.6	P/P	50 - 150
Methiocarb	126	119	P/P	50 - 150
Methomyl	110	115	P/P	50 - 150
Oxamyl	115	124	P/P	50 - 150
Primidone	96.8	96.0	P/P	60 - 150
Propoxur	99.4	136	P/P	50 - 150
Pyraclostrobin	107	106	P/P	60 - 150
Triclopyr	98.2	104	P/P	50 - 150
Triclopyr	99.8	98.2	P/P	50 - 150

Reference Method: SM 2320 B-97
Run ID: A82678
Included Lab Sample IDs: 1973470, 1973471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.4	98.5	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8276
Run ID: A82696
Included Lab Sample IDs: 1973512, 1973513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.6		P	80 - 120
Toxaphene	80.8		P	80 - 120

Reference Method: SM 4500 F-C-97
Run ID: A82726
Included Lab Sample IDs: 1973467, 1973470, 1973471

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	105	96.7	P/P	90 - 110
Fluoride	98.6	99.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A82743
Included Lab Sample IDs: 1973468, 1973473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	100	P/P	90 - 110
Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A82759
Included Lab Sample IDs: 1973514, 1973515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	108		P	80 - 120
Atrazine	92.7		P	80 - 120
Atrazine Desethyl	99.8		P	80 - 120
Azinphos Methyl	96.7		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	98.2		P	80 - 120
Chlorpyrifos Ethyl	94.9		P	80 - 120
Chlorpyrifos Methyl	95.7		P	80 - 120
Cyanazine	93.5		P	80 - 120
Demeton	99.5		P	80 - 120
Diazinon	99.9		P	80 - 120
Disulfoton	92.3		P	80 - 120
EPTC	102		P	80 - 120
Ethion	85.4		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	95.5		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Sulfide	96.5		P	80 - 120
Fipronil Sulfone	96.9		P	80 - 120
Fonofos	95.9		P	80 - 120
Hexazinone	96.7		P	80 - 120
Malathion	95.9		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	85.7		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A82759
Included Lab Sample IDs: 1973514, 1973515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mevinphos	101		P	80 - 120
Molinate	102		P	80 - 120
Norflurazon	104		P	80 - 120
Parathion Ethyl	92.5		P	80 - 120
Parathion Methyl	94.1		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	98.5		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	103		P	80 - 120
Simazine	95.8		P	80 - 120
Terbufos	94.8		P	80 - 120
Terbuthylazine	98.8		P	80 - 120

Reference Method: SM 5310 B-00
Run ID: A82777
Included Lab Sample IDs: 1973468, 1973472, 1973473

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.6	99.4	P/P	90 - 110
Organic Carbon	99.7	100	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A82780
Included Lab Sample IDs: 1973514

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	93.5		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A82821
Included Lab Sample IDs: 1973560, 1973561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.0	99.2	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Copper	100	99.8	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Nickel	98.8	99.1	P/P	90 - 110
Silver	105	105	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A82886
Included Lab Sample IDs: 1973560

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.6	95.2	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A82891
Included Lab Sample IDs: 1973512, 1973513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	94.8		P	80 - 120
Alpha-BHC	99.0		P	80 - 120
Alpha-Chlordane	96.1		P	80 - 120
Beta-BHC	107		P	80 - 120
Carbophenothion	94.8		P	80 - 120
Chlorothalonil	94.6		P	80 - 120
Cypermethrin	92.0		P	80 - 120
DDD-p,p'	104		P	80 - 120
DDE-p,p'	98.4		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	106		P	80 - 120
Dicofol	108		P	80 - 120
Dieldrin	96.4		P	80 - 120
Endosulfan I	94.4		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	91.1		P	80 - 120
Endrin Aldehyde	90.7		P	80 - 120
Endrin Ketone	100		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	95.3		P	80 - 120
Heptachlor	92.7		P	80 - 120
Heptachlor Epoxide	97.1		P	80 - 120
Methoxychlor	103		P	80 - 120
Mirex	94.0		P	80 - 120
Permethrin	94.2		P	80 - 120
Trifluralin	98.8		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A83063
Included Lab Sample IDs: 1973561

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	100	99.3	P/P	90 - 110
Nickel	98.1	101	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		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					0.388	
EPA 200.7 Rev. 4.4	Iron	109	108	109			0.619
	Zinc	104	109	106			1.22
EPA 200.8 Rev. 5.4	Arsenic	101	110	108			1.85
	Cadmium	102	102	99.7			1.49

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 200.8 Rev. 5.4	Chromium	105		92.7	93.2			0.561
	Chromium	106		85.1	87.5			2.75
	Copper	101		102	100			2.04
	Lead	103		111	109			1.18
	Nickel	101		102	100			1.87
	Nickel	101		100	103			3.16
	Silver	107		100	99.2			1.09
EPA 300.0 Rev. 2.1	Chloride	101		92.9	97.6		0.166	
	Sulfate	101		97.9	95.9		0.138	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6		100	99.8			0.670
	Ammonia-N	97.1		98.1	99.6			1.47
	Ammonia-N	97.6		101	101			0.0852
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105		106	105			0.900
	Kjeldahl Nitrogen	110		97.1	103			3.13
EPA 353.2 Rev. 2.0	NO2NO3-N	104		101	101			0.494
	NO2NO3-N	102		105	104			0.477
EPA 365.1 Rev. 2.0	Total-P	99.9		101	103			2.75
	Total-P	103		99.0	95.8			2.80
	Total-P	101		101	105			3.33
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5		95.2	95.3			0.0817
	O-Phosphate-P	97.5		95.7	96.7			0.794
EPA 8270D	Acetochlor	98.2	95.6	92.8	96.6	2.75		4.05
	Alachlor	99.4	96.1	90.1	89.0	3.39		1.30
	Aldrin	76.8	57.4	70.8	66.0	28.9		7.03
	Alpha-BHC	90.3	84.0	97.8	96.6	7.28		1.21
	Alpha-Chlordane	102	88.1	98.4	99.3	15.0		0.772
	Ametryn	107	105	105	110	2.45		2.49
	Atrazine	101	92.4	92.5	93.5	9.33		0.489
	Atrazine Desethyl	93.8	91.9	105	110	2.07		4.55
	Azinphos Methyl	108	103	91.6	101	5.53		10.2
	Beta-BHC	140	135	116	127	4.13		9.22
	Bromacil	91.1	76.2	91.8	96.1	17.8		4.61
	Butylate	51.7	53.2	34.4	42.9	2.92		22.1
	Carbophenothion	114	99.1	80.6	109	13.8		30.3
	Chlorothalonil	114	95.6	89.2	155	17.7		53.9
	Chlorpyrifos Ethyl	95.4	90.0	75.1	83.8	5.83		10.9
	Chlorpyrifos Methyl	99.0	93.8	83.9	90.6	5.39		7.72
	Cyanazine	135	121	115	122	10.7		6.21
	Cypermethrin	104	104	97.8	110	0.686		12.1
	DDD-p,p'	110	97.9	109	111	11.5		1.84
	DDE-p,p'	102	88.0	102	96.4	15.0		5.22
	DDT-p,p'	102	93.8	95.0	114	8.61		18.0
	Delta-BHC	123	107	131	165	14.0		22.6
	Demeton	78.2	84.0	69.2	78.9	7.15		13.1
	Diazinon	98.2	99.1	101	102	0.963		0.906
	Dicofol	98.0	75.2	87.9	87.9	26.3		0.0291
	Dieldrin	107	91.2	99.4	94.2	16.1		5.35
	Disulfoton	79.4	85.7	71.3	72.2	7.59		1.21
	Endosulfan I	106	86.9	104	108	20.0		4.10
	Endosulfan II	140	109	116	141	24.5		18.9
	Endosulfan Sulfate	123	118	93.0	106	4.06		12.6
	Endrin	104	80.1	91.3	95.7	25.6		4.70
	Endrin Aldehyde	112	75.2	95.3	32.1	39.3		99.2
	Endrin Ketone	111	111	92.8	102	0.122		9.30

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	EPTC	51.0	55.5	33.4	41.9	8.40		22.8
	Ethion	83.9	86.8	89.5	84.4	3.48		5.88
	Ethoprop	91.3	91.3	92.4	98.8	0.0397		6.72
	Fenamiphos	103	99.4	86.7	101	3.71		15.4
	Fipronil	104	99.0	103	110	5.07		7.00
	Fipronil Sulfide	104	92.6	89.9	103	11.6		13.3
	Fipronil Sulfone	93.3	84.2	82.3	93.5	10.2		12.8
	Fonofos	94.0	90.8	89.9	96.4	3.41		6.96
	Gamma-BHC	111	119	110	104	7.15		5.60
	Gamma-Chlordane	101	86.8	94.0	95.9	14.7		1.74
	Heptachlor	78.7	70.6	70.9	70.4	10.8		0.648
	Heptachlor Epoxide	101	88.2	99.6	102	13.9		2.63
	Hexazinone	101	100	108	117	1.10		7.85
	Malathion	101	92.7	83.8	87.3	8.20		4.15
	Metalaxyl	99.7	94.7	90.7	96.0	5.14		5.72
	Methoxychlor	103	103	96.7	95.6	0.0196		1.05
	Metolachlor	95.8	93.1	83.7	90.2	2.84		6.88
	Metribuzin	160	137	162	175	15.4		7.76
	Mevinphos	84.8	80.4	83.5	91.6	5.27		9.29
	Mirex	78.8	76.2	80.4	83.5	3.44		3.84
	Molinate	60.2	60.4	54.1	58.4	0.246		7.55
	Norflurazon	98.9	94.3	93.0	103	4.79		10.2
	Parathion Ethyl	93.2	93.2	88.4	96.2	0.0201		8.43
	Parathion Methyl	103	100	96.9	104	2.74		7.05
	Pendimethalin	114	116	111	117	2.17		5.13
	Permethrin	97.7	103	90.5	95.8	4.88		5.72
	Phorate	90.4	88.3	79.3	77.7	2.41		1.68
	Prometon	91.4	86.0	92.3	104	6.09		11.6
	Prometryn	96.3	93.7	99.1	104	2.79		4.46
	Simazine	103	98.1	107	116	5.17		7.93
	Terbufos	88.6	89.6	83.9	90.0	1.19		7.02
	Terbuthylazine	96.2	93.4	94.8	103	2.93		7.90
	Trifluralin	86.5	86.5	84.4	87.5	0.0223		3.63
EPA 8276	Chlordane	77.6	70.1	69.2	61.7	10.2		11.4
	Toxaphene	88.5	83.0	79.4	80.1	6.44		0.901
EPA 8321B	2,4-D	81.6		40.5	50.2			19.8
	3-Hydroxycarbofuran	111		109	112			2.94
	Acetaminophen	112		130	132			1.83
	Aldicarb	85.5		80.1	84.7			5.56
	Aldicarb Sulfone	110		121	122			0.264
	Aldicarb Sulfoxide	118		93.9	92.9			1.02
	AMPA	98.4		94.9	98.6			3.77
	Bentazon	89.8		25.7	27.3			6.00
	Carbamazepine	76.0		82.8	78.6			5.13
	Carbaryl	71.1		52.5	53.7			2.12
	Carbofuran	66.3		63.3	63.1			0.218
	Diuron	64.9		54.1	61.5			12.1
	Fenuron	110		84.6	82.9			2.01
	Fluridone	61.8		52.4	55.8			6.42
	Glyphosate	97.8		104	102			2.04
	Imazapyr	83.6		74.0	61.6			18.4
	Imidacloprid	106		148	152			2.63
	Linuron	86.9		79.7	87.7			9.57
	MCPP	79.7		39.1	33.9			14.3

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Methiocarb	75.6	64.7	72.8			11.7
	Methomyl	93.5	91.1	86.6			5.04
	Oxamyl	104	91.5	88.7			3.12
	Primidone	111	100	105			4.68
	Propoxur	66.9	68.8	72.9			5.77
	Pyraclostrobin	57.3	60.2	61.3			1.76
	Sucralose	99.6	91.8	103			10.7
	Triclopyr	84.5	34.2	40.8			17.5
SM 2120 B	Color (true)					9.19	
SM 2320 B-97	Total Alkalinity	99.7				0.314	
	Total Alkalinity	98.1				0.388	
SM 2540 C-97	TDS					5.85	
SM 4500 F-C-97	Fluoride	93.6	92.3	93.3			0.988
	Fluoride	94.0	94.2	95.4			0.953
SM 5310 B-00	Organic Carbon	98.0	100	101			1.11
	Organic Carbon	100	98.8	99.0			0.211

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1973467, 1973470, 1973471
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1973560, 1973561
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1973560, 1973561
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1973467
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1973467
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1973468, 1973472, 1973473
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1973468, 1973472, 1973473
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1973468, 1973472, 1973473
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1973468, 1973472, 1973473
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1973469, 1973474, 1973475
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1973512, 1973513
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1973514, 1973515
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1973512, 1973513
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1973508, 1973509
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1973506, 1973507, 1973510, 1973511
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1973510, 1973511
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1973506, 1973507, 1973510, 1973511
SM 2120 B / E31780	True Color measured at 450 nm	1973467
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1973467, 1973470, 1973471
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1973467
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1973467, 1973470, 1973471
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1973467, 1973470, 1973471
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1973468, 1973472, 1973473

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/09/2018			03/09/2018 15:21	Tanya Welborn	1973467, 1973470, 1973471
EPA 200.7 Rev. 4.4	03/09/2018	03/13/2018 12:45	Elliott D. Healy	03/14/2018 19:02	Betina Topolski	1973560
	03/09/2018	03/13/2018 12:45	Elliott D. Healy	03/14/2018 19:14	Betina Topolski	1973561
EPA 200.8 Rev. 5.4	03/09/2018	03/13/2018 12:45	Elliott D. Healy	03/24/2018 02:42	Nadine Brooks	1973561
	03/09/2018	03/13/2018 12:45	Elliott D. Healy	03/24/2018 03:29	Nadine Brooks	1973560
	03/09/2018	03/13/2018 12:45	Elliott D. Healy	03/28/2018 04:14	Nadine Brooks	1973560
	03/09/2018	03/28/2018 17:05	Elliott D. Healy	04/05/2018 22:23	Nadine Brooks	1973561
EPA 300.0 Rev. 2.1	03/09/2018			03/14/2018 23:25	Julia Storbeck	1973467
EPA 350.1 Rev. 2.0	03/09/2018			03/09/2018 13:22	Ping Hua	1973472
	03/09/2018			03/15/2018 16:38	Ping Hua	1973468
	03/09/2018			03/15/2018 16:55	Ping Hua	1973473
EPA 351.2 Rev. 2.0	03/09/2018	03/13/2018 10:30	Adrian Shelby	03/15/2018 11:25	Joseph Suarez	1973472
	03/09/2018	03/13/2018 10:30	Adrian Shelby	03/15/2018 11:27	Joseph Suarez	1973473
	03/09/2018	03/14/2018 15:30	Adrian Shelby	03/15/2018 15:29	Joseph Suarez	1973468
EPA 353.2 Rev. 2.0	03/09/2018			03/13/2018 14:52	Lauren Bottorf	1973472
	03/09/2018			03/13/2018 14:53	Lauren Bottorf	1973473
	03/09/2018			03/14/2018 11:08	Lauren Bottorf	1973468
EPA 365.1 Rev. 2.0	03/09/2018	03/12/2018 01:30	Lipi Saha	03/13/2018 09:25	Beverly Y. Sanders	1973473
	03/09/2018	03/13/2018 13:20	Lipi Saha	03/14/2018 12:38	Beverly Y. Sanders	1973468
	03/09/2018	03/13/2018 13:20	Lipi Saha	03/14/2018 12:49	Beverly Y. Sanders	1973472
EPA 365.1 Rev. 2.0 dissolved	03/09/2018			03/09/2018 17:20	Megan Treadwell	1973469
	03/09/2018			03/09/2018 17:21	Megan Treadwell	1973474
	03/09/2018			03/09/2018 17:22	Megan Treadwell	1973475
EPA 8270D	03/09/2018	03/12/2018 09:48	John Kaba	03/14/2018 17:59	Vandana T. Nagar	1973514
	03/09/2018	03/12/2018 09:48	John Kaba	03/14/2018 18:23	Vandana T. Nagar	1973515
	03/09/2018	03/12/2018 09:48	John Kaba	03/15/2018 14:12	Vandana T. Nagar	1973514
	03/09/2018	03/13/2018 08:31	Rasheda Ghaffari	03/15/2018 17:40	Vandana T. Nagar	1973512
	03/09/2018	03/13/2018 08:31	Rasheda Ghaffari	03/15/2018 18:12	Vandana T. Nagar	1973513
EPA 8276	03/09/2018	03/13/2018 08:31	Rasheda Ghaffari	03/15/2018 17:13	John P. Burgos	1973512
	03/09/2018	03/13/2018 08:31	Rasheda Ghaffari	03/15/2018 18:09	John P. Burgos	1973513
EPA 8321B	03/09/2018	03/09/2018 14:00	Julie Michelle Frank	03/09/2018 23:55	Juyoung Kim	1973506
	03/09/2018	03/09/2018 14:00	Julie Michelle Frank	03/10/2018 00:11	Juyoung Kim	1973507
	03/09/2018	03/09/2018 14:00	Julie Michelle Frank	03/10/2018 00:26	Juyoung Kim	1973510
	03/09/2018	03/09/2018 14:00	Julie Michelle Frank	03/10/2018 00:42	Juyoung Kim	1973511
	03/09/2018	03/12/2018 11:00	Julie Michelle Frank	03/12/2018 14:06	Julie Michelle Frank	1973510
	03/09/2018	03/12/2018 11:00	Julie Michelle Frank	03/12/2018 14:17	Julie Michelle Frank	1973511
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/13/2018 17:39	Julie Michelle Frank	1973506
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/13/2018 18:13	Julie Michelle Frank	1973507
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/13/2018 18:48	Julie Michelle Frank	1973510
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/13/2018 19:57	Julie Michelle Frank	1973511

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/14/2018 05:45	Julie Michelle Frank	1973506
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/14/2018 06:20	Julie Michelle Frank	1973507
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/14/2018 06:54	Julie Michelle Frank	1973510
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/14/2018 07:29	Julie Michelle Frank	1973511
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/14/2018 12:06	Julie Michelle Frank	1973508
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/14/2018 12:41	Julie Michelle Frank	1973509
	03/09/2018	03/13/2018 12:00	Hoor Shaik	03/14/2018 19:01	Julie Michelle Frank	1973511
SM 2120 B	03/09/2018			03/09/2018 11:43	Tanya Welborn	1973467
SM 2320 B-97	03/09/2018			03/15/2018 07:58	Dale L. Simmons	1973467
	03/09/2018			03/16/2018 18:39	Lauren Bottorf	1973471
	03/09/2018			03/16/2018 19:35	Lauren Bottorf	1973470
SM 2540 C-97	03/09/2018			03/14/2018 16:02	Yijie Li	1973467
SM 2540 D-97	03/09/2018			03/14/2018 16:02	Yijie Li	1973467, 1973470, 1973471
SM 4500 F-C-97	03/09/2018			03/20/2018 04:14	Lauren Bottorf	1973470
	03/09/2018			03/20/2018 04:17	Lauren Bottorf	1973471
	03/09/2018			03/20/2018 09:20	Lauren Bottorf	1973467
SM 5310 B-00	03/09/2018			03/21/2018 05:06	Megan Treadwell	1973468
	03/09/2018			03/21/2018 11:07	Megan Treadwell	1973472
	03/09/2018			03/21/2018 11:25	Megan Treadwell	1973473