

Chemical Analysis Report

CEN-DIST-2017-08-02-02

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

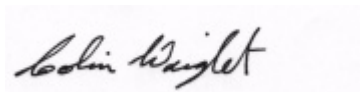
Event Description: **Reedy In RCID / Withlacoochee River**
Request ID: **RQ-2017-07-31-26**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 23-AUG-2017 17:24

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray 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: Reedy Creek @ 15m Upstream of I-4 Bridge

Collection Date/Time: 08/01/2017 10:55

Field ID: G4CE0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1918160	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P329566	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P329708	
		Sulfate	6.0		mg SO4/L	P329712	
	SM 2120 B	Color (true)	730		PCU	P329576	
	SM 2320 B-97	Total Alkalinity	21		mg CaCO3/L	P329762	
	SM 2540 C-97	TDS	209		mg/L	P329919	
	SM 2540 D-97	TSS	2	I	mg/L	P330148	
	SM 4500 F-C-97	Fluoride	0.064	I	mg F/L	P329766	
1918161	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P329677	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P329626	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.051		mg N/L	P329694	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P329634	
	SM 5310 B-00	Organic Carbon	47		mg C/L	P329828	
1918162	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P329589	
1918175	EPA 200.7 Rev. 4.4	Calcium	12.0		mg/L	P329580	
		Iron	590		ug/L	P329580	
		Magnesium	3.14		mg/L	P329580	
		Potassium	4.2		mg/L	P329580	
		Sodium	19.7		mg/L	P329580	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P329580	
		Arsenic	1.22		ug/L	P329580	
		Cadmium	0.020	U	ug/L	P329580	
		Chromium	0.70	I	ug/L	P329580	
		Copper	1.46		ug/L	P329580	
		Lead	0.43		ug/L	P329580	
		Nickel	0.69	I	ug/L	P329580	
		Silver	0.010	U	ug/L	P329580	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Reedy Creek @ 15m Upstream of I-4 Bridge

Collection Date/Time: 08/01/2017 10:55

Field ID: G4CE0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1918172	EPA 8321B	Glyphosate**	4.3		ug/L	P329700	
		Pyraclostrobin**	0.0020	U	ug/L	P329718	
		Sucralose**	1.3		ug/L	P329540	
	USGS O-2060-01	2,4-D	0.091		ug/L	P329539	
		Diuron	0.0053		ug/L	P329539	
		Fenuron	0.0080	U	ug/L	P329539	RPD
		Imidacloprid	0.013	V	ug/L	P329539	
		Bentazon	0.0037		ug/L	P329539	
		Linuron	0.0040	U	ug/L	P329539	RPD

Field ID: G4CE0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1918172	USGS O-2060-01	Acetaminophen**	0.0080	U	ug/L	P329539	
		MCPD	0.0020	U	ug/L	P329539	
		Carbamazepine**	0.0018		ug/L	P329539	
		Triclopyr**	0.0040	U	ug/L	P329539	
		Primidone**	0.0040	U	ug/L	P329539	
		Fluridone**	0.023		ug/L	P329539	
1918173	EPA 8270D	Aldrin	4.2	U	ng/L	P329591	
		Alpha-BHC	2.1	U	ng/L	P329591	
		Beta-BHC	4.2	U	ng/L	P329591	
		Delta-BHC	4.2	U	ng/L	P329591	
		Gamma-BHC	4.2	U	ng/L	P329591	
		Carbophenothion	4.2	U	ng/L	P329591	
		Chlorothalonil	2.1	U	ng/L	P329591	MS
		Cypermethrin	21	U	ng/L	P329591	
		DDD-p,p'	3.2	U	ng/L	P329591	
		DDE-p,p'	3.2	U	ng/L	P329591	
		DDT-p,p'	3.2	U	ng/L	P329591	
		Dieldrin	4.2	U	ng/L	P329591	
		Endosulfan I	4.2	U	ng/L	P329591	
		Endosulfan II	4.2	U	ng/L	P329591	
		Endosulfan Sulfate	2.1	U	ng/L	P329591	
		Endrin	2.1	U	ng/L	P329591	
		Endrin Aldehyde	2.1	U	ng/L	P329591	
		Heptachlor	1.6	U	ng/L	P329591	
		Heptachlor Epoxide	2.1	U	ng/L	P329591	
		Methoxychlor	4.2	U	ng/L	P329591	
		Mirex	2.1	U	ng/L	P329591	
		Permethrin	11	U	ng/L	P329591	
		Trifluralin	1.1	U	ng/L	P329591	
		Alpha-Chlordane	1.1	U	ng/L	P329591	
		Gamma-Chlordane	1.1	U	ng/L	P329591	
		Endrin Ketone	2.1	U	ng/L	P329591	
		Dicofol	32	U	ng/L	P329591	
	EPA 8276	Chlordane**	2.7	U	ng/L	P329591	
		Toxaphene**	13	U	ng/L	P329591	
1918174	EPA 8270D	Alachlor	0.26	U	ng/L	P329749	
		Ametryn	0.33	U	ng/L	P329749	
		Atrazine	0.26	U	ng/L	P329749	
		Atrazine Desethyl	1.5	U	ng/L	P329749	
		Azinphos Methyl	2.3	U	ng/L	P329749	
		Bromacil	3.5		ng/L	P329749	
		Butylate	0.41	U	ng/L	P329749	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P329749	
		Chlorpyrifos Methyl	0.10	U	ng/L	P329749	
		Demeton	2.1	U	ng/L	P329749	

Field ID: G4CE0137

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1918174	EPA 8270D	Diazinon	0.13	U	ng/L	P329749	
		Disulfoton	0.51	U	ng/L	P329749	
		EPTC	1.3	U	ng/L	P329749	
		Ethion	0.15	U	ng/L	P329749	
		Ethoprop	0.10	U	ng/L	P329749	
		Fenamiphos	0.26	U	ng/L	P329749	
		Fipronil	0.26	U	ng/L	P329749	
		Fipronil Sulfide	0.28	I	ng/L	P329749	
		Fipronil Sulfone	0.63		ng/L	P329749	
		Hexazinone	0.51	U	ng/L	P329749	
		Malathion	2.4	J	ng/L	P329749	
		Metribuzin	0.37	IJ	ng/L	P329749	LCS, MS
		Mevinphos	0.51	U	ng/L	P329749	
		Molinate	0.31	U	ng/L	P329749	
		Norflurazon	0.51	U	ng/L	P329749	
		Pendimethalin	1.0	U	ng/L	P329749	
		Phorate	0.26	U	ng/L	P329749	
		Prometon	0.92	U	ng/L	P329749	
		Prometryn	0.21	U	ng/L	P329749	
		Simazine	1.3	I	ng/L	P329749	
		Terbufos	0.10	U	ng/L	P329749	
		Terbutylazine	0.44	U	ng/L	P329749	
		Fonofos	0.21	U	ng/L	P329749	
		Metalaxyl	0.21	U	ng/L	P329749	
		Metolachlor	2.5		ng/L	P329749	
		Acetochlor	0.26	U	ng/L	P329749	
		Cyanazine	0.51	U	ng/L	P329749	
		Parathion Ethyl	0.26	U	ng/L	P329749	
		Parathion Methyl	0.26	U	ng/L	P329749	

Ref. Method and Comment:

EPA 8321B: Results confirmed in re-extraction.

USGS O-2060-01: Result for imidacloprid was reassessed in re-extraction beyond routine holding time due to a method blank positive; imidacloprid = 0.019 ug/L in the reanalysis.

EPA 8270D: Estimation for Malathion due to second source standard recovery failure. Refer to the narrative for an explanation of QC Codes.

Sample Location: Withlacoochee River @ Upstream of SR33

Collection Date/Time: 08/01/2017 11:45

Field ID: G4CE0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1918163	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P329566	
	EPA 300.0 Rev. 2.1	Chloride	13	A	mg Cl/L	P329708	
		Sulfate	0.33	IA	mg SO4/L	P329712	
	SM 2120 B	Color (true)	810		PCU	P329576	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P329762	
	SM 2540 C-97	TDS	147		mg/L	P329919	
	SM 2540 D-97	TSS	2	I	mg/L	P330148	
	SM 4500 F-C-97	Fluoride	0.076	I	mg F/L	P329766	

Field ID: G4CE0138

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1918164	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P329677	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P329626	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P329694	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P329634	
	SM 5310 B-00	Organic Carbon	72		mg C/L	P329828	
1918165	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.054		mg P/L	P329589	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P329566

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P329580

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: P329580

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: P329708

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P329712

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329677

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329626

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329694

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329634

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329589

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

Reference Method: EPA 8270D
Batch ID: P329591

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P329591

Component	Result	Code	Units
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: P329749

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	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
Terbuthylazine	0.42	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8276
Batch ID: P329591

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

Reference Method: EPA 8321B
Batch ID: P329540

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P329700

Component	Result	Code	Units
Glyphosate	0.50	U	ug/L

Reference Method: EPA 8321B
Batch ID: P329718

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P329576

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P329762

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

Reference Method: SM 2540 C-97
Batch ID: P329919

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330148

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P329766

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
 Batch ID: P329828

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

Reference Method: USGS O-2060-01
 Batch ID: P329539

Component	Result	Code	Units
2,4-D	0.0020	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	0.0016	I	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
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: P329580

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	105		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P329580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	107		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	103		P	85 - 115
Copper	101		P	85 - 115
Lead	99.7		P	85 - 115
Nickel	104		P	85 - 115
Silver	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P329708

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329712

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329677

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329694

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329634

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: P329589

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.4		P	90 - 110

Reference Method: EPA 8270D
Batch ID: P329591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	48.2	38.3	P/P	26 - 88.0
Alpha-BHC	93.8	85.9	P/P	63 - 114
Alpha-Chlordane	85.6	76.6	P/P	56 - 117
Beta-BHC	103	90.6	P/P	57 - 138
Carbophenothion	105	88.8	P/P	36 - 148
Chlorothalonil	82.0	99.6	P/P	26 - 173
Cypermethrin	113	108	P/P	42 - 159
DDD-p,p'	106	98.6	P/P	62 - 126
DDE-p,p'	83.6	70.8	P/P	53 - 115
DDT-p,p'	88.2	77.5	P/P	54 - 117
Delta-BHC	133	132	P/P	68 - 158
Dicofol	26.4	27.1	P/P	25 - 114
Dieldrin	88.5	81.2	P/P	59 - 126
Endosulfan I	107	100	P/P	62 - 138
Endosulfan II	123	111	P/P	61 - 150
Endosulfan Sulfate	98.7	96.3	P/P	63 - 132

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P329591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	91.6	91.3	P/P	49 - 148
Endrin Aldehyde	103	93.7	P/P	50 - 144
Endrin Ketone	97.5	91.3	P/P	66 - 122
Gamma-BHC	101	100	P/P	60 - 137
Gamma-Chlordane	83.4	73.1	P/P	54 - 113
Heptachlor	72.2	62.1	P/P	43 - 104
Heptachlor Epoxide	87.0	80.9	P/P	64 - 118
Methoxychlor	106	98.9	P/P	63 - 129
Mirex	77.3	64.5	P/P	39 - 93.0
Permethrin	96.4	88.3	P/P	51 - 123
Trifluralin	127	111	P/P	35 - 187

Reference Method: EPA 8270D

Batch ID: P329749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	92.7	85.2	P/P	78 - 118
Alachlor	96.8	86.6	P/P	77 - 119
Ametryn	85.8	88.5	P/P	61 - 136
Atrazine	110	97.3	P/P	73 - 120
Atrazine Desethyl	106	104	P/P	16 - 122
Azinphos Methyl	127	111	P/P	69 - 186
Bromacil	62.6	59.4	P/P	40 - 125
Butylate	53.9	44.4	P/P	32 - 87.0
Chlorpyrifos Ethyl	80.9	79.3	P/P	53 - 110
Chlorpyrifos Methyl	86.9	87.4	P/P	31 - 119
Cyanazine	197	167	P/P	36 - 224
Demeton	79.2	71.0	P/P	39 - 122
Diazinon	93.2	86.8	P/P	75 - 119
Disulfoton	83.7	84.2	P/P	42 - 139
EPTC	54.3	44.0	P/P	33 - 96.0
Ethion	83.0	77.1	P/P	63 - 127
Ethoprop	84.6	79.6	P/P	65 - 107
Fenamiphos	97.7	94.7	P/P	64 - 137
Fipronil	104	90.5	P/P	60 - 126
Fipronil Sulfide	88.1	87.8	P/P	58 - 124
Fipronil Sulfone	74.8	75.1	P/P	57 - 126
Fonofos	84.0	85.4	P/P	65 - 111
Hexazinone	96.6	87.7	P/P	46 - 151
Malathion	81.7	79.7	P/P	68 - 132
Metalaxyl	87.8	81.4	P/P	51 - 132
Metolachlor	89.0	81.8	P/P	78 - 119
Metribuzin	137	151	P/F	64 - 138
Mevinphos	78.6	73.9	P/P	34 - 128
Molinate	47.6	44.8	P/P	44 - 101
Norflurazon	93.8	90.4	P/P	63 - 129
Parathion Ethyl	88.9	82.5	P/P	80 - 109
Parathion Methyl	112	104	P/P	74 - 125
Pendimethalin	81.0	79.0	P/P	48 - 134
Phorate	92.1	78.4	P/P	52 - 119
Prometon	83.0	84.7	P/P	69 - 124
Prometryn	95.9	88.2	P/P	66 - 124

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P329749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	108	99.0	P/P	61 - 134
Terbufos	82.7	80.4	P/P	58 - 115
Terbutylazine	87.5	81.9	P/P	77 - 113

Reference Method: EPA 8276
Batch ID: P329591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	96.6	97.4	P/P	48 - 121
Toxaphene	107	118	P/P	43 - 135

Reference Method: EPA 8321B
Batch ID: P329540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	63.4		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P329700

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	97.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P329718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	71.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P329762

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

Reference Method: SM 4500 F-C-97
Batch ID: P329766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P329828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P329539

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	102		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01

Batch ID: P329539

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	98.2		P	30 - 150
Bentazon	93.8		P	40 - 150
Carbamazepine	102		P	40 - 150
Diuron	111		P	40 - 150
Fenuron	97.6		P	40 - 150
Fluridone	97.5		P	40 - 150
Imidacloprid	100		P	40 - 160
Linuron	112		P	40 - 150
MCPP	99.3		P	40 - 150
Primidone	113		P	40 - 150
Triclopyr	107		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P329580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918094	Calcium	102		P	80 - 120
1918094	Iron	107	106	P/P	80 - 120
1918094	Magnesium	103		P	80 - 120
1918094	Potassium	102	101	P/P	80 - 120
1918094	Sodium	104	101	P/P	80 - 120
1918094	Zinc	97.9	96.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P329580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918094	Arsenic	110	109	P/P	80 - 120
1918094	Cadmium	105	104	P/P	80 - 120
1918094	Chromium	97.7	99.8	P/P	80 - 120
1918094	Copper	98.6	97.7	P/P	80 - 120
1918094	Lead	99.1	98.8	P/P	80 - 120
1918094	Nickel	102	102	P/P	80 - 120
1918094	Silver	102	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P329708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918108	Chloride	101		P	90 - 110
1918163	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P329712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918108	Sulfate	103		P	90 - 110
1918163	Sulfate	102		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918164	Ammonia-N	98.6	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918191	Kjeldahl Nitrogen	105	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918062	NO2NO3-N	96.8	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918191	Total-P	102	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918068	O-Phosphate-P	93.4	93.3	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P329591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917963	Aldrin	44.3	46.3	P/P	22 - 97.0
1917963	Alpha-BHC	94.0	88.5	P/P	43 - 132
1917963	Alpha-Chlordane	76.7	70.8	P/P	36 - 126
1917963	Beta-BHC	91.4	86.0	P/P	41 - 150
1917963	Carbophenothion	126	121	P/P	13 - 196
1917963	Chlorothalonil	7.12	5.27	F/F	10 - 266
1917963	Cypermethrin	136	108	P/P	37 - 161
1917963	DDD-p,p'	94.0	87.8	P/P	44 - 131
1917963	DDE-p,p'	73.7	73.3	P/P	32 - 127
1917963	DDT-p,p'	87.0	81.2	P/P	45 - 116
1917963	Delta-BHC	171	163	P/P	50 - 201
1917963	Dicofol	19.5	18.7	P/P	10 - 100
1917963	Dieldrin	76.4	70.1	P/P	39 - 142
1917963	Endosulfan I	107	103	P/P	51 - 139
1917963	Endosulfan II	95.5	103	P/P	49 - 155
1917963	Endosulfan Sulfate	95.0	77.0	P/P	54 - 136
1917963	Endrin	89.6	88.7	P/P	38 - 141
1917963	Endrin Aldehyde	68.3	59.6	P/P	14 - 152
1917963	Endrin Ketone	101	86.7	P/P	60 - 128
1917963	Gamma-BHC	153	140	P/P	48 - 157
1917963	Gamma-Chlordane	74.6	69.6	P/P	35 - 123
1917963	Heptachlor	62.7	57.0	P/P	25 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P329591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917963	Heptachlor Epoxide	76.8	74.0	P/P	48 - 125
1917963	Methoxychlor	92.6	89.9	P/P	52 - 127
1917963	Mirex	78.5	71.5	P/P	25 - 108
1917963	Permethrin	115	94.4	P/P	46 - 133
1917963	Trifluralin	195	201	P/P	29 - 254

Reference Method: EPA 8270D

Batch ID: P329749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918093	Acetochlor	83.9	88.3	P/P	74 - 123
1918093	Alachlor	89.1	97.9	P/P	73 - 124
1918093	Ametryn	85.7	85.8	P/P	56 - 149
1918093	Atrazine	110	111	P/P	73 - 124
1918093	Atrazine Desethyl	97.2	91.7	P/P	12 - 103
1918093	Azinphos Methyl	116	115	P/P	60 - 202
1918093	Bromacil	93.7	90.9	P/P	42 - 133
1918093	Butylate	51.6	49.6	P/P	10 - 85.0
1918093	Chlorpyrifos Ethyl	81.3	87.6	P/P	53 - 113
1918093	Chlorpyrifos Methyl	86.4	81.8	P/P	40 - 115
1918093	Cyanazine	173	186	P/P	22 - 210
1918093	Demeton	84.3	81.3	P/P	17 - 149
1918093	Diazinon	84.6	91.1	P/P	72 - 124
1918093	Disulfoton	92.9	94.2	P/P	43 - 139
1918093	EPTC	46.7	48.9	P/P	10 - 86.0
1918093	Ethion	78.3	81.2	P/P	65 - 131
1918093	Ethoprop	82.7	81.0	P/P	59 - 110
1918093	Fenamiphos	89.0	91.0	P/P	57 - 138
1918093	Fipronil	89.4	96.1	P/P	40 - 130
1918093	Fipronil Sulfide	86.9	85.6	P/P	36 - 128
1918093	Fipronil Sulfone	77.1	69.7	P/P	16 - 145
1918093	Fonofos	82.3	81.8	P/P	60 - 112
1918093	Hexazinone	90.7	92.5	P/P	69 - 142
1918093	Malathion	82.5	84.4	P/P	68 - 132
1918093	Metaxyl	83.4	83.2	P/P	66 - 118
1918093	Metolachlor	84.6	97.2	P/P	71 - 124
1918093	Metribuzin	153	149	F/F	61 - 140
1918093	Mevinphos	81.6	74.9	P/P	38 - 130
1918093	Molinate	39.1	48.5	P/P	23 - 99.0
1918093	Norflurazon	92.3	87.3	P/P	39 - 139
1918093	Parathion Ethyl	86.1	88.1	P/P	75 - 111
1918093	Parathion Methyl	104	89.1	P/P	64 - 130
1918093	Pendimethalin	73.8	71.2	P/P	26 - 173
1918093	Phorate	102	79.6	P/P	43 - 127
1918093	Prometon	90.2	88.0	P/P	50 - 144
1918093	Prometryn	91.9	94.7	P/P	69 - 126
1918093	Simazine	107	103	P/P	51 - 152
1918093	Terbufos	84.0	83.6	P/P	54 - 125
1918093	Terbutylazine	82.7	83.1	P/P	76 - 113

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
 Batch ID: P329591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918092	Chlordane	105	99.8	P/P	44 - 134
1918092	Toxaphene	119	112	P/P	36 - 147

Reference Method: EPA 8321B
 Batch ID: P329540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918022	Sucralose	107	106	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P329700

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918088	Glyphosate	111	111	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P329718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919077	Pyraclostrobin	68.3	66.4	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P329766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918188	Fluoride	100	99.6	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P329828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918124	Organic Carbon	94.2	94.7	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P329539

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918088	2,4-D	96.8	84.4	P/P	40 - 150
1918088	Acetaminophen	68.1	76.9	P/P	30 - 150
1918088	Bentazon	102	87.2	P/P	40 - 150
1918088	Carbamazepine	110	107	P/P	40 - 150
1918088	Diuron	87.2	93.7	P/P	40 - 150
1918088	Fenuron	54.9	78.6	P/P	40 - 150
1918088	Fluridone	100	102	P/P	40 - 150
1918088	Imidacloprid	49.4	72.2	P/P	40 - 160
1918088	Linuron	118	71.4	P/P	40 - 150
1918088	MCPP	82.9	81.3	P/P	40 - 150
1918088	Primidone	80.2	85.4	P/P	40 - 150
1918088	Triclopyr	98.0	97.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P329566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918122	Turbidity	0.496	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P329580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918094	Calcium	1.67	Spike	P	0 - 20
1918094	Iron	0.106	Spike	P	0 - 20
1918094	Magnesium	1.35	Spike	P	0 - 20
1918094	Potassium	0.279	Spike	P	0 - 20
1918094	Sodium	1.27	Spike	P	0 - 20
1918094	Zinc	1.03	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918094	Arsenic	0.692	Spike	P	0 - 20
1918094	Cadmium	0.956	Spike	P	0 - 20
1918094	Chromium	2.06	Spike	P	0 - 20
1918094	Copper	0.989	Spike	P	0 - 20
1918094	Lead	0.289	Spike	P	0 - 20
1918094	Nickel	0.462	Spike	P	0 - 20
1918094	Silver	0.466	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918163	Chloride	2.65	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918164	Ammonia-N	1.77	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918191	Kjeldahl Nitrogen	2.22	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P329694

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918062	NO2NO3-N	0.743	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P329634

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918191	Total-P	3.95	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P329589

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918068	O-Phosphate-P	0.0806	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P329591

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917963	Aldrin	4.38	Spike	P	0 - 30
1917963	Alpha-BHC	6.06	Spike	P	0 - 30
1917963	Alpha-Chlordane	8.00	Spike	P	0 - 30
1917963	Beta-BHC	6.01	Spike	P	0 - 30
1917963	Carbophenothion	4.14	Spike	P	0 - 30
1917963	Chlorothalonil	29.9	Spike	P	0 - 30
1917963	Cypermethrin	22.7	Spike	P	0 - 30
1917963	DDD-p,p'	6.76	Spike	P	0 - 30
1917963	DDE-p,p'	0.473	Spike	P	0 - 30
1917963	DDT-p,p'	6.93	Spike	P	0 - 30
1917963	Delta-BHC	4.45	Spike	P	0 - 30
1917963	Dicofol	4.02	Spike	P	0 - 30
1917963	Dieldrin	8.62	Spike	P	0 - 30
1917963	Endosulfan I	3.72	Spike	P	0 - 30
1917963	Endosulfan II	7.09	Spike	P	0 - 30
1917963	Endosulfan Sulfate	20.9	Spike	P	0 - 30
1917963	Endrin	1.01	Spike	P	0 - 30
1917963	Endrin Aldehyde	13.6	Spike	P	0 - 30
1917963	Endrin Ketone	15.7	Spike	P	0 - 30
1917963	Gamma-BHC	8.93	Spike	P	0 - 30
1917963	Gamma-Chlordane	6.82	Spike	P	0 - 30
1917963	Heptachlor	9.44	Spike	P	0 - 30
1917963	Heptachlor Epoxide	3.74	Spike	P	0 - 30
1917963	Methoxychlor	2.98	Spike	P	0 - 30
1917963	Mirex	9.43	Spike	P	0 - 30
1917963	Permethrin	19.7	Spike	P	0 - 30
1917963	Trifluralin	3.21	Spike	P	0 - 30
LFB	Aldrin	23.0	LCS	P	0 - 30
LFB	Alpha-BHC	8.81	LCS	P	0 - 30
LFB	Alpha-Chlordane	11.1	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P329591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-BHC	12.7	LCS	P	0 - 30
LFB	Carbophenothion	16.7	LCS	P	0 - 30
LFB	Chlorothalonil	19.4	LCS	P	0 - 30
LFB	Cypermethrin	4.18	LCS	P	0 - 30
LFB	DDD-p,p'	7.07	LCS	P	0 - 30
LFB	DDE-p,p'	16.6	LCS	P	0 - 30
LFB	DDT-p,p'	12.9	LCS	P	0 - 30
LFB	Delta-BHC	1.21	LCS	P	0 - 30
LFB	Dicofol	2.86	LCS	P	0 - 30
LFB	Dieldrin	8.70	LCS	P	0 - 30
LFB	Endosulfan I	6.31	LCS	P	0 - 30
LFB	Endosulfan II	10.2	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.42	LCS	P	0 - 30
LFB	Endrin	0.302	LCS	P	0 - 30
LFB	Endrin Aldehyde	9.21	LCS	P	0 - 30
LFB	Endrin Ketone	6.56	LCS	P	0 - 30
LFB	Gamma-BHC	0.993	LCS	P	0 - 30
LFB	Gamma-Chlordane	13.2	LCS	P	0 - 30
LFB	Heptachlor	15.0	LCS	P	0 - 30
LFB	Heptachlor Epoxide	7.27	LCS	P	0 - 30
LFB	Methoxychlor	7.33	LCS	P	0 - 30
LFB	Mirex	18.1	LCS	P	0 - 30
LFB	Permethrin	8.81	LCS	P	0 - 30
LFB	Trifluralin	13.2	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P329749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918093	Acetochlor	5.07	Spike	P	0 - 30
1918093	Alachlor	9.44	Spike	P	0 - 30
1918093	Ametryn	0.187	Spike	P	0 - 30
1918093	Atrazine	1.32	Spike	P	0 - 30
1918093	Atrazine Desethyl	5.82	Spike	P	0 - 30
1918093	Azinphos Methyl	0.903	Spike	P	0 - 30
1918093	Bromacil	3.03	Spike	P	0 - 30
1918093	Butylate	3.97	Spike	P	0 - 30
1918093	Chlorpyrifos Ethyl	7.46	Spike	P	0 - 30
1918093	Chlorpyrifos Methyl	5.44	Spike	P	0 - 30
1918093	Cyanazine	7.22	Spike	P	0 - 30
1918093	Demeton	3.60	Spike	P	0 - 30
1918093	Diazinon	7.37	Spike	P	0 - 30
1918093	Disulfoton	1.44	Spike	P	0 - 30
1918093	EPTC	4.54	Spike	P	0 - 30
1918093	Ethion	3.55	Spike	P	0 - 30
1918093	Ethoprop	2.15	Spike	P	0 - 30
1918093	Fenamiphos	2.21	Spike	P	0 - 30
1918093	Fipronil	7.27	Spike	P	0 - 30
1918093	Fipronil Sulfide	1.51	Spike	P	0 - 30
1918093	Fipronil Sulfone	10.1	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P329749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918093	Fonofos	0.637	Spike	P	0 - 30
1918093	Hexazinone	1.97	Spike	P	0 - 30
1918093	Malathion	2.23	Spike	P	0 - 30
1918093	Metalaxyl	0.315	Spike	P	0 - 30
1918093	Metolachlor	13.9	Spike	P	0 - 30
1918093	Metribuzin	2.83	Spike	P	0 - 30
1918093	Mevinphos	8.56	Spike	P	0 - 30
1918093	Molinate	21.3	Spike	P	0 - 30
1918093	Norflurazon	5.53	Spike	P	0 - 30
1918093	Parathion Ethyl	2.31	Spike	P	0 - 30
1918093	Parathion Methyl	15.7	Spike	P	0 - 30
1918093	Pendimethalin	3.70	Spike	P	0 - 30
1918093	Phorate	24.4	Spike	P	0 - 30
1918093	Prometon	2.44	Spike	P	0 - 30
1918093	Prometryn	3.03	Spike	P	0 - 30
1918093	Simazine	2.89	Spike	P	0 - 30
1918093	Terbufos	0.494	Spike	P	0 - 30
1918093	Terbutylazine	0.482	Spike	P	0 - 30
LFB	Acetochlor	8.43	LCS	P	0 - 30
LFB	Alachlor	11.2	LCS	P	0 - 30
LFB	Ametryn	3.03	LCS	P	0 - 30
LFB	Atrazine	12.5	LCS	P	0 - 30
LFB	Atrazine Desethyl	2.52	LCS	P	0 - 30
LFB	Azinphos Methyl	13.4	LCS	P	0 - 30
LFB	Bromacil	5.13	LCS	P	0 - 30
LFB	Butylate	19.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.04	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.516	LCS	P	0 - 30
LFB	Cyanazine	16.4	LCS	P	0 - 30
LFB	Demeton	10.8	LCS	P	0 - 30
LFB	Diazinon	7.17	LCS	P	0 - 30
LFB	Disulfoton	0.626	LCS	P	0 - 30
LFB	EPTC	21.0	LCS	P	0 - 30
LFB	Ethion	7.32	LCS	P	0 - 30
LFB	Ethoprop	6.03	LCS	P	0 - 30
LFB	Fenamiphos	3.14	LCS	P	0 - 30
LFB	Fipronil	14.0	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.293	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.423	LCS	P	0 - 30
LFB	Fonofos	1.66	LCS	P	0 - 30
LFB	Hexazinone	9.60	LCS	P	0 - 30
LFB	Malathion	2.48	LCS	P	0 - 30
LFB	Metalaxyl	7.52	LCS	P	0 - 30
LFB	Metolachlor	8.40	LCS	P	0 - 30
LFB	Metribuzin	9.83	LCS	P	0 - 30
LFB	Mevinphos	6.11	LCS	P	0 - 30
LFB	Molinate	6.15	LCS	P	0 - 30
LFB	Norflurazon	3.73	LCS	P	0 - 30
LFB	Parathion Ethyl	7.43	LCS	P	0 - 30
LFB	Parathion Methyl	7.38	LCS	P	0 - 30
LFB	Pendimethalin	2.47	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P329749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	16.1	LCS	P	0 - 30
LFB	Prometon	2.07	LCS	P	0 - 30
LFB	Prometryn	8.43	LCS	P	0 - 30
LFB	Simazine	9.20	LCS	P	0 - 30
LFB	Terbufos	2.86	LCS	P	0 - 30
LFB	Terbutylazine	6.62	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P329591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918092	Chlordane	4.99	Spike	P	0 - 30
1918092	Toxaphene	6.02	Spike	P	0 - 30
LFB	Chlordane	0.852	LCS	P	0 - 30
LFB	Toxaphene	10.1	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P329540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918022	Sucralose	0.895	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P329700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918088	Glyphosate	0.451	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P329718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919077	Pyraclostrobin	2.88	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P329576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918181	Color (true)	2.78	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P329762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918188	Total Alkalinity	0.170	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P329919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918123	TDS	2.25	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P329766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918188	Fluoride	0.470	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P329828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918124	Organic Carbon	0.285	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P329539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918088	2,4-D	13.7	Spike	P	0 - 30
1918088	Acetaminophen	12.1	Spike	P	0 - 30
1918088	Bentazon	15.8	Spike	P	0 - 30
1918088	Carbamazepine	2.49	Spike	P	0 - 30
1918088	Diuron	7.25	Spike	P	0 - 30
1918088	Fenuron	35.5	Spike	F	0 - 30
1918088	Fluridone	1.92	Spike	P	0 - 30
1918088	Imidacloprid	22.8	Spike	P	0 - 30
1918088	Linuron	49.0	Spike	F	0 - 30
1918088	MCP	1.96	Spike	P	0 - 30
1918088	Primidone	6.22	Spike	P	0 - 30
1918088	Triclopyr	0.339	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: 1918172
Field Sample ID: G4CE0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.4	P	30 - 160
EPA 8321B	Diuron-d6	78.3	P	30 - 160
EPA 8321B	Diuron-d6	58.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	40 - 150
EPA 8321B	Primidone-d5	80.4	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1918172
Field Sample ID: G4CE0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	94.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	159	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	112	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	72.4	P	30 - 160
USGS O-2060-01	Diuron-d6	78.3	P	30 - 160
USGS O-2060-01	Diuron-d6	58.2	P	30 - 160
USGS O-2060-01	Primidone-d5	80.4	P	30 - 160

Lab Sample ID: 1918173
Field Sample ID: G4CE0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	67.9	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	56.1	P	32 - 103
EPA 8276	Decachlorobiphenyl	66.8	P	31 - 100

Lab Sample ID: 1918174
Field Sample ID: G4CE0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	60.2	P	53 - 135
EPA 8270D	Simazine-d10	95.4	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A78128
Included Lab Sample IDs: 1918160, 1918163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	104	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A78130
Included Lab Sample IDs: 1918160, 1918163

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A78141
Included Lab Sample IDs: 1918162, 1918165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78163

Included Lab Sample IDs: 1918160, 1918163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.4	96.7	P/P	90 - 110
Chloride	99.4	98.1	P/P	90 - 110
Sulfate	100	98.7	P/P	90 - 110
Sulfate	103	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78175

Included Lab Sample IDs: 1918175

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	107	106	P/P	90 - 110
Cadmium	104	104	P/P	90 - 110
Chromium	103	100	P/P	90 - 110
Lead	99.2	98.8	P/P	90 - 110
Nickel	105	104	P/P	90 - 110
Silver	100	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78178

Included Lab Sample IDs: 1918175

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	99.9	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	100	101	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Zinc	99.3	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78181

Included Lab Sample IDs: 1918161, 1918164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	97.5	P/P	90 - 110
Ammonia-N	98.4	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78182

Included Lab Sample IDs: 1918161, 1918164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	98.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78187

Included Lab Sample IDs: 1918161, 1918164

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78215

Included Lab Sample IDs: 1918175

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	107	106	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78219

Included Lab Sample IDs: 1918160, 1918163

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

Reference Method: SM 4500 F-C-97

Run ID: A78219

Included Lab Sample IDs: 1918160, 1918163

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78227

Included Lab Sample IDs: 1918161, 1918164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.5	97.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78238

Included Lab Sample IDs: 1918172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	100	105	P/P	70 - 160

Reference Method: EPA 8321B

Run ID: A78247

Included Lab Sample IDs: 1918172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	60.3	P/P	60 - 160

Reference Method: SM 5310 B-00

Run ID: A78252

Included Lab Sample IDs: 1918161, 1918164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	99.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78269

Included Lab Sample IDs: 1918172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	97.0	97.0	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A78269

Included Lab Sample IDs: 1918172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.2	105	P/P	50 - 150
Acetaminophen	104	112	P/P	60 - 150
Bentazon	95.9	122	P/P	50 - 150
Carbamazepine	108	109	P/P	60 - 150
Diuron	103	97.6	P/P	60 - 150
Fenuron	104	101	P/P	60 - 150
Fluridone	116	110	P/P	60 - 160
Imidacloprid	94.5	93.5	P/P	60 - 150
Linuron	106	112	P/P	60 - 150
MCPP	105	105	P/P	50 - 150
Primidone	122	120	P/P	60 - 150
Triclopyr	102	99.5	P/P	50 - 150

Reference Method: EPA 8270D

Run ID: A78280

Included Lab Sample IDs: 1918173

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.2		P	80 - 120
Alpha-BHC	104		P	80 - 120
Alpha-Chlordane	98.6		P	80 - 120
Beta-BHC	103		P	80 - 120
Carbophenothion	104		P	80 - 120
Chlorothalonil	98.0		P	80 - 120
Cypermethrin	95.6		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	99.3		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	99.4		P	80 - 120
Dicofol	91.1		P	80 - 120
Dieldrin	99.4		P	80 - 120
Endosulfan I	99.9		P	80 - 120
Endosulfan II	113		P	80 - 120
Endosulfan Sulfate	98.6		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	95.7		P	80 - 120
Endrin Ketone	98.5		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	98.5		P	80 - 120
Heptachlor	96.3		P	80 - 120
Heptachlor Epoxide	98.4		P	80 - 120
Methoxychlor	103		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	98.3		P	80 - 120
Trifluralin	92.4		P	80 - 120

Reference Method: EPA 8276

Run ID: A78289

Included Lab Sample IDs: 1918173

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

Reference Method: EPA 8276

Run ID: A78289

Included Lab Sample IDs: 1918173

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	103		P	80 - 120
Toxaphene	108		P	80 - 120

Reference Method: EPA 8270D

Run ID: A78478

Included Lab Sample IDs: 1918174

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	92.7		P	80 - 120
Alachlor	93.6		P	80 - 120
Ametryn	90.6		P	80 - 120
Atrazine	93.8		P	80 - 120
Atrazine Desethyl	94.9		P	80 - 120
Azinphos Methyl	84.0		P	80 - 120
Bromacil	87.6		P	80 - 120
Butylate	102		P	80 - 120
Chlorpyrifos Ethyl	95.0		P	80 - 120
Chlorpyrifos Methyl	96.1		P	80 - 120
Cyanazine	99.3		P	80 - 120
Demeton	93.3		P	80 - 120
Diazinon	94.3		P	80 - 120
Disulfoton	94.9		P	80 - 120
EPTC	95.7		P	80 - 120
Ethion	93.8		P	80 - 120
Ethoprop	104		P	80 - 120
Fenamiphos	92.1		P	80 - 120
Fipronil	87.2		P	80 - 120
Fipronil Sulfide	91.5		P	80 - 120
Fipronil Sulfone	92.6		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	97.8		P	80 - 120
Malathion	90.7		P	80 - 120
Metalaxyl	95.3		P	80 - 120
Metolachlor	95.9		P	80 - 120
Metribuzin	85.3		P	80 - 120
Mevinphos	99.8		P	80 - 120
Molinate	117		P	80 - 120
Norflurazon	90.5		P	80 - 120
Parathion Ethyl	97.2		P	80 - 120
Parathion Methyl	94.0		P	80 - 120
Pendimethalin	89.5		P	80 - 120
Phorate	95.6		P	80 - 120
Prometon	94.5		P	80 - 120
Prometryn	89.7		P	80 - 120
Simazine	91.7		P	80 - 120
Terbufos	96.2		P	80 - 120
Terbuthylazine	93.6		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements. Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.496	
EPA 200.7 Rev. 4.4	Calcium	104		102				1.67
	Iron	107		107	106			0.106
	Magnesium	105		103				1.35
	Potassium	102		102	101			0.279
	Sodium	105		104	101			1.27
	Zinc	101		97.9	96.9			1.03
EPA 200.8 Rev. 5.4	Arsenic	107		110	109			0.692
	Cadmium	102		105	104			0.956
	Chromium	103		97.7	99.8			2.06
	Copper	101		98.6	97.7			0.989
	Lead	99.7		99.1	98.8			0.289
	Nickel	104		102	102			0.462
	Silver	102		102	102			0.466
EPA 300.0 Rev. 2.1	Chloride	101		106	101		2.65	
	Sulfate	103		102	103			
EPA 350.1 Rev. 2.0	Ammonia-N	99.5		98.6	95.8			1.77
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109		105	102			2.22
EPA 353.2 Rev. 2.0	NO2NO3-N	104		96.8	95.8			0.743
EPA 365.1 Rev. 2.0	Total-P	101		102	97.8			3.95
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		93.4	93.3			0.0806
EPA 8270D	Acetochlor	85.2	92.7	83.9	88.3	8.43		5.07
	Alachlor	96.8	86.6	89.1	97.9	11.2		9.44
	Aldrin	48.2	38.3	44.3	46.3	23.0		4.38
	Alpha-BHC	93.8	85.9	94.0	88.5	8.81		6.06
	Alpha-Chlordane	85.6	76.6	76.7	70.8	11.1		8.00
	Ametryn	85.8	88.5	85.7	85.8	3.03		0.187
	Atrazine	97.3	110	110	111	12.5		1.32
	Atrazine Desethyl	104	106	97.2	91.7	2.52		5.82
	Azinphos Methyl	111	127	116	115	13.4		0.903
	Beta-BHC	103	90.6	91.4	86.0	12.7		6.01
	Bromacil	59.4	62.6	93.7	90.9	5.13		3.03
	Butylate	44.4	53.9	51.6	49.6	19.4		3.97
	Carbophenothion	105	88.8	126	121	16.7		4.14
	Chlorothalonil	82.0	99.6	7.12	5.27	19.4		29.9
	Chlorpyrifos Ethyl	79.3	80.9	81.3	87.6	2.04		7.46
	Chlorpyrifos Methyl	87.4	86.9	86.4	81.8	0.516		5.44
	Cyanazine	167	197	173	186	16.4		7.22
	Cypermethrin	113	108	136	108	4.18		22.7
	DDD-p,p'	106	98.6	94.0	87.8	7.07		6.76
	DDE-p,p'	83.6	70.8	73.7	73.3	16.6		0.473
	DDT-p,p'	88.2	77.5	87.0	81.2	12.9		6.93
	Delta-BHC	133	132	171	163	1.21		4.45
	Demeton	79.2	71.0	84.3	81.3	10.8		3.60
	Diazinon	93.2	86.8	84.6	91.1	7.17		7.37
	Dicofol	26.4	27.1	19.5	18.7	2.86		4.02
	Dieldrin	88.5	81.2	76.4	70.1	8.70		8.62
	Disulfoton	83.7	84.2	92.9	94.2	0.626		1.44
	Endosulfan I	107	100	107	103	6.31		3.72
	Endosulfan II	123	111	95.5	103	10.2		7.09
	Endosulfan Sulfate	98.7	96.3	95.0	77.0	2.42		20.9
	Endrin	91.6	91.3	89.6	88.7	0.302		1.01
	Endrin Aldehyde	103	93.7	68.3	59.6	9.21		13.6
	Endrin Ketone	97.5	91.3	101	86.7	6.56		15.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	EPTC	54.3	44.0	46.7	48.9	21.0	4.54
	Ethion	83.0	77.1	78.3	81.2	7.32	3.55
	Ethoprop	84.6	79.6	82.7	81.0	6.03	2.15
	Fenamiphos	97.7	94.7	89.0	91.0	3.14	2.21
	Fipronil	104	90.5	89.4	96.1	14.0	7.27
	Fipronil Sulfide	88.1	87.8	86.9	85.6	0.293	1.51
	Fipronil Sulfone	74.8	75.1	77.1	69.7	0.423	10.1
	Fonofos	85.4	84.0	82.3	81.8	1.66	0.637
	Gamma-BHC	101	100	153	140	0.993	8.93
	Gamma-Chlordane	83.4	73.1	74.6	69.6	13.2	6.82
	Heptachlor	72.2	62.1	62.7	57.0	15.0	9.44
	Heptachlor Epoxide	87.0	80.9	76.8	74.0	7.27	3.74
	Hexazinone	87.7	96.6	90.7	92.5	9.60	1.97
	Malathion	79.7	81.7	82.5	84.4	2.48	2.23
	Metalaxyl	81.4	87.8	83.4	83.2	7.52	0.315
	Methoxychlor	106	98.9	92.6	89.9	7.33	2.98
	Metolachlor	81.8	89.0	84.6	97.2	8.40	13.9
	Metribuzin	151	137	153	149	9.83	2.83
	Mevinphos	73.9	78.6	81.6	74.9	6.11	8.56
	Mirex	77.3	64.5	78.5	71.5	18.1	9.43
	Molinate	44.8	47.6	39.1	48.5	6.15	21.3
	Norflurazon	90.4	93.8	92.3	87.3	3.73	5.53
	Parathion Ethyl	82.5	88.9	86.1	88.1	7.43	2.31
	Parathion Methyl	104	112	104	89.1	7.38	15.7
	Pendimethalin	79.0	81.0	73.8	71.2	2.47	3.70
	Permethrin	96.4	88.3	115	94.4	8.81	19.7
	Phorate	78.4	92.1	102	79.6	16.1	24.4
	Prometon	84.7	83.0	90.2	88.0	2.07	2.44
	Prometryn	88.2	95.9	91.9	94.7	8.43	3.03
	Simazine	99.0	108	107	103	9.20	2.89
	Terbufos	80.4	82.7	84.0	83.6	2.86	0.494
	Terbutylazine	81.9	87.5	82.7	83.1	6.62	0.482
	Trifluralin	127	111	195	201	13.2	3.21
EPA 8276	Chlordane	96.6	97.4	105	99.8	0.852	4.99
	Toxaphene	107	118	119	112	10.1	6.02
EPA 8321B	Glyphosate	97.1		111	111		0.451
	Pyraclostrobin	71.2		68.3	66.4		2.88
	Sucralose	63.4		107	106		0.895
SM 2120 B	Color (true)					2.78	
SM 2320 B-97	Total Alkalinity	103				0.170	
SM 2540 C-97	TDS					2.25	
SM 4500 F-C-97	Fluoride	98.8		100	99.6		0.470
SM 5310 B-00	Organic Carbon	96.6		94.2	94.7		0.285
USGS O-2060-01	2,4-D	102		96.8	84.4		13.7
	Acetaminophen	98.2		68.1	76.9		12.1
	Bentazon	93.8		102	87.2		15.8
	Carbamazepine	102		110	107		2.49
	Diuron	111		87.2	93.7		7.25
	Fenuron	97.6		54.9	78.6		35.5
	Fluridone	97.5		100	102		1.92
	Imidacloprid	100		49.4	72.2		22.8
	Linuron	112		118	71.4		49.0
	MCPP	99.3		82.9	81.3		1.96
	Primidone	113		80.2	85.4		6.22

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
USGS O-2060-01	Triclopyr	107	98.0 97.6			0.339

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1918160, 1918163
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1918175
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1918175
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1918160, 1918163
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1918160, 1918163
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1918161, 1918164
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1918161, 1918164
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1918161, 1918164
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1918161, 1918164
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1918162, 1918165
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1918173
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1918174
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1918173
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1918172
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1918172
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1918172
SM 2120 B / E31780	True Color measured at 450 nm	1918160, 1918163
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1918160, 1918163
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1918160, 1918163
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1918160, 1918163
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1918160, 1918163
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1918161, 1918164
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1918172
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1918172

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	08/02/2017			08/02/2017 16:29	DeAsia Armster	1918160, 1918163
EPA 200.7 Rev. 4.4	08/02/2017	08/02/2017	Elliott D. Healy	08/03/2017	Betina Topolski	1918175
EPA 200.8 Rev. 5.4	08/02/2017	08/02/2017	Elliott D. Healy	08/04/2017	Nadine Brooks	1918175
	08/02/2017	08/02/2017	Elliott D. Healy	08/05/2017	Nadine Brooks	1918175
EPA 300.0 Rev. 2.1	08/02/2017			08/03/2017	Julia Storbeck	1918160, 1918163
EPA 350.1 Rev. 2.0	08/02/2017			08/03/2017	Sofia Elnemr	1918161, 1918164
EPA 351.2 Rev. 2.0	08/02/2017	08/03/2017	Adrian Shelby	08/07/2017	Joseph Suarez	1918161, 1918164
EPA 353.2 Rev. 2.0	08/02/2017			08/04/2017	Beverly Y. Sanders	1918161, 1918164
EPA 365.1 Rev. 2.0	08/02/2017	08/03/2017	Sima Feizi	08/04/2017	Lipi Saha	1918161, 1918164
EPA 365.1 Rev. 2.0 dissolved	08/02/2017			08/02/2017 15:21	Ping Hua	1918162
	08/02/2017			08/02/2017 15:22	Ping Hua	1918165
EPA 8270D	08/02/2017	08/04/2017	John Kaba	08/08/2017	Vandana T. Nagar	1918173
	08/02/2017	08/04/2017	Rasheda Ghaffari	08/09/2017	Irina Carbone	1918174
EPA 8276	08/02/2017	08/04/2017	John Kaba	08/09/2017	Vandana T. Nagar	1918173
EPA 8321B	08/02/2017	08/04/2017	Julie Michelle Frank	08/04/2017	Mohammad Ghaffari	1918172
	08/02/2017	08/07/2017	Julie Michelle Frank	08/07/2017	Juyoung Kim	1918172
	08/02/2017	08/08/2017	Hoor Shaik	08/08/2017	Juyoung Kim	1918172
SM 2120 B	08/02/2017			08/02/2017 16:15	Tanya Welborn	1918160
	08/02/2017			08/02/2017 16:16	Tanya Welborn	1918163
SM 2320 B-97	08/02/2017			08/05/2017	Dale L. Simmons	1918160, 1918163
SM 2540 C-97	08/02/2017			08/04/2017	Yijie Li	1918160, 1918163
SM 2540 D-97	08/02/2017			08/04/2017	Yijie Li	1918160, 1918163
SM 4500 F-C-97	08/02/2017			08/05/2017	Dale L. Simmons	1918160, 1918163
SM 5310 B-00	08/02/2017			08/07/2017	Ping Hua	1918161, 1918164
USGS O-2060-01	08/02/2017	08/04/2017	Fe-Val Siddell	08/08/2017	Juyoung Kim	1918172