Chemical Analysis Report

NE-DIST-2017-04-26-02

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

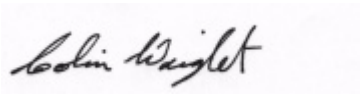
Event Description: **Gville 1-4/25/17**
Request ID: **RQ-2017-04-17-10**
Customer: **NE-DIST**
Project ID: **SMP**

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

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 24-MAY-2017 17:06



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: Lake Alice Outlet @ Gale Lemmeron Rd. **Collection Date/Time: 04/25/2017 10:55**

Field ID: G1NE0206 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892615	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P324093	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P324662	
		Sulfate	53		mg SO4/L	P324667	
	SM 2120 B	Color (true)	26		PCU	P324068	
	SM 2320 B-97	Total Alkalinity	122		mg CaCO3/L	P324822	
	SM 2540 C-97	TDS	255		mg/L	P324738	
	SM 2540 D-97	TSS	4	I	mg/L	P324782	
	SM 4500 F-C-97	Fluoride	0.48		mg F/L	P325469	RPD
1892616	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P324251	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P324153	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324206	
	EPA 365.1 Rev. 2.0	Total-P	0.93		mg P/L	P324199	
	SM 5310 B-00	Organic Carbon	6.9		mg C/L	P324173	
1892617	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.77		mg P/L	P324097	
1892670	EPA 200.7 Rev. 4.4	Calcium	57.6		mg/L	P325545	
		Iron	140		ug/L	P325545	
		Magnesium	12.9		mg/L	P325545	
		Potassium	2.8		mg/L	P325545	
		Sodium	17.6		mg/L	P325545	
		Zinc	5.0	U	ug/L	P325545	
	EPA 200.8 Rev. 5.4	Arsenic	0.91		ug/L	P325545	
		Cadmium	0.020	U	ug/L	P325545	
		Chromium	0.40	U	ug/L	P325545	
		Copper	1.09		ug/L	P325545	
		Lead	0.40		ug/L	P325545	
		Nickel	0.65	I	ug/L	P325545	
		Silver	0.016	I	ug/L	P325545	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Lake Alice Outlet @ Gale Lemmeron Rd. **Collection Date/Time: 04/25/2017 10:55**

Field ID: G1NE0206 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892645	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P324033	
1892661	EPA 8270D	Aldrin	4.3	U	ng/L	P324073	
		Alpha-BHC	2.1	U	ng/L	P324073	
		Beta-BHC	4.3	U	ng/L	P324073	
		Delta-BHC	4.3	U	ng/L	P324073	
		Gamma-BHC	4.3	U	ng/L	P324073	
		Carbophenothion	4.3	U	ng/L	P324073	
		Chlorothalonil	2.1	UJ	ng/L	P324073	LCS, RPD
		Cypermethrin	21	U	ng/L	P324073	

Field ID: G1NE0206 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892661	EPA 8270D	DDD-p,p'	2.1	U	ng/L	P324073	
		DDE-p,p'	3.2	U	ng/L	P324073	
		DDT-p,p'	3.2	U	ng/L	P324073	
		Dieldrin	4.3	U	ng/L	P324073	
		Endosulfan I	4.3	U	ng/L	P324073	
		Endosulfan II	4.3	U	ng/L	P324073	
		Endosulfan Sulfate	2.1	U	ng/L	P324073	
		Endrin	2.1	U	ng/L	P324073	
		Endrin Aldehyde	2.1	U	ng/L	P324073	
		Heptachlor	1.6	U	ng/L	P324073	
		Heptachlor Epoxide	2.1	U	ng/L	P324073	
		Methoxychlor	4.3	U	ng/L	P324073	
		Mirex	2.1	U	ng/L	P324073	
		Permethrin	11	U	ng/L	P324073	
		Trifluralin	1.1	U	ng/L	P324073	MS
		Alpha-Chlordane	1.1	U	ng/L	P324073	
		Gamma-Chlordane	1.1	U	ng/L	P324073	
		Endrin Ketone	2.1	U	ng/L	P324073	
		Dicofol	32	U	ng/L	P324073	MS, RPD
	EPA 8276	Chlordane**	2.7	U	ng/L	P324073	
		Toxaphene**	13	U	ng/L	P324073	
1892662	EPA 8270D	Ametryn	0.31	U	ng/L	P324314	
		Atrazine	2.2		ng/L	P324314	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P324314	
		Chlorpyrifos Methyl	0.095	U	ng/L	P324314	
		Disulfoton	0.31	U	ng/L	P324314	
		Ethion	1.4		ng/L	P324314	
		Ethoprop	0.095	U	ng/L	P324314	
		Hexazinone	0.47	U	ng/L	P324314	
		Malathion	0.33	U	ng/L	P324314	
		Metribuzin	0.19	U	ng/L	P324314	
		Mevinphos	0.47	U	ng/L	P324314	
		Norflurazon	0.47	U	ng/L	P324314	
		Phorate	0.24	U	ng/L	P324314	
		Prometryn	0.19	U	ng/L	P324314	
		Simazine	0.73	I	ng/L	P324314	
		Atrazine Desethyl	1.4	U	ng/L	P324314	
		Prometon	2.7	I	ng/L	P324314	
		Fipronil	0.32	I	ng/L	P324314	
		Molinate	0.28	U	ng/L	P324314	
		Pendimethalin	1.4	U	ng/L	P324314	
		Terbufos	0.095	U	ng/L	P324314	
		EPTC	1.2	U	ng/L	P324314	
		Terbuthylazine	0.40	U	ng/L	P324314	
		Bromacil	120		ng/L	P324314	

Field ID: G1NE0206 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892662	EPA 8270D	Fipronil Sulfide	2.1		ng/L	P324314	
		Fipronil Sulfone	4.9		ng/L	P324314	
		Alachlor	0.24	U	ng/L	P324314	
		Azinphos Methyl	2.1	U	ng/L	P324314	
		Butylate	0.38	U	ng/L	P324314	
		Demeton	1.9	UJ	ng/L	P324314	CCV
		Diazinon	0.12	U	ng/L	P324314	
		Fenamiphos	0.24	UJ	ng/L	P324314	LCS, MS
		Fonofos	0.19	U	ng/L	P324314	
		Metalaxyl	0.19	U	ng/L	P324314	
		Metolachlor	0.24	U	ng/L	P324314	
		Acetochlor	0.24	U	ng/L	P324314	
		Cyanazine	0.47	UJ	ng/L	P324314	CCV
		Parathion Ethyl	0.24	U	ng/L	P324314	
		Parathion Methyl	0.24	U	ng/L	P324314	

Ref. Method and Comment:
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: Lake Alice Outlet @ Gale Lemmeron Rd. **Collection Date/Time: 04/25/2017 10:55**

Field ID: G1NE0206 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892646	EPA 8321B	Sucralose**	2.6		ug/L	P323999	
	USGS O-2060-01	2,4-D	0.0024	I	ug/L	P324040	
		Diuron	0.0088		ug/L	P324040	
		Fenuron	0.0072	I	ug/L	P324040	
		Imidacloprid	0.0096		ug/L	P324040	MS
		Bentazon	0.013		ug/L	P324040	
		Linuron	0.0040	U	ug/L	P324040	
		Acetaminophen**	0.0080	U	ug/L	P324040	
		MCPP	8.0E-04	U	ug/L	P324040	
		Carbamazepine**	0.0014	I	ug/L	P324040	
		Triclopyr**	0.0040	U	ug/L	P324040	
		Primidone**	0.0040	U	ug/L	P324040	
		Fluridone**	4.0E-04	U	ug/L	P324040	

Sample Location: Hogtown Creek @ SW 20th Ave **Collection Date/Time: 04/25/2017 11:55**

Field ID: G1NE0871 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892647	EPA 8321B	Sucralose**	0.25		ug/L	P323999	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P324040	
		Diuron	0.0019	I	ug/L	P324040	
		Fenuron	0.0045	I	ug/L	P324040	
		Imidacloprid	0.013		ug/L	P324040	MS
		Bentazon	0.0026	I	ug/L	P324040	

Field ID: G1NE0871 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892647	USGS O-2060-01	Linuron	0.0040	U	ug/L	P324040	
		Acetaminophen**	0.0080	U	ug/L	P324040	
		MCPP	8.0E-04	U	ug/L	P324040	
		Carbamazepine**	4.0E-04	U	ug/L	P324040	
		Triclopyr**	0.0040	U	ug/L	P324040	
		Primidone**	0.0040	U	ug/L	P324040	
		Fluridone**	7.2E-04	I	ug/L	P324040	

Sample Location: Little Hatchett Creek @ SR 24 **Collection Date/Time: 04/25/2017 09:45**

Field ID: G1NE0083 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892618	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P324093	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P324662	
		Sulfate	20		mg SO4/L	P324667	
	SM 2120 B	Color (true)	38		PCU	P324068	
	SM 2320 B-97	Total Alkalinity	124		mg CaCO3/L	P324822	
	SM 2540 C-97	TDS	172		mg/L	P324738	
	SM 2540 D-97	TSS	2	I	mg/L	P324782	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P325469	RPD
1892619	EPA 350.1 Rev. 2.0	Ammonia-N	0.084		mg N/L	P324251	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39		mg N/L	P324153	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P324206	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P324199	
	SM 5310 B-00	Organic Carbon	6.8		mg C/L	P324173	
1892620	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.16		mg P/L	P324097	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Little Hatchett Creek @ SR 24 **Collection Date/Time: 04/25/2017 09:45**

Field ID: G1NE0083 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892648	EPA 8321B	Sucralose**	2.5		ug/L	P323999	
	USGS O-2060-01	2,4-D	0.034		ug/L	P324040	
		Diuron	0.0019	I	ug/L	P324040	
		Fenuron	0.0040	U	ug/L	P324040	
		Imidacloprid	0.011		ug/L	P324040	MS
		Bentazon	0.0037		ug/L	P324040	
		Linuron	0.0040	U	ug/L	P324040	
		Acetaminophen**	0.18		ug/L	P324040	
		MCPP	8.0E-04	U	ug/L	P324040	
		Carbamazepine**	0.0022		ug/L	P324040	
		Triclopyr**	0.0040	U	ug/L	P324040	
		Primidone**	0.080		ug/L	P324040	

Field ID: G1NE0083 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892648	USGS O-2060-01	Fluridone**	0.0010	I	ug/L	P324040	

Sample Location: Tumblin Creek @ SW 14th **Collection Date/Time: 04/25/2017 10:40**

Field ID: G1NE0856 04252017 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1892649	EPA 8321B	Sucralose**	0.51		ug/L	P323999	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P324040	
		Diuron	0.0046		ug/L	P324040	
		Fenuron	0.0040	U	ug/L	P324040	
		Imidacloprid	0.077		ug/L	P324040	MS
		Bentazon	0.0014	I	ug/L	P324040	
		Linuron	0.0040	U	ug/L	P324040	
		Acetaminophen**	0.0080	U	ug/L	P324040	
		MCPP	8.0E-04	U	ug/L	P324040	
		Carbamazepine**	8.0E-04	I	ug/L	P324040	
		Triclopyr**	0.0040	U	ug/L	P324040	
		Primidone**	0.0040	U	ug/L	P324040	
		Fluridone**	4.0E-04	U	ug/L	P324040	

Non-Conformance Report

NCR ID: 6446

Event(s)	Job(s)	Sample(s)	Test(s)
NE-DIST-2017-04-26-02			

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

Observation: The glyphosate analysis was not logged in due to confusing and incomplete submittal forms.

Resolution: Nicole Frederick and Jeremy Parrish were notified about the situation. Jeremy Parrish elected to not analyze for glyphosate, which was out of hold time.

Authorized by/Date: Colin Wright 5/24/2017

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: P324093

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report
Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325545

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: P325545

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324662

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324667

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324251

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324153

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324206

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324199

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324097

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

Reference Method: EPA 8270D
Batch ID: P324073

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'	2.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D
Batch ID: P324314

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P324314

Component	Result	Code	Units
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	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	0.20	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	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P324073

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	12	U	ng/L

Reference Method: EPA 8321B
Batch ID: P323999

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P324033

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2120 B
Batch ID: P324068

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P324822

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

Reference Method: SM 2540 C-97
Batch ID: P324738

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324782

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325469

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P324173

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

Reference Method: USGS O-2060-01
Batch ID: P324040

Component	Result	Code	Units
2,4-D	8.0E-04	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0040	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	8.0E-04	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	102		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	97.7		P	85 - 115
Sodium	102		P	85 - 115
Zinc	97.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	99.9		P	85 - 115
Cadmium	96.6		P	85 - 115
Chromium	96.0		P	85 - 115
Copper	98.6		P	85 - 115
Lead	97.4		P	85 - 115
Nickel	101		P	85 - 115
Silver	94.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324662

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324667

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324251

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324153

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324206

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324199

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: P324097

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

Reference Method: EPA 8270D
Batch ID: P324073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.7	46.3	P/P	30 - 83.0
Alpha-BHC	93.1	92.6	P/P	62 - 119
Alpha-Chlordane	94.0	86.3	P/P	56 - 119
Beta-BHC	107	107	P/P	54 - 141
Carbophenothion	109	110	P/P	33 - 147
Chlorothalonil	23.8	61.7	F/P	25 - 175
Cypermethrin	101	83.2	P/P	50 - 155
DDD-p,p'	100	91.7	P/P	56 - 135
DDE-p,p'	92.0	89.0	P/P	48 - 120
DDT-p,p'	98.8	95.4	P/P	51 - 121
Delta-BHC	124	127	P/P	65 - 163
Dicofol	44.1	33.8	P/P	15 - 112
Dieldrin	92.6	85.6	P/P	59 - 134
Endosulfan I	100	95.3	P/P	65 - 142
Endosulfan II	102	98.3	P/P	65 - 154
Endosulfan Sulfate	95.2	93.0	P/P	65 - 136
Endrin	102	91.2	P/P	53 - 156
Endrin Aldehyde	89.3	82.8	P/P	47 - 156
Endrin Ketone	93.6	91.1	P/P	70 - 124
Gamma-BHC	103	102	P/P	64 - 142
Gamma-Chlordane	91.1	82.9	P/P	55 - 114
Heptachlor	76.6	73.7	P/P	42 - 105
Heptachlor Epoxide	94.2	87.8	P/P	67 - 120
Methoxychlor	108	100	P/P	63 - 134
Mirex	77.1	72.4	P/P	40 - 90.0
Permethrin	99.6	83.3	P/P	36 - 144
Trifluralin	147	126	P/P	40 - 170

Reference Method: EPA 8270D
Batch ID: P324314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	105	89.2	P/P	78 - 118
Alachlor	102	84.5	P/P	77 - 119
Ametryn	126	109	P/P	61 - 136
Atrazine	108	92.0	P/P	73 - 120
Atrazine Desethyl	76.0	67.8	P/P	16 - 122
Azinphos Methyl	144	131	P/P	69 - 186
Bromacil	88.1	77.3	P/P	40 - 125
Butylate	52.5	48.4	P/P	32 - 87.0

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P324314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorpyrifos Ethyl	99.8	87.2	P/P	53 - 110
Chlorpyrifos Methyl	97.7	86.1	P/P	31 - 119
Cyanazine	122	105	P/P	36 - 224
Demeton	102	94.6	P/P	39 - 122
Diazinon	101	84.5	P/P	75 - 119
Disulfoton	99.3	92.0	P/P	42 - 139
EPTC	51.4	47.9	P/P	33 - 96.0
Ethion	126	112	P/P	63 - 127
Ethoprop	103	85.1	P/P	65 - 107
Fenamiphos	150	131	F/P	64 - 137
Fipronil	113	99.2	P/P	60 - 126
Fipronil Sulfide	106	88.1	P/P	58 - 124
Fipronil Sulfone	102	91.1	P/P	57 - 126
Fonofos	97.9	82.9	P/P	65 - 111
Hexazinone	93.3	95.5	P/P	46 - 151
Malathion	102	98.5	P/P	68 - 132
Metalaxyl	98.8	85.1	P/P	51 - 132
Metolachlor	110	91.1	P/P	78 - 119
Metribuzin	111	94.2	P/P	64 - 138
Mevinphos	95.4	81.9	P/P	34 - 128
Molinate	63.3	55.7	P/P	44 - 101
Norflurazon	112	97.5	P/P	63 - 129
Parathion Ethyl	98.7	87.9	P/P	80 - 109
Parathion Methyl	91.9	85.8	P/P	74 - 125
Pendimethalin	97.4	86.1	P/P	48 - 134
Phorate	109	87.1	P/P	52 - 119
Prometon	115	94.8	P/P	69 - 124
Prometryn	118	102	P/P	66 - 124
Simazine	105	88.9	P/P	61 - 134
Terbufos	100	85.9	P/P	58 - 115
Terbuthylazine	99.0	86.0	P/P	77 - 113

Reference Method: EPA 8276
Batch ID: P324073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.2	84.6	P/P	44 - 118
Toxaphene	92.7	90.9	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P323999

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	92.6		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P324033

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	94.4		P	40 - 140

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P324822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P325469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P324173

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

Reference Method: USGS O-2060-01
Batch ID: P324040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	73.9		P	40 - 140
Acetaminophen	83.4		P	40 - 140
Bentazon	48.0		P	40 - 140
Carbamazepine	109		P	40 - 140
Diuron	106		P	40 - 140
Fenuron	105		P	40 - 140
Fluridone	102		P	40 - 140
Imidacloprid	106		P	40 - 160
Linuron	98.6		P	40 - 140
MCPP	79.2		P	40 - 140
Primidone	105		P	40 - 140
Triclopyr	77.4		P	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892815	Calcium	110		P	80 - 120
1892815	Iron	104		P	80 - 120
1892815	Magnesium	111		P	80 - 120
1892815	Potassium	102		P	80 - 120
1892815	Sodium	98.4		P	80 - 120
1892815	Zinc	99.3		P	80 - 120
1892909	Calcium	107	110	P/P	80 - 120
1892909	Iron	104	106	P/P	80 - 120
1892909	Magnesium	109	111	P/P	80 - 120
1892909	Potassium	99.8	100	P/P	80 - 120
1892909	Sodium	105		P	80 - 120
1892909	Zinc	100	101	P/P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892815	Arsenic	98.2		P	80 - 120
1892815	Cadmium	98.2		P	80 - 120
1892815	Chromium	94.9		P	80 - 120
1892815	Copper	99.0		P	80 - 120
1892815	Lead	97.2		P	80 - 120
1892815	Nickel	99.8		P	80 - 120
1892815	Silver	95.4		P	80 - 120
1892909	Arsenic	99.7	98.4	P/P	80 - 120
1892909	Cadmium	98.4	95.6	P/P	80 - 120
1892909	Chromium	96.6	94.9	P/P	80 - 120
1892909	Copper	98.5	97.8	P/P	80 - 120
1892909	Lead	98.5	96.8	P/P	80 - 120
1892909	Nickel	100	99.4	P/P	80 - 120
1892909	Silver	94.6	93.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892638	Chloride	96.9		P	90 - 110
1895503	Chloride	95.8	96.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892638	Sulfate	99.8		P	90 - 110
1895503	Sulfate	97.4	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892289	Ammonia-N	96.5	93.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324153

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892639	Kjeldahl Nitrogen	96.9	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324206

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892601	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324097

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892562	O-Phosphate-P	97.2	98.3	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P324073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892624	Aldrin	59.2	70.7	P/P	30 - 83.0
1892624	Alpha-BHC	86.6	110	P/P	62 - 119
1892624	Alpha-Chlordane	75.0	88.4	P/P	56 - 119
1892624	Beta-BHC	89.2	109	P/P	54 - 141
1892624	Carbophenothion	125	147	P/P	33 - 147
1892624	Chlorothalonil	148	153	P/P	25 - 175
1892624	Cypermethrin	109	140	P/P	50 - 155
1892624	DDD-p,p'	78.7	95.2	P/P	56 - 135
1892624	DDE-p,p'	68.5	85.6	P/P	48 - 120
1892624	DDT-p,p'	68.7	79.0	P/P	51 - 121
1892624	Delta-BHC	116	135	P/P	65 - 163
1892624	Dicofol	11.8	20.1	F/P	15 - 112
1892624	Dieldrin	72.3	85.5	P/P	59 - 134
1892624	Endosulfan I	84.3	96.8	P/P	65 - 142
1892624	Endosulfan II	88.6	105	P/P	65 - 154
1892624	Endosulfan Sulfate	86.4	96.2	P/P	65 - 136
1892624	Endrin	84.6	87.7	P/P	53 - 156
1892624	Endrin Aldehyde	81.3	96.8	P/P	47 - 156
1892624	Endrin Ketone	90.6	110	P/P	70 - 124
1892624	Gamma-BHC	84.0	103	P/P	64 - 142
1892624	Gamma-Chlordane	74.9	87.6	P/P	55 - 114
1892624	Heptachlor	66.6	73.5	P/P	42 - 105
1892624	Heptachlor Epoxide	75.6	88.9	P/P	67 - 120
1892624	Methoxychlor	80.3	93.5	P/P	63 - 134
1892624	Mirex	64.5	78.7	P/P	40 - 90.0
1892624	Permethrin	98.9	124	P/P	36 - 144
1892624	Trifluralin	139	176	P/F	40 - 170

Reference Method: EPA 8270D
Batch ID: P324314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893765	Acetochlor	99.0	98.8	P/P	74 - 123
1893765	Alachlor	92.5	92.4	P/P	73 - 124
1893765	Ametryn	122	125	P/P	56 - 149
1893765	Atrazine	99.3	97.3	P/P	73 - 124
1893765	Atrazine Desethyl	65.9	61.9	P/P	12 - 103
1893765	Azinphos Methyl	147	127	P/P	60 - 202
1893765	Bromacil	92.7	92.1	P/P	42 - 133
1893765	Butylate	41.4	39.2	P/P	10 - 85.0
1893765	Chlorpyrifos Ethyl	93.3	93.3	P/P	53 - 113
1893765	Chlorpyrifos Methyl	89.3	85.7	P/P	40 - 115
1893765	Cyanazine	115	109	P/P	22 - 210
1893765	Demeton	96.9	94.3	P/P	17 - 149
1893765	Diazinon	97.6	97.4	P/P	72 - 124
1893765	Disulfoton	98.6	89.5	P/P	43 - 139
1893765	EPTC	39.7	37.3	P/P	10 - 86.0
1893765	Ethion	120	117	P/P	65 - 131
1893765	Ethoprop	96.8	93.6	P/P	59 - 110
1893765	Fenamiphos	143	141	F/F	57 - 138
1893765	Fipronil	113	108	P/P	40 - 130
1893765	Fipronil Sulfide	99.5	91.9	P/P	36 - 128

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P324314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893765	Fipronil Sulfone	100	90.2	P/P	16 - 145
1893765	Fonofos	95.5	89.3	P/P	60 - 112
1893765	Hexazinone	94.1	87.9	P/P	69 - 142
1893765	Malathion	103	92.9	P/P	68 - 132
1893765	Metalaxyl	96.7	95.4	P/P	66 - 118
1893765	Metolachlor	97.9	101	P/P	71 - 124
1893765	Metribuzin	104	98.0	P/P	61 - 140
1893765	Mevinphos	95.6	84.4	P/P	38 - 130
1893765	Molinate	54.5	52.2	P/P	23 - 99.0
1893765	Norflurazon	114	105	P/P	39 - 139
1893765	Parathion Ethyl	98.1	90.6	P/P	75 - 111
1893765	Parathion Methyl	91.6	85.6	P/P	64 - 130
1893765	Pendimethalin	99.3	93.9	P/P	26 - 173
1893765	Phorate	97.3	95.5	P/P	43 - 127
1893765	Prometon	115	112	P/P	50 - 144
1893765	Prometryn	116	115	P/P	69 - 126
1893765	Simazine	94.0	89.3	P/P	51 - 152
1893765	Terbufos	96.1	93.2	P/P	54 - 125
1893765	Terbuthylazine	92.3	90.5	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P324073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893803	Chlordane	83.4	76.9	P/P	44 - 118
1893803	Toxaphene	115	112	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P323999

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892232	Sucralose	84.6	87.2	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P324033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892645	Pyraclostrobin	94.2	86.2	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P325469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892554	Fluoride	102	97.9	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P324173

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892474	Organic Carbon	99.1	100	P/P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P324040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892542	2,4-D	62.4	66.3	P/P	40 - 140
1892542	Acetaminophen	81.8	101	P/P	40 - 140
1892542	Bentazon	47.2	49.4	P/P	40 - 140
1892542	Carbamazepine	89.2	90.7	P/P	40 - 140
1892542	Diuron	76.3	80.6	P/P	40 - 140
1892542	Fenuron	49.5	49.3	P/P	40 - 140
1892542	Fluridone	71.1	74.9	P/P	40 - 140
1892542	Imidacloprid	154	163	P/F	40 - 160
1892542	Linuron	91.2	94.6	P/P	40 - 140
1892542	MCPP	56.8	61.2	P/P	40 - 140
1892542	Primidone	81.5	84.5	P/P	40 - 140
1892542	Triclopyr	60.1	63.0	P/P	40 - 140

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892553	Turbidity	1.60	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892909	Calcium	1.21	Spike	P	0 - 20
1892909	Iron	1.54	Spike	P	0 - 20
1892909	Magnesium	1.50	Spike	P	0 - 20
1892909	Potassium	0.402	Spike	P	0 - 20
1892909	Sodium	1.57	Spike	P	0 - 20
1892909	Zinc	0.568	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892909	Arsenic	1.26	Spike	P	0 - 20
1892909	Cadmium	2.90	Spike	P	0 - 20
1892909	Chromium	1.83	Spike	P	0 - 20
1892909	Copper	0.677	Spike	P	0 - 20
1892909	Lead	1.67	Spike	P	0 - 20
1892909	Nickel	0.591	Spike	P	0 - 20
1892909	Silver	0.953	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895503	Chloride	0.808	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895503	Sulfate	2.39	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892289	Ammonia-N	2.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324153

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892639	Kjeldahl Nitrogen	5.87	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892601	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324199

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892616	Total-P	0.494	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324097

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892562	O-Phosphate-P	1.13	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P324073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892624	Aldrin	17.6	Spike	P	0 - 30
1892624	Alpha-BHC	24.0	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P324073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892624	Alpha-Chlordane	16.5	Spike	P	0 - 30
1892624	Beta-BHC	20.0	Spike	P	0 - 30
1892624	Carbophenothion	16.1	Spike	P	0 - 30
1892624	Chlorothalonil	3.21	Spike	P	0 - 30
1892624	Cypermethrin	24.6	Spike	P	0 - 30
1892624	DDD-p,p'	19.0	Spike	P	0 - 30
1892624	DDE-p,p'	22.2	Spike	P	0 - 30
1892624	DDT-p,p'	13.9	Spike	P	0 - 30
1892624	Delta-BHC	14.4	Spike	P	0 - 30
1892624	Dicofol	51.9	Spike	F	0 - 30
1892624	Dieldrin	16.7	Spike	P	0 - 30
1892624	Endosulfan I	13.8	Spike	P	0 - 30
1892624	Endosulfan II	17.2	Spike	P	0 - 30
1892624	Endosulfan Sulfate	10.7	Spike	P	0 - 30
1892624	Endrin	3.50	Spike	P	0 - 30
1892624	Endrin Aldehyde	17.4	Spike	P	0 - 30
1892624	Endrin Ketone	19.3	Spike	P	0 - 30
1892624	Gamma-BHC	20.4	Spike	P	0 - 30
1892624	Gamma-Chlordane	15.6	Spike	P	0 - 30
1892624	Heptachlor	9.76	Spike	P	0 - 30
1892624	Heptachlor Epoxide	16.2	Spike	P	0 - 30
1892624	Methoxychlor	15.1	Spike	P	0 - 30
1892624	Mirex	19.8	Spike	P	0 - 30
1892624	Permethrin	22.2	Spike	P	0 - 30
1892624	Trifluralin	23.7	Spike	P	0 - 30
LFB	Aldrin	7.13	LCS	P	0 - 30
LFB	Alpha-BHC	0.503	LCS	P	0 - 30
LFB	Alpha-Chlordane	8.54	LCS	P	0 - 30
LFB	Beta-BHC	0.0541	LCS	P	0 - 30
LFB	Carbophenothion	1.12	LCS	P	0 - 30
LFB	Chlorothalonil	88.5	LCS	F	0 - 30
LFB	Cypermethrin	18.9	LCS	P	0 - 30
LFB	DDD-p,p'	9.11	LCS	P	0 - 30
LFB	DDE-p,p'	3.27	LCS	P	0 - 30
LFB	DDT-p,p'	3.56	LCS	P	0 - 30
LFB	Delta-BHC	2.40	LCS	P	0 - 30
LFB	Dicofol	26.5	LCS	P	0 - 30
LFB	Dieldrin	7.84	LCS	P	0 - 30
LFB	Endosulfan I	5.08	LCS	P	0 - 30
LFB	Endosulfan II	3.73	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.32	LCS	P	0 - 30
LFB	Endrin	11.7	LCS	P	0 - 30
LFB	Endrin Aldehyde	7.60	LCS	P	0 - 30
LFB	Endrin Ketone	2.71	LCS	P	0 - 30
LFB	Gamma-BHC	0.727	LCS	P	0 - 30
LFB	Gamma-Chlordane	9.39	LCS	P	0 - 30
LFB	Heptachlor	3.87	LCS	P	0 - 30
LFB	Heptachlor Epoxide	7.04	LCS	P	0 - 30
LFB	Methoxychlor	7.65	LCS	P	0 - 30
LFB	Mirex	6.35	LCS	P	0 - 30
LFB	Permethrin	17.8	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P324073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Trifluralin	15.4	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P324314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893765	Acetochlor	0.220	Spike	P	0 - 30
1893765	Alachlor	0.128	Spike	P	0 - 30
1893765	Ametryn	2.89	Spike	P	0 - 30
1893765	Atrazine	1.67	Spike	P	0 - 30
1893765	Atrazine Desethyl	6.24	Spike	P	0 - 30
1893765	Azinphos Methyl	14.3	Spike	P	0 - 30
1893765	Bromacil	0.607	Spike	P	0 - 30
1893765	Butylate	5.36	Spike	P	0 - 30
1893765	Chlorpyrifos Ethyl	0.0469	Spike	P	0 - 30
1893765	Chlorpyrifos Methyl	4.12	Spike	P	0 - 30
1893765	Cyanazine	5.56	Spike	P	0 - 30
1893765	Demeton	2.64	Spike	P	0 - 30
1893765	Diazinon	0.233	Spike	P	0 - 30
1893765	Disulfoton	9.59	Spike	P	0 - 30
1893765	EPTC	6.18	Spike	P	0 - 30
1893765	Ethion	2.84	Spike	P	0 - 30
1893765	Ethoprop	3.40	Spike	P	0 - 30
1893765	Fenamiphos	1.13	Spike	P	0 - 30
1893765	Fipronil	3.59	Spike	P	0 - 30
1893765	Fipronil Sulfide	8.01	Spike	P	0 - 30
1893765	Fipronil Sulfone	9.15	Spike	P	0 - 30
1893765	Fonofos	6.72	Spike	P	0 - 30
1893765	Hexazinone	6.02	Spike	P	0 - 30
1893765	Malathion	10.8	Spike	P	0 - 30
1893765	Metalaxyl	1.37	Spike	P	0 - 30
1893765	Metolachlor	2.56	Spike	P	0 - 30
1893765	Metribuzin	5.54	Spike	P	0 - 30
1893765	Mevinphos	12.4	Spike	P	0 - 30
1893765	Molinate	4.39	Spike	P	0 - 30
1893765	Norflurazon	7.92	Spike	P	0 - 30
1893765	Parathion Ethyl	7.92	Spike	P	0 - 30
1893765	Parathion Methyl	6.78	Spike	P	0 - 30
1893765	Pendimethalin	5.61	Spike	P	0 - 30
1893765	Phorate	1.87	Spike	P	0 - 30
1893765	Prometon	2.69	Spike	P	0 - 30
1893765	Prometryn	0.528	Spike	P	0 - 30
1893765	Simazine	5.17	Spike	P	0 - 30
1893765	Terbufos	3.08	Spike	P	0 - 30
1893765	Terbuthylazine	1.94	Spike	P	0 - 30
LFB	Acetochlor	15.9	LCS	P	0 - 30
LFB	Alachlor	18.5	LCS	P	0 - 30
LFB	Ametryn	14.4	LCS	P	0 - 30
LFB	Atrazine	15.9	LCS	P	0 - 30
LFB	Atrazine Desethyl	11.5	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P324314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Azinphos Methyl	9.43	LCS	P	0 - 30
LFB	Bromacil	13.0	LCS	P	0 - 30
LFB	Butylate	8.11	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	13.4	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	12.6	LCS	P	0 - 30
LFB	Cyanazine	14.9	LCS	P	0 - 30
LFB	Demeton	7.25	LCS	P	0 - 30
LFB	Diazinon	17.3	LCS	P	0 - 30
LFB	Disulfoton	7.71	LCS	P	0 - 30
LFB	EPTC	7.10	LCS	P	0 - 30
LFB	Ethion	12.3	LCS	P	0 - 30
LFB	Ethoprop	18.6	LCS	P	0 - 30
LFB	Fenamiphos	13.2	LCS	P	0 - 30
LFB	Fipronil	13.2	LCS	P	0 - 30
LFB	Fipronil Sulfide	18.0	LCS	P	0 - 30
LFB	Fipronil Sulfone	10.9	LCS	P	0 - 30
LFB	Fonofos	16.5	LCS	P	0 - 30
LFB	Hexazinone	2.31	LCS	P	0 - 30
LFB	Malathion	3.75	LCS	P	0 - 30
LFB	Metalaxyl	14.9	LCS	P	0 - 30
LFB	Metolachlor	18.8	LCS	P	0 - 30
LFB	Metribuzin	15.9	LCS	P	0 - 30
LFB	Mevinphos	15.3	LCS	P	0 - 30
LFB	Molinate	12.9	LCS	P	0 - 30
LFB	Norflurazon	14.2	LCS	P	0 - 30
LFB	Parathion Ethyl	11.6	LCS	P	0 - 30
LFB	Parathion Methyl	6.81	LCS	P	0 - 30
LFB	Pendimethalin	12.3	LCS	P	0 - 30
LFB	Phorate	22.8	LCS	P	0 - 30
LFB	Prometon	19.5	LCS	P	0 - 30
LFB	Prometryn	13.8	LCS	P	0 - 30
LFB	Simazine	16.8	LCS	P	0 - 30
LFB	Terbufos	15.4	LCS	P	0 - 30
LFB	Terbuthylazine	14.1	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P324073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893803	Chlordane	8.10	Spike	P	0 - 30
1893803	Toxaphene	3.05	Spike	P	0 - 30
LFB	Chlordane	9.10	LCS	P	0 - 30
LFB	Toxaphene	1.96	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P323999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892232	Sucralose	3.03	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P324033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892645	Pyraclostrobin	8.87	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P324068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892637	Color (true)	6.14	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P324822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893634	Total Alkalinity	0.297	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P324738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892554	TDS	4.06	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P325469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892554	Fluoride	3.65	Spike	F	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P324173

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892474	Organic Carbon	1.19	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P324040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892542	2,4-D	5.43	Spike	P	0 - 30
1892542	Acetaminophen	20.6	Spike	P	0 - 30
1892542	Bentazon	4.29	Spike	P	0 - 30
1892542	Carbamazepine	1.73	Spike	P	0 - 30
1892542	Diuron	4.34	Spike	P	0 - 30
1892542	Fenuron	0.324	Spike	P	0 - 30
1892542	Fluridone	4.39	Spike	P	0 - 30
1892542	Imidacloprid	5.87	Spike	P	0 - 30
1892542	Linuron	3.66	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: USGS O-2060-01
Batch ID: P324040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892542	MCPP	7.46	Spike	P	0 - 30
1892542	Primidone	3.61	Spike	P	0 - 30
1892542	Triclopyr	4.68	Spike	P	0 - 30

* 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: 1892645
Field Sample ID: G1NE0206 04252017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	84.1	P	30 - 150

Lab Sample ID: 1892646
Field Sample ID: G1NE0206 04252017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	106	P	40 - 150
USGS O-2060-01	2,4-D-d3	63.9	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	80.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	84.4	P	30 - 160
USGS O-2060-01	Diuron-d6	72.5	P	30 - 150
USGS O-2060-01	Primidone-d5	92.9	P	30 - 150

Lab Sample ID: 1892647
Field Sample ID: G1NE0871 04252017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	108	P	40 - 150
USGS O-2060-01	2,4-D-d3	66.6	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	92.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	101	P	30 - 160
USGS O-2060-01	Diuron-d6	100	P	30 - 150
USGS O-2060-01	Primidone-d5	114	P	30 - 150

Lab Sample ID: 1892648
Field Sample ID: G1NE0083 04252017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	100	P	40 - 150
USGS O-2060-01	2,4-D-d3	64.4	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	85.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	88.5	P	30 - 160
USGS O-2060-01	Diuron-d6	86.0	P	30 - 150
USGS O-2060-01	Primidone-d5	86.4	P	30 - 150

Quality Assurance Report
Surrogates

Lab Sample ID: 1892649
Field Sample ID: G1NE0856 04252017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	96.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	64.8	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	92.5	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	94.9	P	30 - 160
USGS O-2060-01	Diuron-d6	88.1	P	30 - 150
USGS O-2060-01	Primidone-d5	102	P	30 - 150

Lab Sample ID: 1892661
Field Sample ID: G1NE0206 04252017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	57.0	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	40.3	P	31 - 111
EPA 8276	Decachlorobiphenyl	50.3	P	41 - 106

Lab Sample ID: 1892662
Field Sample ID: G1NE0206 04252017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	109	P	62 - 132
EPA 8270D	Simazine-d10	92.2	P	72 - 127

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A76015
Included Lab Sample IDs: 1892615, 1892618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.9	99.8	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A76020
Included Lab Sample IDs: 1892617, 1892620

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.1	97.2	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A76022
Included Lab Sample IDs: 1892646, 1892647, 1892648, 1892649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	125	90.8	P/P	60 - 150

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A76023
Included Lab Sample IDs: 1892615, 1892618

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A76023
Included Lab Sample IDs: 1892615, 1892618

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

Reference Method: SM 5310 B-00
Run ID: A76046
Included Lab Sample IDs: 1892616, 1892619

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A76056
Included Lab Sample IDs: 1892616, 1892619

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A76070
Included Lab Sample IDs: 1892616, 1892619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	91.7	91.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A76091
Included Lab Sample IDs: 1892616, 1892619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A76108
Included Lab Sample IDs: 1892616, 1892619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	96.2	P/P	90 - 110
Kjeldahl Nitrogen	96.2	93.5	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A76140
Included Lab Sample IDs: 1892661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.4		P	80 - 120
Toxaphene	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A76148
Included Lab Sample IDs: 1892615, 1892618

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A76148
Included Lab Sample IDs: 1892615, 1892618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	104	P/P	90 - 110
Chloride	104	102	P/P	90 - 110
Sulfate	100	96.7	P/P	90 - 110
Sulfate	96.1	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A76198
Included Lab Sample IDs: 1892670

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	101	P/P	90 - 110
Cadmium	98.6	98.2	P/P	90 - 110
Chromium	99.6	98.2	P/P	90 - 110
Copper	104	102	P/P	90 - 110
Lead	100	99.5	P/P	90 - 110
Nickel	104	103	P/P	90 - 110
Silver	99.1	97.9	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A76242
Included Lab Sample IDs: 1892615, 1892618

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

Reference Method: EPA 8321B
Run ID: A76248
Included Lab Sample IDs: 1892645

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	111	103	P/P	60 - 150

Reference Method: EPA 8270D
Run ID: A76297
Included Lab Sample IDs: 1892661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.2		P	80 - 120
Alpha-BHC	97.4		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	98.0		P	80 - 120
Carbophenothion	95.7		P	80 - 120
Chlorothalonil	97.3		P	80 - 120
Cypermethrin	88.0		P	80 - 120
DDD-p,p'	95.7		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	102		P	80 - 120
Dicofol	98.2		P	80 - 120
Dieldrin	98.9		P	80 - 120
Endosulfan I	98.1		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A76297
Included Lab Sample IDs: 1892661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan II	87.1		P	80 - 120
Endosulfan Sulfate	92.8		P	80 - 120
Endrin	97.2		P	80 - 120
Endrin Ketone	93.1		P	80 - 120
Gamma-BHC	99.2		P	80 - 120
Gamma-Chlordane	100		P	80 - 120
Heptachlor	97.4		P	80 - 120
Heptachlor Epoxide	99.1		P	80 - 120
Methoxychlor	108		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	91.7		P	80 - 120
Trifluralin	98.1		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76306
Included Lab Sample IDs: 1892662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Simazine	94.4		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76310
Included Lab Sample IDs: 1892662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.5		P	80 - 120
Alachlor	95.0		P	80 - 120
Ametryn	93.6		P	80 - 120
Atrazine	96.4		P	80 - 120
Atrazine Desethyl	93.6		P	80 - 120
Azinphos Methyl	89.5		P	80 - 120
Bromacil	106		P	80 - 120
Butylate	82.2		P	80 - 120
Chlorpyrifos Ethyl	92.6		P	80 - 120
Chlorpyrifos Methyl	102		P	80 - 120
Cyanazine	77.9*		F	80 - 120
Demeton	77.5*		F	80 - 120
Diazinon	81.1		P	80 - 120
Disulfoton	93.1		P	80 - 120
EPTC	90.3		P	80 - 120
Ethion	92.7		P	80 - 120
Ethoprop	94.0		P	80 - 120
Fenamiphos	91.7		P	80 - 120
Fipronil	94.0		P	80 - 120
Fipronil Sulfide	96.1		P	80 - 120
Fipronil Sulfone	98.0		P	80 - 120
Fonofos	94.2		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	88.8		P	80 - 120
Metalaxyl	90.8		P	80 - 120
Metolachlor	96.3		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A76310
Included Lab Sample IDs: 1892662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Metribuzin	91.8		P	80 - 120
Mevinphos	96.9		P	80 - 120
Molinate	88.1		P	80 - 120
Norflurazon	92.4		P	80 - 120
Parathion Ethyl	113		P	80 - 120
Parathion Methyl	96.1		P	80 - 120
Pendimethalin	92.7		P	80 - 120
Phorate	99.5		P	80 - 120
Prometon	90.8		P	80 - 120
Prometryn	95.3		P	80 - 120
Terbufos	94.9		P	80 - 120
Terbuthylazine	118		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76326
Included Lab Sample IDs: 1892661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Aldehyde	95.3		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A76346
Included Lab Sample IDs: 1892670

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	90 - 110
Iron	100	99.3	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	99.0	99.5	P/P	90 - 110
Sodium	99.0	101	P/P	90 - 110
Zinc	98.9	99.5	P/P	90 - 110

Reference Method: USGS O-2060-01
Run ID: A76477
Included Lab Sample IDs: 1892646, 1892647, 1892648, 1892649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.2	89.2	P/P	50 - 150
2,4-D	94.4	91.2	P/P	50 - 150
Acetaminophen	102	110	P/P	60 - 150
Acetaminophen	110	96.4	P/P	60 - 150
Bentazon	80.0	84.4	P/P	50 - 150
Bentazon	84.4	81.2	P/P	50 - 150
Carbamazepine	108	99.2	P/P	60 - 150
Carbamazepine	90.0	108	P/P	60 - 150
Diuron	106	116	P/P	60 - 150
Diuron	116	121	P/P	60 - 150
Fenuron	102	102	P/P	60 - 150
Fenuron	105	102	P/P	60 - 150
Fluridone	103	118	P/P	60 - 150
Fluridone	118	112	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A76477
Included Lab Sample IDs: 1892646, 1892647, 1892648, 1892649

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imidacloprid	109	105	P/P	60 - 150
Imidacloprid	99.6	109	P/P	60 - 150
Linuron	104	96.8	P/P	60 - 150
Linuron	95.6	104	P/P	60 - 150
MCPP	90.8	94.4	P/P	50 - 150
MCPP	94.4	90.0	P/P	50 - 150
Primidone	102	106	P/P	60 - 150
Primidone	106	94.0	P/P	60 - 150
Triclopyr	90.8	97.2	P/P	50 - 150
Triclopyr	97.2	90.0	P/P	50 - 150

Reference Method: SM 4500 F-C-97
Run ID: A76498
Included Lab Sample IDs: 1892615, 1892618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.0	104	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							1.60	
EPA 200.7 Rev. 4.4	Calcium	106		110	107	110			1.21
	Iron	102		104	104	106			1.54
	Magnesium	107		111	109	111			1.50
	Potassium	97.7		102	99.8	100			0.402
	Sodium	102		98.4	105				1.57
	Zinc	97.7		99.3	100	101			0.568
EPA 200.8 Rev. 5.4	Arsenic	99.9		98.2	99.7	98.4			1.26
	Cadmium	96.6		98.2	98.4	95.6			2.90
	Chromium	96.0		94.9	96.6	94.9			1.83
	Copper	98.6		99.0	98.5	97.8			0.677
	Lead	97.4		97.2	98.5	96.8			1.67
	Nickel	101		99.8	100	99.4			0.591
	Silver	94.9		95.4	94.6	93.7			0.953
EPA 300.0 Rev. 2.1	Chloride	97.6		95.8	96.8	96.9			0.808
	Sulfate	97.9		97.4	100	99.8			2.39
EPA 350.1 Rev. 2.0	Ammonia-N	97.3		96.5	93.5				2.84
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.1		96.9	104				5.87
EPA 353.2 Rev. 2.0	NO2NO3-N	106		102	102				0.0
EPA 365.1 Rev. 2.0	Total-P	101							0.494
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.0		97.2	98.3				1.13
EPA 8270D	Acetochlor	105	89.2	99.0	98.8		15.9		0.220
	Alachlor	102	84.5	92.5	92.4		18.5		0.128

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Aldrin	49.7	46.3	59.2	70.7	7.13		17.6
	Alpha-BHC	93.1	92.6	86.6	110	0.503		24.0
	Alpha-Chlordane	94.0	86.3	75.0	88.4	8.54		16.5
	Ametryn	126	109	122	125	14.4		2.89
	Atrazine	108	92.0	99.3	97.3	15.9		1.67
	Atrazine Desethyl	76.0	67.8	65.9	61.9	11.5		6.24
	Azinphos Methyl	144	131	147	127	9.43		14.3
	Beta-BHC	107	107	89.2	109	0.0541		20.0
	Bromacil	88.1	77.3	92.7	92.1	13.0		0.607
	Butylate	52.5	48.4	41.4	39.2	8.11		5.36
	Carbophenothion	109	110	125	147	1.12		16.1
	Chlorothalonil	23.8	61.7	148	153	88.5		3.21
	Chlorpyrifos Ethyl	99.8	87.2	93.3	93.3	13.4		0.0469
	Chlorpyrifos Methyl	97.7	86.1	89.3	85.7	12.6		4.12
	Cyanazine	122	105	115	109	14.9		5.56
	Cypermethrin	101	83.2	109	140	18.9		24.6
	DDD-p,p'	100	91.7	78.7	95.2	9.11		19.0
	DDE-p,p'	92.0	89.0	68.5	85.6	3.27		22.2
	DDT-p,p'	98.8	95.4	68.7	79.0	3.56		13.9
	Delta-BHC	124	127	116	135	2.40		14.4
	Demeton	102	94.6	96.9	94.3	7.25		2.64
	Diazinon	101	84.5	97.6	97.4	17.3		0.233
	Dicofol	44.1	33.8	11.8	20.1	26.5		51.9
	Dieldrin	92.6	85.6	72.3	85.5	7.84		16.7
	Disulfoton	99.3	92.0	98.6	89.5	7.71		9.59
	Endosulfan I	100	95.3	84.3	96.8	5.08		13.8
	Endosulfan II	102	98.3	88.6	105	3.73		17.2
	Endosulfan Sulfate	95.2	93.0	86.4	96.2	2.32		10.7
	Endrin	102	91.2	84.6	87.7	11.7		3.50
	Endrin Aldehyde	89.3	82.8	81.3	96.8	7.60		17.4
	Endrin Ketone	93.6	91.1	90.6	110	2.71		19.3
	EPTC	51.4	47.9	39.7	37.3	7.10		6.18
	Ethion	126	112	120	117	12.3		2.84
	Ethoprop	103	85.1	96.8	93.6	18.6		3.40
	Fenamiphos	150	131	143	141	13.2		1.13
	Fipronil	113	99.2	113	108	13.2		3.59
	Fipronil Sulfide	106	88.1	99.5	91.9	18.0		8.01
	Fipronil Sulfone	102	91.1	100	90.2	10.9		9.15
	Fonofos	97.9	82.9	95.5	89.3	16.5		6.72
	Gamma-BHC	103	102	84.0	103	0.727		20.4
	Gamma-Chlordane	91.1	82.9	74.9	87.6	9.39		15.6
	Heptachlor	76.6	73.7	66.6	73.5	3.87		9.76
	Heptachlor Epoxide	94.2	87.8	75.6	88.9	7.04		16.2
	Hexazinone	93.3	95.5	94.1	87.9	2.31		6.02
	Malathion	102	98.5	103	92.9	3.75		10.8
	Metalaxyl	98.8	85.1	96.7	95.4	14.9		1.37
	Methoxychlor	108	100	80.3	93.5	7.65		15.1
	Metolachlor	110	91.1	97.9	101	18.8		2.56
	Metribuzin	111	94.2	104	98.0	15.9		5.54
	Mevinphos	95.4	81.9	95.6	84.4	15.3		12.4
	Mirex	77.1	72.4	64.5	78.7	6.35		19.8
	Molinate	63.3	55.7	54.5	52.2	12.9		4.39
	Norflurazon	112	97.5	114	105	14.2		7.92
	Parathion Ethyl	98.7	87.9	98.1	90.6	11.6		7.92

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Parathion Methyl	91.9	85.8	91.6	85.6	6.81		6.78
	Pendimethalin	97.4	86.1	99.3	93.9	12.3		5.61
	Permethrin	99.6	83.3	98.9	124	17.8		22.2
	Phorate	109	87.1	97.3	95.5	22.8		1.87
	Prometon	115	94.8	115	112	19.5		2.69
	Prometryn	118	102	116	115	13.8		0.528
	Simazine	105	88.9	94.0	89.3	16.8		5.17
	Terbufos	100	85.9	96.1	93.2	15.4		3.08
	Terbuthylazine	99.0	86.0	92.3	90.5	14.1		1.94
	Trifluralin	147	126	139	176	15.4		23.7
EPA 8276	Chlordane	77.2	84.6	83.4	76.9	9.10		8.10
	Toxaphene	92.7	90.9	115	112	1.96		3.05
EPA 8321B	Pyraclostrobin	94.4		94.2	86.2			8.87
	Sucralose	92.6		84.6	87.2			3.03
SM 2120 B	Color (true)						6.14	
SM 2320 B-97	Total Alkalinity	103					0.297	
SM 2540 C-97	TDS						4.06	
SM 4500 F-C-97	Fluoride	102		102	97.9			3.65
SM 5310 B-00	Organic Carbon	102		99.1	100			1.19
USGS O-2060-01	2,4-D	73.9		62.4	66.3			5.43
	Acetaminophen	83.4		101	81.8			20.6
	Bentazon	48.0		47.2	49.4			4.29
	Carbamazepine	109		89.2	90.7			1.73
	Diuron	106		76.3	80.6			4.34
	Fenuron	105		49.5	49.3			0.324
	Fluridone	102		71.1	74.9			4.39
	Imidacloprid	106		154	163			5.87
	Linuron	98.6		91.2	94.6			3.66
	MCPP	79.2		56.8	61.2			7.46
	Primidone	105		81.5	84.5			3.61
	Triclopyr	77.4		60.1	63.0			4.68

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1892615, 1892618
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1892670
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1892670
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1892615, 1892618
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1892615, 1892618
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1892616, 1892619
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1892616, 1892619
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1892616, 1892619
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1892616, 1892619
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1892617, 1892620

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1892661
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1892662
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1892661
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1892645
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1892646, 1892647, 1892648, 1892649
SM 2120 B / E31780	True Color measured at 450 nm	1892615, 1892618
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1892615, 1892618
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1892615, 1892618
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1892615, 1892618
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1892615, 1892618
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1892616, 1892619
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1892646, 1892647, 1892648, 1892649
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1892646, 1892647, 1892648, 1892649

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	04/26/2017			04/26/2017 16:32	Sima Feizi	1892615, 1892618
EPA 200.7 Rev. 4.4	04/26/2017	05/03/2017	Elliott D. Healy	05/10/2017	Martin Acosta	1892670
EPA 200.8 Rev. 5.4	04/26/2017	05/03/2017	Elliott D. Healy	05/04/2017	Betina Topolski	1892670
EPA 300.0 Rev. 2.1	04/26/2017			05/03/2017	Ping Hua	1892615
	04/26/2017			05/04/2017	Ping Hua	1892618
EPA 350.1 Rev. 2.0	04/26/2017			04/27/2017	Julie Michelle Frank	1892616, 1892619
EPA 351.2 Rev. 2.0	04/26/2017	04/28/2017	Adrian Shelby	05/02/2017	Joseph Suarez	1892616, 1892619
EPA 353.2 Rev. 2.0	04/26/2017			04/28/2017	Beverly Y. Sanders	1892616, 1892619
EPA 365.1 Rev. 2.0	04/26/2017	04/28/2017	Vijayalakshmi Reddy	05/01/2017	Lipi Saha	1892616, 1892619
EPA 365.1 Rev. 2.0 dissolved	04/26/2017			04/26/2017 14:39	Anthony C. Onicha	1892617
	04/26/2017			04/26/2017 14:40	Anthony C. Onicha	1892620
EPA 8270D	04/26/2017	04/28/2017	Fe-Val Siddell	05/01/2017	Marek Topolski	1892661
	04/26/2017	04/28/2017	Fe-Val Siddell	05/10/2017	Marek Topolski	1892661
	04/26/2017	05/01/2017	Rasheda Ghaffari	05/03/2017	Irina Carbone	1892662
	04/26/2017	05/01/2017	Rasheda Ghaffari	05/05/2017	Irina Carbone	1892662
EPA 8276	04/26/2017	04/28/2017	Fe-Val Siddell	05/02/2017	Vandana T. Nagar	1892661
EPA 8321B	04/26/2017	04/26/2017	Mohammad Ghaffari	04/26/2017	Mohammad Ghaffari	1892646, 1892647, 1892648, 1892649
	04/26/2017	04/29/2017	Fe-Val Siddell	05/05/2017	Juyoung Kim	1892645
SM 2120 B	04/26/2017			04/26/2017 15:28	Julia Storbeck	1892615
	04/26/2017			04/26/2017 15:29	Julia Storbeck	1892618
SM 2320 B-97	04/26/2017			05/06/2017	Dale L. Simmons	1892615, 1892618
SM 2540 C-97	04/26/2017			05/01/2017	Yijie Li	1892615, 1892618
SM 2540 D-97	04/26/2017			05/01/2017	Yijie Li	1892615, 1892618
SM 4500 F-C-97	04/26/2017			05/18/2017	Dale L. Simmons	1892615, 1892618
SM 5310 B-00	04/26/2017			04/27/2017	Julie Michelle Frank	1892616, 1892619
USGS O-2060-01	04/26/2017	04/29/2017	Hoor Shaik	05/14/2017	Juyoung Kim	1892646, 1892647, 1892648, 1892649