

Chemical Analysis Report

WQAP-2017-08-15-04

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

Event Description: **pesticide template kit: C**
Request ID: **RQ-2017-06-19-34**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
MS #3560
Tallahassee, FL 32399-2400
Attn: Michael Eckles

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Certified by: Colin Wright, Program Administrator

Date Certified: 13-SEP-2017 14:15

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light-colored rectangular background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Little Aucilla River @ US 90

Collection Date/Time: 08/15/2017 12:30

Field ID: G1TLHR0029-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1921626	EPA 180.1 Rev. 2.0	Turbidity	1.4	A	NTU	P330258	
	EPA 300.0 Rev. 2.1	Chloride	3.8		mg Cl/L	P330286	
		Sulfate	0.24	I	mg SO4/L	P330285	
	SM 2120 B	Color (true)	630		PCU	P330273	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P330605	
	SM 2540 C-97	TDS	113		mg/L	P330691	RPD
	SM 2540 D-97	TSS	3	I	mg/L	P330919	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P330801	
1921627	EPA 350.1 Rev. 2.0	Ammonia-N	0.079		mg N/L	P330513	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P330543	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P330476	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P330417	
	SM 5310 B-00	Organic Carbon	57		mg C/L	P330561	
1921628	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P330345	
1921633	EPA 200.7 Rev. 4.4	Calcium	2.61		mg/L	P330325	
		Iron	2.01E+03		ug/L	P330325	
		Magnesium	1.05		mg/L	P330325	
		Potassium	0.47	I	mg/L	P330325	
		Sodium	2.4		mg/L	P330325	
		Zinc	7.1	I	ug/L	P330325	
	EPA 200.8 Rev. 5.4	Arsenic	0.57		ug/L	P330325	
		Cadmium	0.031	I	ug/L	P330325	
		Chromium	0.90	I	ug/L	P330325	
		Copper	1.80		ug/L	P330325	
		Lead	2.74		ug/L	P330325	
		Nickel	1.13		ug/L	P330325	
		Silver	0.010	U	ug/L	P330325	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 09/08/2017.

Sample Location: Little Aucilla River @ US 90

Collection Date/Time: 08/15/2017 12:30

Field ID: G1TLHR0029-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1921630	EPA 8321B	Glyphosate**	0.50	U	ug/L	P330061	
		Pyraclostrobin**	0.0020	U	ug/L	P330252	MS
		Sucralose**	0.010	U	ug/L	P330383	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P330313	
		Diuron	8.0E-04	U	ug/L	P330313	
		Fenuron	0.0080	U	ug/L	P330313	
		Imidacloprid	0.053		ug/L	P330313	
		Bentazon	8.0E-04	U	ug/L	P330313	
		Linuron	0.0040	U	ug/L	P330313	

Field ID: G1TLHR0029-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1921630	USGS O-2060-01	Acetaminophen**	0.015	I	ug/L	P330313	
		MCP	0.0020	U	ug/L	P330313	
		Carbamazepine**	4.0E-04	U	ug/L	P330313	
		Triclopyr**	0.0040	U	ug/L	P330313	
		Primidone**	0.0040	U	ug/L	P330313	
		Fluridone**	4.0E-04	U	ug/L	P330313	RPD
1921631	EPA 8270D	Aldrin	4.3	U	ng/L	P330385	RPD
		Alpha-BHC	2.2	U	ng/L	P330385	
		Beta-BHC	4.3	U	ng/L	P330385	
		Delta-BHC	4.3	U	ng/L	P330385	
		Gamma-BHC	4.3	U	ng/L	P330385	
		Carbophenothion	4.3	U	ng/L	P330385	
		Chlorothalonil	2.2	U	ng/L	P330385	
		Cypermethrin	22	U	ng/L	P330385	
		DDD-p,p'	3.2	U	ng/L	P330385	
		DDE-p,p'	3.2	U	ng/L	P330385	
		DDT-p,p'	3.2	U	ng/L	P330385	
		Dieldrin	4.3	U	ng/L	P330385	
		Endosulfan I	4.3	U	ng/L	P330385	
		Endosulfan II	4.3	U	ng/L	P330385	
		Endosulfan Sulfate	2.2	U	ng/L	P330385	
		Endrin	2.2	U	ng/L	P330385	
		Endrin Aldehyde	2.2	U	ng/L	P330385	
		Heptachlor	1.6	U	ng/L	P330385	
		Heptachlor Epoxide	2.2	U	ng/L	P330385	
		Methoxychlor	4.3	U	ng/L	P330385	
		Mirex	2.2	U	ng/L	P330385	
		Permethrin	11	U	ng/L	P330385	
		Trifluralin	1.1	U	ng/L	P330385	
		Alpha-Chlordane	1.1	U	ng/L	P330385	
		Gamma-Chlordane	1.1	U	ng/L	P330385	
		Endrin Ketone	2.2	U	ng/L	P330385	
		Dicofol	32	U	ng/L	P330385	
	EPA 8276	Chlordane**	2.7	U	ng/L	P330385	
		Toxaphene**	14	U	ng/L	P330385	
1921632	EPA 8270D	Alachlor	0.24	U	ng/L	P330463	
		Ametryn	0.31	U	ng/L	P330463	
		Atrazine	0.27	I	ng/L	P330463	
		Atrazine Desethyl	1.4	U	ng/L	P330463	RPD
		Azinphos Methyl	2.2	U	ng/L	P330463	
		Bromacil	0.48	U	ng/L	P330463	RPD
		Butylate	0.38	U	ng/L	P330463	RPD
		Chlorpyrifos Ethyl	0.24	U	ng/L	P330463	
		Chlorpyrifos Methyl	0.096	U	ng/L	P330463	
		Demeton	1.9	U	ng/L	P330463	

Field ID: G1TLHR0029-2017-02

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1921632	EPA 8270D	Diazinon	0.12	U	ng/L	P330463	
		Disulfoton	0.48	U	ng/L	P330463	
		EPTC	1.2	U	ng/L	P330463	RPD
		Ethion	0.14	U	ng/L	P330463	
		Ethoprop	0.096	U	ng/L	P330463	
		Fenamiphos	0.24	U	ng/L	P330463	
		Fipronil	0.24	U	ng/L	P330463	MS, RPD
		Fipronil Sulfide	0.14	U	ng/L	P330463	MS, RPD
		Fipronil Sulfone	0.14	U	ng/L	P330463	RPD
		Hexazinone	0.48	U	ng/L	P330463	MS, RPD
		Malathion	0.34	U	ng/L	P330463	
		Metribuzin	0.19	UJ	ng/L	P330463	LCS, MS
		Mevinphos	0.48	U	ng/L	P330463	
		Molinate	0.29	U	ng/L	P330463	MS, RPD
		Norflurazon	0.48	U	ng/L	P330463	RPD
		Pendimethalin	0.96	U	ng/L	P330463	
		Phorate	0.24	U	ng/L	P330463	
		Prometon	0.86	U	ng/L	P330463	
		Prometryn	0.19	U	ng/L	P330463	
		Simazine	0.48	U	ng/L	P330463	
		Terbufos	0.096	U	ng/L	P330463	
		Terbutylazine	0.41	U	ng/L	P330463	
		Fonofos	0.19	U	ng/L	P330463	
		Metalaxyl	0.19	U	ng/L	P330463	
		Metolachlor	1.0		ng/L	P330463	
		Acetochlor	0.24	U	ng/L	P330463	
		Cyanazine	0.48	U	ng/L	P330463	RPD
		Parathion Ethyl	0.24	U	ng/L	P330463	
		Parathion Methyl	0.24	U	ng/L	P330463	

Ref. Method and Comment:

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

USGS O-2060-01: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

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

Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P330258

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P330325

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330325

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: P330325

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: P330285

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330286

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330513

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330543

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330476

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: P330417

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330345

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

Reference Method: EPA 8270D
Batch ID: P330385

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

Reference Method: EPA 8270D
Batch ID: P330463

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: P330463

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

Reference Method: EPA 8276

Batch ID: P330385

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

Reference Method: EPA 8321B

Batch ID: P330061

Component	Result	Code	Units
Glyphosate	0.50	U	ug/L

Reference Method: EPA 8321B

Batch ID: P330252

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P330383

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P330273

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P330605

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

Reference Method: SM 2540 C-97
Batch ID: P330691

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330919

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P330801

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P330561

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

Reference Method: USGS O-2060-01
Batch ID: P330313

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	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P330313

Component	Result	Code	Units
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	107		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	102		P	85 - 115
Sodium	103		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	107		P	85 - 115
Cadmium	99.3		P	85 - 115
Chromium	95.7		P	85 - 115
Copper	101		P	85 - 115
Lead	100		P	85 - 115
Nickel	103		P	85 - 115
Silver	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330285

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330286

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330513

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330543

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P330543

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: P330476

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: P330417

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P330345

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

Reference Method: EPA 8270D
 Batch ID: P330385

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	36.2	35.4	P/P	26 - 88.0
Alpha-BHC	82.9	76.3	P/P	63 - 114
Alpha-Chlordane	78.7	76.4	P/P	56 - 117
Beta-BHC	87.0	78.4	P/P	57 - 138
Carbophenothion	62.8	81.7	P/P	36 - 148
Chlorothalonil	47.9	39.0	P/P	26 - 173
Cypermethrin	79.4	84.3	P/P	42 - 159
DDD-p,p'	85.7	81.1	P/P	62 - 126
DDE-p,p'	76.3	75.3	P/P	53 - 115
DDT-p,p'	77.2	77.0	P/P	54 - 117
Delta-BHC	106	94.5	P/P	68 - 158
Dicofol	45.4	36.3	P/P	25 - 114
Dieldrin	81.0	75.2	P/P	59 - 126
Endosulfan I	92.8	86.7	P/P	62 - 138
Endosulfan II	91.7	82.7	P/P	61 - 150
Endosulfan Sulfate	84.3	82.3	P/P	63 - 132
Endrin	105	110	P/P	49 - 148
Endrin Aldehyde	90.8	82.8	P/P	50 - 144
Endrin Ketone	82.7	81.1	P/P	66 - 122
Gamma-BHC	96.7	85.4	P/P	60 - 137
Gamma-Chlordane	74.2	70.9	P/P	54 - 113
Heptachlor	60.9	65.3	P/P	43 - 104
Heptachlor Epoxide	80.0	74.9	P/P	64 - 118
Methoxychlor	96.2	95.8	P/P	63 - 129
Mirex	61.6	66.0	P/P	39 - 93.0
Permethrin	71.5	75.2	P/P	51 - 123
Trifluralin	110	106	P/P	35 - 187

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P330463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	87.8	90.8	P/P	78 - 118
Alachlor	89.4	92.0	P/P	77 - 119
Ametryn	76.7	82.7	P/P	61 - 136
Atrazine	94.7	94.7	P/P	73 - 120
Atrazine Desethyl	90.8	76.7	P/P	16 - 122
Azinphos Methyl	108	102	P/P	69 - 186
Bromacil	91.3	80.7	P/P	40 - 125
Butylate	41.6	44.1	P/P	32 - 87.0
Chlorpyrifos Ethyl	92.1	89.2	P/P	53 - 110
Chlorpyrifos Methyl	91.8	93.5	P/P	31 - 119
Cyanazine	178	182	P/P	36 - 224
Demeton	82.3	80.7	P/P	39 - 122
Diazinon	90.9	97.7	P/P	75 - 119
Disulfoton	96.0	97.8	P/P	42 - 139
EPTC	40.5	47.0	P/P	33 - 96.0
Ethion	91.9	92.5	P/P	63 - 127
Ethoprop	69.3	88.6	P/P	65 - 107
Fenamiphos	89.6	80.2	P/P	64 - 137
Fipronil	85.5	79.1	P/P	60 - 126
Fipronil Sulfide	83.4	74.0	P/P	58 - 124
Fipronil Sulfone	74.1	63.3	P/P	57 - 126
Fonofos	84.4	92.6	P/P	65 - 111
Hexazinone	80.6	86.0	P/P	46 - 151
Malathion	93.0	93.7	P/P	68 - 132
Metaxyl	81.2	79.0	P/P	51 - 132
Metolachlor	90.0	92.6	P/P	78 - 119
Metribuzin	180	168	F/F	58 - 148
Mevinphos	71.1	70.9	P/P	34 - 128
Molinate	52.6	51.9	P/P	44 - 101
Norflurazon	81.2	73.3	P/P	63 - 129
Parathion Ethyl	90.1	92.3	P/P	80 - 109
Parathion Methyl	97.7	97.0	P/P	74 - 125
Pendimethalin	84.6	86.7	P/P	48 - 134
Phorate	74.1	80.5	P/P	52 - 119
Prometon	79.4	79.0	P/P	69 - 124
Prometryn	83.8	77.8	P/P	66 - 124
Simazine	95.3	91.2	P/P	61 - 134
Terbufos	84.9	90.6	P/P	58 - 115
Terbutylazine	91.4	92.6	P/P	77 - 113

Reference Method: EPA 8276
Batch ID: P330385

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	79.9	88.0	P/P	48 - 121
Toxaphene	85.9	98.3	P/P	43 - 135

Reference Method: EPA 8321B
Batch ID: P330061

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P330252

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	52.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P330383

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	125		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P330605

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

Reference Method: SM 4500 F-C-97
Batch ID: P330801

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P330561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.5		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P330313

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	70.9		P	40 - 150
Acetaminophen	77.2		P	30 - 150
Bentazon	79.8		P	40 - 150
Carbamazepine	84.8		P	40 - 150
Diuron	91.8		P	40 - 150
Fenuron	90.6		P	40 - 150
Fluridone	101		P	40 - 150
Imidacloprid	76.0		P	40 - 160
Linuron	99.0		P	40 - 150
MCP	57.5		P	40 - 150
Primidone	85.2		P	40 - 150
Triclopyr	62.3		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921516	Calcium	103		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921516	Iron	110		P	80 - 120
1921516	Magnesium	105		P	80 - 120
1921516	Potassium	102		P	80 - 120
1921516	Sodium	104		P	80 - 120
1921516	Zinc	103		P	80 - 120
1921772	Calcium	107		P	80 - 120
1921772	Iron	107	106	P/P	80 - 120
1921772	Magnesium	107		P	80 - 120
1921772	Potassium	106	101	P/P	80 - 120
1921772	Sodium	107		P	80 - 120
1921772	Zinc	100	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921516	Arsenic	106		P	80 - 120
1921516	Cadmium	100		P	80 - 120
1921516	Chromium	93.2		P	80 - 120
1921516	Copper	94.9		P	80 - 120
1921516	Lead	102		P	80 - 120
1921516	Nickel	98.4		P	80 - 120
1921516	Silver	104		P	80 - 120
1921772	Arsenic	104	106	P/P	80 - 120
1921772	Cadmium	102	103	P/P	80 - 120
1921772	Chromium	92.5	94.2	P/P	80 - 120
1921772	Copper	93.8	94.6	P/P	80 - 120
1921772	Lead	101	104	P/P	80 - 120
1921772	Nickel	96.3	97.2	P/P	80 - 120
1921772	Silver	102	104	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921555	Sulfate	97.3		P	90 - 110
1921557	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921555	Chloride	97.8		P	90 - 110
1921557	Chloride	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330513

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921605	Ammonia-N	101	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921598	Kjeldahl Nitrogen	96.7	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921559	NO2NO3-N	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921552	Total-P	93.0	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921680	O-Phosphate-P	91.0	93.0	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P330385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922374	Aldrin	51.2	35.5	P/P	22 - 97.0
1922374	Alpha-BHC	90.7	84.0	P/P	43 - 132
1922374	Alpha-Chlordane	84.2	73.4	P/P	36 - 126
1922374	Beta-BHC	89.9	92.5	P/P	41 - 150
1922374	Carbophenothion	93.9	70.4	P/P	13 - 196
1922374	Chlorothalonil	85.4	70.5	P/P	10 - 266
1922374	Cypermethrin	91.8	90.3	P/P	37 - 161
1922374	DDD-p,p'	86.2	84.3	P/P	44 - 131
1922374	DDE-p,p'	89.0	73.5	P/P	32 - 127
1922374	DDT-p,p'	83.5	70.9	P/P	45 - 116
1922374	Delta-BHC	127	125	P/P	50 - 201
1922374	Dicofol	31.3	24.3	P/P	10 - 100
1922374	Dieldrin	107	67.4	P/P	39 - 142
1922374	Endosulfan I	97.8	90.9	P/P	51 - 139
1922374	Endosulfan II	92.3	97.3	P/P	49 - 155
1922374	Endosulfan Sulfate	83.8	89.4	P/P	54 - 136
1922374	Endrin	123	117	P/P	38 - 141
1922374	Endrin Aldehyde	87.5	88.8	P/P	14 - 152
1922374	Endrin Ketone	91.7	93.4	P/P	60 - 128
1922374	Gamma-BHC	109	98.4	P/P	48 - 157
1922374	Gamma-Chlordane	78.8	69.8	P/P	35 - 123
1922374	Heptachlor	66.7	57.4	P/P	25 - 112
1922374	Heptachlor Epoxide	90.9	84.1	P/P	48 - 125
1922374	Methoxychlor	100	94.7	P/P	52 - 127
1922374	Mirex	72.5	56.9	P/P	25 - 108
1922374	Permethrin	86.3	75.6	P/P	46 - 133
1922374	Trifluralin	136	123	P/P	29 - 254

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P330463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921573	Acetochlor	81.4	85.2	P/P	74 - 123
1921573	Alachlor	84.0	88.1	P/P	73 - 124
1921573	Ametryn	97.8	85.6	P/P	56 - 149
1921573	Atrazine Desethyl	81.3	33.3	P/P	12 - 103
1921573	Azinphos Methyl	89.9	78.5	P/P	60 - 202
1921573	Bromacil	96.0	48.5	P/P	42 - 133
1921573	Butylate	13.9	19.9	P/P	10 - 85.0
1921573	Chlorpyrifos Ethyl	85.1	83.6	P/P	53 - 113
1921573	Chlorpyrifos Methyl	79.5	79.6	P/P	40 - 115
1921573	Cyanazine	135	79.5	P/P	22 - 210
1921573	Demeton	68.0	70.3	P/P	17 - 149
1921573	Diazinon	82.4	88.7	P/P	72 - 124
1921573	Disulfoton	82.8	83.6	P/P	43 - 139
1921573	EPTC	13.2	21.3	P/P	10 - 86.0
1921573	Ethion	112	87.2	P/P	65 - 131
1921573	Ethoprop	61.2	67.5	P/P	59 - 110
1921573	Fenamiphos	73.4	63.4	P/P	57 - 138
1921573	Fipronil	84.7	33.8	P/F	40 - 130
1921573	Fipronil Sulfide	97.6	9.16	P/F	36 - 128
1921573	Fonofos	73.2	76.7	P/P	60 - 112
1921573	Hexazinone	111	18.2	P/F	69 - 142
1921573	Malathion	95.5	82.9	P/P	68 - 132
1921573	Metolachlor	88.5	89.4	P/P	71 - 124
1921573	Metribuzin	187	134	F/P	61 - 140
1921573	Mevinphos	57.8	61.5	P/P	38 - 130
1921573	Molinate	22.3	34.4	F/P	23 - 99.0
1921573	Norflurazon	79.9	48.1	P/P	39 - 139
1921573	Parathion Ethyl	91.4	81.0	P/P	75 - 111
1921573	Parathion Methyl	93.3	85.1	P/P	64 - 130
1921573	Pendimethalin	85.3	82.5	P/P	26 - 173
1921573	Phorate	53.3	61.4	P/P	43 - 127
1921573	Prometon	91.6	83.2	P/P	50 - 144
1921573	Prometryn	91.8	87.1	P/P	69 - 126
1921573	Simazine	96.2	81.5	P/P	51 - 152
1921573	Terbufos	71.4	77.2	P/P	54 - 125
1921573	Terbuthylazine	90.7	83.2	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P330385

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921425	Chlordane	85.8	92.9	P/P	44 - 134
1921425	Toxaphene	91.2	99.5	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P330061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919951	Glyphosate	118	114	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P330252

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921412	Pyraclostrobin	40.1	37.9	P/F	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P330801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921904	Fluoride	94.6	96.5	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P330561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921560	Organic Carbon	90.5	90.8	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P330313

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921540	Acetaminophen	110	104	P/P	30 - 150
1921540	Bentazon	58.3	56.0	P/P	40 - 150
1921540	Carbamazepine	94.5	95.8	P/P	40 - 150
1921540	Diuron	72.1	72.8	P/P	40 - 150
1921540	Fenuron	78.6	81.9	P/P	40 - 150
1921540	Fluridone	96.6	62.0	P/P	40 - 150
1921540	Linuron	95.2	88.2	P/P	40 - 150
1921540	MCP	80.1	74.2	P/P	40 - 150
1921540	Primidone	115	115	P/P	40 - 150
1921540	Triclopyr	78.7	69.0	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921626	Turbidity	1.48	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921772	Calcium	2.09	Spike	P	0 - 20
1921772	Iron	1.07	Spike	P	0 - 20
1921772	Magnesium	1.91	Spike	P	0 - 20
1921772	Potassium	2.25	Spike	P	0 - 20
1921772	Sodium	2.57	Spike	P	0 - 20
1921772	Zinc	0.343	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921772	Arsenic	1.85	Spike	P	0 - 20
1921772	Cadmium	1.21	Spike	P	0 - 20
1921772	Chromium	1.79	Spike	P	0 - 20
1921772	Copper	0.858	Spike	P	0 - 20
1921772	Lead	2.58	Spike	P	0 - 20
1921772	Nickel	0.960	Spike	P	0 - 20
1921772	Silver	2.30	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921557	Sulfate	6.67	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921557	Chloride	6.88	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921605	Ammonia-N	1.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921598	Kjeldahl Nitrogen	2.40	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921559	NO2NO3-N	0.727	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921552	Total-P	2.94	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921680	O-Phosphate-P	2.17	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P330385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922374	Aldrin	36.4	Spike	F	0 - 30
1922374	Alpha-BHC	7.67	Spike	P	0 - 30
1922374	Alpha-Chlordane	13.7	Spike	P	0 - 30
1922374	Beta-BHC	2.87	Spike	P	0 - 30
1922374	Carbophenothion	28.5	Spike	P	0 - 30
1922374	Chlorothalonil	19.2	Spike	P	0 - 30
1922374	Cypermethrin	1.62	Spike	P	0 - 30
1922374	DDD-p,p'	2.23	Spike	P	0 - 30
1922374	DDE-p,p'	19.1	Spike	P	0 - 30
1922374	DDT-p,p'	16.4	Spike	P	0 - 30
1922374	Delta-BHC	1.61	Spike	P	0 - 30
1922374	Dicofol	25.2	Spike	P	0 - 30
1922374	Dieldrin	9.45	Spike	P	0 - 30
1922374	Endosulfan I	7.32	Spike	P	0 - 30
1922374	Endosulfan II	5.28	Spike	P	0 - 30
1922374	Endosulfan Sulfate	6.46	Spike	P	0 - 30
1922374	Endrin	5.00	Spike	P	0 - 30
1922374	Endrin Aldehyde	1.43	Spike	P	0 - 30
1922374	Endrin Ketone	1.91	Spike	P	0 - 30
1922374	Gamma-BHC	10.0	Spike	P	0 - 30
1922374	Gamma-Chlordane	12.2	Spike	P	0 - 30
1922374	Heptachlor	15.0	Spike	P	0 - 30
1922374	Heptachlor Epoxide	5.89	Spike	P	0 - 30
1922374	Methoxychlor	5.56	Spike	P	0 - 30
1922374	Mirex	24.1	Spike	P	0 - 30
1922374	Permethrin	13.1	Spike	P	0 - 30
1922374	Trifluralin	9.87	Spike	P	0 - 30
LFB	Aldrin	2.35	LCS	P	0 - 30
LFB	Alpha-BHC	8.28	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.93	LCS	P	0 - 30
LFB	Beta-BHC	10.3	LCS	P	0 - 30
LFB	Carbophenothion	26.1	LCS	P	0 - 30
LFB	Chlorothalonil	20.5	LCS	P	0 - 30
LFB	Cypermethrin	6.09	LCS	P	0 - 30
LFB	DDD-p,p'	5.56	LCS	P	0 - 30
LFB	DDE-p,p'	1.29	LCS	P	0 - 30
LFB	DDT-p,p'	0.188	LCS	P	0 - 30
LFB	Delta-BHC	11.2	LCS	P	0 - 30
LFB	Dicofol	22.4	LCS	P	0 - 30
LFB	Dieldrin	7.39	LCS	P	0 - 30
LFB	Endosulfan I	6.75	LCS	P	0 - 30
LFB	Endosulfan II	10.4	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.38	LCS	P	0 - 30
LFB	Endrin	4.13	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
 Batch ID: P330385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endrin Aldehyde	9.15	LCS	P	0 - 30
LFB	Endrin Ketone	1.94	LCS	P	0 - 30
LFB	Gamma-BHC	12.5	LCS	P	0 - 30
LFB	Gamma-Chlordane	4.57	LCS	P	0 - 30
LFB	Heptachlor	7.00	LCS	P	0 - 30
LFB	Heptachlor Epoxide	6.59	LCS	P	0 - 30
LFB	Methoxychlor	0.466	LCS	P	0 - 30
LFB	Mirex	6.94	LCS	P	0 - 30
LFB	Permethrin	5.00	LCS	P	0 - 30
LFB	Trifluralin	3.36	LCS	P	0 - 30

Reference Method: EPA 8270D
 Batch ID: P330463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921573	Acetochlor	4.52	Spike	P	0 - 30
1921573	Alachlor	4.86	Spike	P	0 - 30
1921573	Ametryn	13.2	Spike	P	0 - 30
1921573	Atrazine	24.6	Spike	P	0 - 30
1921573	Atrazine Desethyl	45.9	Spike	F	0 - 30
1921573	Azinphos Methyl	13.5	Spike	P	0 - 30
1921573	Bromacil	51.0	Spike	F	0 - 30
1921573	Butylate	35.3	Spike	F	0 - 30
1921573	Chlorpyrifos Ethyl	1.88	Spike	P	0 - 30
1921573	Chlorpyrifos Methyl	0.143	Spike	P	0 - 30
1921573	Cyanazine	51.6	Spike	F	0 - 30
1921573	Demeton	3.27	Spike	P	0 - 30
1921573	Diazinon	7.37	Spike	P	0 - 30
1921573	Disulfoton	0.966	Spike	P	0 - 30
1921573	EPTC	47.2	Spike	F	0 - 30
1921573	Ethion	24.5	Spike	P	0 - 30
1921573	Ethoprop	9.80	Spike	P	0 - 30
1921573	Fenamiphos	14.7	Spike	P	0 - 30
1921573	Fipronil	48.8	Spike	F	0 - 30
1921573	Fipronil Sulfide	66.3	Spike	F	0 - 30
1921573	Fipronil Sulfone	76.3	Spike	F	0 - 30
1921573	Fonofos	4.58	Spike	P	0 - 30
1921573	Hexazinone	63.4	Spike	F	0 - 30
1921573	Malathion	14.2	Spike	P	0 - 30
1921573	Metalaxyl	26.6	Spike	P	0 - 30
1921573	Metolachlor	0.958	Spike	P	0 - 30
1921573	Metribuzin	26.5	Spike	P	0 - 30
1921573	Mevinphos	6.34	Spike	P	0 - 30
1921573	Molinate	42.8	Spike	F	0 - 30
1921573	Norflurazon	49.6	Spike	F	0 - 30
1921573	Parathion Ethyl	12.1	Spike	P	0 - 30
1921573	Parathion Methyl	9.24	Spike	P	0 - 30
1921573	Pendimethalin	3.33	Spike	P	0 - 30
1921573	Phorate	14.1	Spike	P	0 - 30
1921573	Prometon	9.70	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P330463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921573	Prometryn	5.21	Spike	P	0 - 30
1921573	Simazine	16.6	Spike	P	0 - 30
1921573	Terbufos	7.82	Spike	P	0 - 30
1921573	Terbutylazine	8.64	Spike	P	0 - 30
LFB	Acetochlor	3.39	LCS	P	0 - 30
LFB	Alachlor	2.93	LCS	P	0 - 30
LFB	Ametryn	7.44	LCS	P	0 - 30
LFB	Atrazine	0.0125	LCS	P	0 - 30
LFB	Atrazine Desethyl	16.8	LCS	P	0 - 30
LFB	Azinphos Methyl	6.38	LCS	P	0 - 30
LFB	Bromacil	12.3	LCS	P	0 - 30
LFB	Butylate	5.86	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.20	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.88	LCS	P	0 - 30
LFB	Cyanazine	2.69	LCS	P	0 - 30
LFB	Demeton	1.95	LCS	P	0 - 30
LFB	Diazinon	7.14	LCS	P	0 - 30
LFB	Disulfoton	1.80	LCS	P	0 - 30
LFB	EPTC	14.9	LCS	P	0 - 30
LFB	Ethion	0.691	LCS	P	0 - 30
LFB	Ethoprop	24.5	LCS	P	0 - 30
LFB	Fenamiphos	11.1	LCS	P	0 - 30
LFB	Fipronil	7.70	LCS	P	0 - 30
LFB	Fipronil Sulfide	12.0	LCS	P	0 - 30
LFB	Fipronil Sulfone	15.7	LCS	P	0 - 30
LFB	Fonofos	9.30	LCS	P	0 - 30
LFB	Hexazinone	6.47	LCS	P	0 - 30
LFB	Malathion	0.760	LCS	P	0 - 30
LFB	Metalaxyl	2.74	LCS	P	0 - 30
LFB	Metolachlor	2.86	LCS	P	0 - 30
LFB	Metribuzin	7.00	LCS	P	0 - 30
LFB	Mevinphos	0.284	LCS	P	0 - 30
LFB	Molinate	1.41	LCS	P	0 - 30
LFB	Norflurazon	10.3	LCS	P	0 - 30
LFB	Parathion Ethyl	2.45	LCS	P	0 - 30
LFB	Parathion Methyl	0.679	LCS	P	0 - 30
LFB	Pendimethalin	2.39	LCS	P	0 - 30
LFB	Phorate	8.32	LCS	P	0 - 30
LFB	Prometon	0.431	LCS	P	0 - 30
LFB	Prometryn	7.36	LCS	P	0 - 30
LFB	Simazine	4.33	LCS	P	0 - 30
LFB	Terbufos	6.43	LCS	P	0 - 30
LFB	Terbutylazine	1.26	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P330385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921425	Chlordane	7.95	Spike	P	0 - 30
1921425	Toxaphene	8.75	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P330385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	9.68	LCS	P	0 - 30
LFB	Toxaphene	13.4	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P330061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919951	Glyphosate	3.53	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P330252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921412	Pyraclostrobin	5.64	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P330383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921620	Sucralose	0.491	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P330273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921556	Color (true)	1.85	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P330605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921904	Total Alkalinity	0.908	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P330691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921551	TDS	14.4	Sample	F	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P330801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921904	Fluoride	0.946	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P330561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921560	Organic Carbon	0.230	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P330313

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921540	2,4-D	7.60	Spike	P	0 - 30
1921540	Acetaminophen	3.84	Spike	P	0 - 30
1921540	Bentazon	2.34	Spike	P	0 - 30
1921540	Carbamazepine	1.39	Spike	P	0 - 30
1921540	Diuron	0.414	Spike	P	0 - 30
1921540	Fenuron	4.09	Spike	P	0 - 30
1921540	Fluridone	38.5	Spike	F	0 - 30
1921540	Imidacloprid	0.475	Spike	P	0 - 30
1921540	Linuron	7.68	Spike	P	0 - 30
1921540	MCP	7.23	Spike	P	0 - 30
1921540	Primidone	0.226	Spike	P	0 - 30
1921540	Triclopyr	13.1	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: 1921630
Field Sample ID: G1TLHR0029-2017-02

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	63.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	63.9	P	30 - 160
EPA 8321B	Diuron-d6	65.4	P	30 - 160
EPA 8321B	Diuron-d6	66.2	P	30 - 160
EPA 8321B	Diuron-d6	65.4	P	30 - 160
EPA 8321B	Diuron-d6	66.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.8	P	40 - 160
EPA 8321B	Primidone-d5	80.9	P	30 - 160
EPA 8321B	Primidone-d5	80.9	P	30 - 160
EPA 8321B	Sucralose-d6	40.8	P	40 - 160
EPA 8321B	Sucralose-d6	40.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	125	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	124	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	63.9	P	30 - 160
USGS O-2060-01	Diuron-d6	65.4	P	30 - 160
USGS O-2060-01	Diuron-d6	66.2	P	30 - 160
USGS O-2060-01	Primidone-d5	80.9	P	30 - 160
USGS O-2060-01	Sucralose-d6	40.8	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1921631

Field Sample ID: G1TLHR0029-2017-02

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	60.2	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	53.4	P	32 - 103
EPA 8276	Decachlorobiphenyl	62.5	P	31 - 100

Lab Sample ID: 1921632

Field Sample ID: G1TLHR0029-2017-02

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	100	P	53 - 135
EPA 8270D	Simazine-d10	80.8	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A78413

Included Lab Sample IDs: 1921626

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

Reference Method: EPA 8321B

Run ID: A78417

Included Lab Sample IDs: 1921630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	98.2	105	P/P	70 - 160

Reference Method: SM 2120 B

Run ID: A78419

Included Lab Sample IDs: 1921626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	103	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78421

Included Lab Sample IDs: 1921626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	96.4	P/P	90 - 110
Sulfate	103	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A78443

Included Lab Sample IDs: 1921628

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	98.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78487

Included Lab Sample IDs: 1921633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	102	P/P	90 - 110
Iron	105	104	P/P	90 - 110
Magnesium	105	104	P/P	90 - 110
Potassium	101	99.7	P/P	90 - 110
Sodium	104	102	P/P	90 - 110
Zinc	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78496

Included Lab Sample IDs: 1921627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78501

Included Lab Sample IDs: 1921627

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78513

Included Lab Sample IDs: 1921627

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

Reference Method: SM 5310 B-00

Run ID: A78526

Included Lab Sample IDs: 1921627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	96.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78530

Included Lab Sample IDs: 1921630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	89.4	90.6	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A78552

Included Lab Sample IDs: 1921626

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78557

Included Lab Sample IDs: 1921627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78570

Included Lab Sample IDs: 1921633

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	98.7	P/P	90 - 110
Cadmium	103	102	P/P	90 - 110
Chromium	97.6	97.3	P/P	90 - 110
Copper	99.5	98.6	P/P	90 - 110
Lead	100	101	P/P	90 - 110
Nickel	99.2	99.2	P/P	90 - 110
Silver	104	105	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A78596

Included Lab Sample IDs: 1921630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	83.2	72.3	P/P	50 - 150
Acetaminophen	78.2	80.1	P/P	60 - 150
Bentazon	107	105	P/P	50 - 150
Carbamazepine	81.9	80.6	P/P	60 - 150
Diuron	87.1	86.2	P/P	60 - 150
Fenuron	89.6	87.6	P/P	60 - 150
Fluridone	95.9	96.8	P/P	60 - 160
Imidacloprid	74.6	81.0	P/P	60 - 150
Linuron	99.7	93.8	P/P	60 - 150
MCPP	68.8	66.2	P/P	50 - 150
Primidone	87.6	79.8	P/P	60 - 150
Triclopyr	76.4	74.3	P/P	50 - 150

Reference Method: SM 4500 F-C-97

Run ID: A78604

Included Lab Sample IDs: 1921626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.0	99.1	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A78688

Included Lab Sample IDs: 1921632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	107		P	80 - 120
Ametryn	96.9		P	80 - 120
Atrazine	96.5		P	80 - 120
Atrazine Desethyl	94.9		P	80 - 120
Azinphos Methyl	98.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A78688
Included Lab Sample IDs: 1921632

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	97.3		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	94.6		P	80 - 120
Demeton	98.5		P	80 - 120
Diazinon	101		P	80 - 120
Disulfoton	95.7		P	80 - 120
EPTC	105		P	80 - 120
Ethion	97.7		P	80 - 120
Ethoprop	103		P	80 - 120
Fenamiphos	96.8		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Sulfide	97.6		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	99.4		P	80 - 120
Hexazinone	101		P	80 - 120
Malathion	98.4		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	100		P	80 - 120
Molinate	109		P	80 - 120
Norflurazon	102		P	80 - 120
Parathion Ethyl	95.4		P	80 - 120
Parathion Methyl	97.1		P	80 - 120
Pendimethalin	91.4		P	80 - 120
Phorate	99.1		P	80 - 120
Prometon	96.9		P	80 - 120
Prometryn	98.9		P	80 - 120
Simazine	102		P	80 - 120
Terbufos	97.3		P	80 - 120
Terbutylazine	101		P	80 - 120

Reference Method: EPA 8276
Run ID: A78704
Included Lab Sample IDs: 1921631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Toxaphene	108		P	80 - 120

Reference Method: EPA 8270D
Run ID: A78708
Included Lab Sample IDs: 1921631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.6		P	80 - 120
Alpha-BHC	96.6		P	80 - 120
Alpha-Chlordane	99.9		P	80 - 120
Beta-BHC	105		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A78708
 Included Lab Sample IDs: 1921631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	105		P	80 - 120
Chlorothalonil	87.4		P	80 - 120
Cypermethrin	96.1		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	98.0		P	80 - 120
Dicofol	93.0		P	80 - 120
Dieldrin	96.6		P	80 - 120
Endosulfan I	94.2		P	80 - 120
Endosulfan II	93.3		P	80 - 120
Endosulfan Sulfate	93.5		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	94.4		P	80 - 120
Endrin Ketone	95.9		P	80 - 120
Gamma-BHC	97.6		P	80 - 120
Gamma-Chlordane	98.8		P	80 - 120
Heptachlor	98.0		P	80 - 120
Heptachlor Epoxide	97.0		P	80 - 120
Methoxychlor	106		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	96.5		P	80 - 120
Trifluralin	93.8		P	80 - 120

Reference Method: EPA 8321B
 Run ID: A78750
 Included Lab Sample IDs: 1921630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	118	115	P/P	60 - 150

* Pass/Fail determinations are made for each bracketing calibration verification check.
 Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
 Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.48	
EPA 200.7 Rev. 4.4	Calcium	104	103	107		2.09
	Iron	107	110	107	106	1.07
	Magnesium	105	105	107		1.91
	Potassium	102	102	106	101	2.25
	Sodium	103	104	107		2.57
	Zinc	101	103	100	100	0.343
EPA 200.8 Rev. 5.4	Arsenic	107	106	104	106	1.85
	Cadmium	99.3	100	102	103	1.21
	Chromium	95.7	93.2	92.5	94.2	1.79

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision	
							LCS	SMP
EPA 200.8 Rev. 5.4	Copper	101		94.9	93.8	94.6		
	Lead	100		102	101	104		
	Nickel	103		98.4	96.3	97.2		
	Silver	104		104	102	104		
EPA 300.0 Rev. 2.1	Chloride	100		103	97.8			6.88
	Sulfate	99.6		100	97.3			6.67
EPA 350.1 Rev. 2.0	Ammonia-N	98.9		101	103			
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.1		96.7	99.2			
EPA 353.2 Rev. 2.0	NO2NO3-N	102		105	104			
EPA 365.1 Rev. 2.0	Total-P	98.2		93.0	96.0			
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1		91.0	93.0			
EPA 8270D	Acetochlor	87.8	90.8	81.4	85.2	3.39		
	Alachlor	89.4	92.0	84.0	88.1	2.93		
	Aldrin	36.2	35.4	51.2	35.5	2.35		
	Alpha-BHC	82.9	76.3	90.7	84.0	8.28		
	Alpha-Chlordane	78.7	76.4	84.2	73.4	2.93		
	Ametryn	76.7	82.7	97.8	85.6	7.44		
	Atrazine	94.7	94.7			0.0125		
	Atrazine Desethyl	90.8	76.7	81.3	33.3	16.8		
	Azinphos Methyl	108	102	89.9	78.5	6.38		
	Beta-BHC	87.0	78.4	89.9	92.5	10.3		
	Bromacil	91.3	80.7	96.0	48.5	12.3		
	Butylate	41.6	44.1	19.9	13.9	5.86		
	Carbophenothion	62.8	81.7	93.9	70.4	26.1		
	Chlorothalonil	47.9	39.0	85.4	70.5	20.5		
	Chlorpyrifos Ethyl	92.1	89.2	85.1	83.6	3.20		
	Chlorpyrifos Methyl	91.8	93.5	79.5	79.6	1.88		
	Cyanazine	178	182	135	79.5	2.69		
	Cypermethrin	79.4	84.3	91.8	90.3	6.09		
	DDD-p,p'	85.7	81.1	86.2	84.3	5.56		
	DDE-p,p'	76.3	75.3	89.0	73.5	1.29		
	DDT-p,p'	77.2	77.0	83.5	70.9	0.188		
	Delta-BHC	106	94.5	127	125	11.2		
	Demeton	82.3	80.7	68.0	70.3	1.95		
	Diazinon	90.9	97.7	82.4	88.7	7.14		
	Dicofol	45.4	36.3	31.3	24.3	22.4		
	Dieldrin	81.0	75.2	107	67.4	7.39		
	Disulfoton	96.0	97.8	82.8	83.6	1.80		
	Endosulfan I	92.8	86.7	97.8	90.9	6.75		
	Endosulfan II	91.7	82.7	92.3	97.3	10.4		
	Endosulfan Sulfate	84.3	82.3	83.8	89.4	2.38		
	Endrin	105	110	123	117	4.13		
	Endrin Aldehyde	90.8	82.8	87.5	88.8	9.15		
	Endrin Ketone	82.7	81.1	91.7	93.4	1.94		
	EPTC	40.5	47.0	13.2	21.3	14.9		
	Ethion	91.9	92.5	112	87.2	0.691		
	Ethoprop	69.3	88.6	61.2	67.5	24.5		
	Fenamiphos	89.6	80.2	73.4	63.4	11.1		
	Fipronil	85.5	79.1	84.7	33.8	7.70		
	Fipronil Sulfide	83.4	74.0	97.6	9.16	12.0		
	Fipronil Sulfone	74.1	63.3			15.7		
	Fonofos	84.4	92.6	73.2	76.7	9.30		
	Gamma-BHC	96.7	85.4	109	98.4	12.5		
	Gamma-Chlordane	74.2	70.9	78.8	69.8	4.57		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Heptachlor	60.9	65.3	66.7	57.4	7.00	15.0
	Heptachlor Epoxide	80.0	74.9	90.9	84.1	6.59	5.89
	Hexazinone	80.6	86.0	111	18.2	6.47	63.4
	Malathion	93.0	93.7	95.5	82.9	0.760	14.2
	Metalaxyl	81.2	79.0			2.74	26.6
	Methoxychlor	96.2	95.8	100	94.7	0.466	5.56
	Metolachlor	90.0	92.6	88.5	89.4	2.86	0.958
	Metribuzin	180	168	187	134	7.00	26.5
	Mevinphos	71.1	70.9	57.8	61.5	0.284	6.34
	Mirex	61.6	66.0	72.5	56.9	6.94	24.1
	Molinate	52.6	51.9	22.3	34.4	1.41	42.8
	Norflurazon	81.2	73.3	79.9	48.1	10.3	49.6
	Parathion Ethyl	90.1	92.3	91.4	81.0	2.45	12.1
	Parathion Methyl	97.7	97.0	93.3	85.1	0.679	9.24
	Pendimethalin	84.6	86.7	85.3	82.5	2.39	3.33
	Permethrin	71.5	75.2	86.3	75.6	5.00	13.1
	Phorate	74.1	80.5	53.3	61.4	8.32	14.1
	Prometon	79.4	79.0	91.6	83.2	0.431	9.70
	Prometryn	83.8	77.8	91.8	87.1	7.36	5.21
	Simazine	95.3	91.2	81.5	96.2	4.33	16.6
	Terbufos	84.9	90.6	71.4	77.2	6.43	7.82
	Terbuthylazine	91.4	92.6	90.7	83.2	1.26	8.64
	Trifluralin	110	106	136	123	3.36	9.87
EPA 8276	Chlordane	79.9	88.0	85.8	92.9	9.68	7.95
	Toxaphene	85.9	98.3	91.2	99.5	13.4	8.75
EPA 8321B	Glyphosate	115		118	114		3.53
	Pyraclostrobin	52.5		40.1	37.9		5.64
	Sucralose	125					0.491
SM 2120 B	Color (true)					1.85	
SM 2320 B-97	Total Alkalinity	102				0.908	
SM 2540 C-97	TDS					14.4	
SM 4500 F-C-97	Fluoride	97.7		94.6	96.5		0.946
SM 5310 B-00	Organic Carbon	95.5		90.5	90.8		0.230
USGS O-2060-01	2,4-D	70.9					7.60
	Acetaminophen	77.2		110	104		3.84
	Bentazon	79.8		58.3	56.0		2.34
	Carbamazepine	84.8		94.5	95.8		1.39
	Diuron	91.8		72.1	72.8		0.414
	Fenuron	90.6		78.6	81.9		4.09
	Fluridone	101		96.6	62.0		38.5
	Imidacloprid	76.0					0.475
	Linuron	99.0		95.2	88.2		7.68
	MCPP	57.5		80.1	74.2		7.23
	Primidone	85.2		115	115		0.226
	Triclopyr	62.3		78.7	69.0		13.1

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1921626
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1921633

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1921633
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1921626
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1921626
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1921627
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1921627
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1921627
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1921627
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1921628
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1921631
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1921632
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1921631
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1921630
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1921630
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1921630
SM 2120 B / E31780	True Color measured at 450 nm	1921626
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1921626
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1921626
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1921626
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1921626
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1921627
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1921630
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1921630

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	08/15/2017			08/15/2017 16:41	DeAsia Armster	1921626
EPA 200.7 Rev. 4.4	08/15/2017	08/16/2017	Elliott D. Healy	08/17/2017	Betina Topolski	1921633
EPA 200.8 Rev. 5.4	08/15/2017	08/16/2017	Elliott D. Healy	08/22/2017	Nadine Brooks	1921633
EPA 300.0 Rev. 2.1	08/15/2017			08/16/2017	Julia Storbeck	1921626
EPA 350.1 Rev. 2.0	08/15/2017			08/17/2017	Sofia Elnemr	1921627
EPA 351.2 Rev. 2.0	08/15/2017	08/21/2017	Adrian Shelby	08/22/2017	Joseph Suarez	1921627
EPA 353.2 Rev. 2.0	08/15/2017			08/18/2017	Beverly Y. Sanders	1921627
EPA 365.1 Rev. 2.0	08/15/2017	08/17/2017	Sima Feizi	08/18/2017	Lipi Saha	1921627
EPA 365.1 Rev. 2.0 dissolved	08/15/2017			08/16/2017 15:32	Megan Treadwell	1921628
EPA 8270D	08/15/2017	08/18/2017	Fe-Val Siddell	08/22/2017	Vandana T. Nagar	1921631
	08/15/2017	08/18/2017	John Kaba	08/24/2017	Irina Carbone	1921632
EPA 8276	08/15/2017	08/18/2017	Fe-Val Siddell	08/22/2017	Vandana T. Nagar	1921631
EPA 8321B	08/15/2017	08/15/2017	Julie Michelle Frank	08/15/2017	Juyoung Kim	1921630
	08/15/2017	08/16/2017	Hoor Shaik	08/17/2017	Julie Michelle Frank	1921630
	08/15/2017	08/24/2017	Julie Michelle Frank	08/31/2017	Julie Michelle Frank	1921630
SM 2120 B	08/15/2017			08/15/2017 16:52	Tanya Welborn	1921626
SM 2320 B-97	08/15/2017			08/17/2017	Dale L. Simmons	1921626
SM 2540 C-97	08/15/2017			08/18/2017	Yijie Li	1921626
SM 2540 D-97	08/15/2017			08/18/2017	Yijie Li	1921626
SM 4500 F-C-97	08/15/2017			08/24/2017	Dale L. Simmons	1921626
SM 5310 B-00	08/15/2017			08/19/2017	Ping Hua	1921627
USGS O-2060-01	08/15/2017	08/17/2017	Hoor Shaik	08/20/2017	Juyoung Kim	1921630