

Chemical Analysis Report

CEN-DIST-2017-05-23-02

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

Event Description: **Tick Island Mud Lake**
Request ID: **RQ-2017-05-15-48**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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Certified by: Colin Wright, Program Administrator

Date Certified: 16-JUN-2017 15:28

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: Tick Island Mud Lake @ 350m S of Center

Collection Date/Time: 05/22/2017 12:47

Field ID: G4CE0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900685	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P325721	
	EPA 300.0 Rev. 2.1	Chloride	430		mg Cl/L	P326772	
		Sulfate	100		mg SO4/L	P326774	
	SM 2120 B	Color (true)	55		PCU	P325711	
	SM 2320 B-97	Total Alkalinity	114		mg CaCO3/L	P325879	
	SM 2540 C-97	TDS	920		mg/L	P325989	
	SM 2540 D-97	TSS	18		mg/L	P326002	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P325881	RPD
1900686	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P325859	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P325728	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325755	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P325749	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P326022	
1900687	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325742	
1900696	EPA 200.7 Rev. 4.4	Calcium	85.4		mg/L	P325839	
		Iron	120		ug/L	P325839	
		Magnesium	34.5		mg/L	P325839	
		Potassium	6.9		mg/L	P325839	
		Sodium	234		mg/L	P325839	
		Zinc	5.0	U	ug/L	P325839	
	EPA 200.8 Rev. 5.4	Arsenic	0.76		ug/L	P326400	
		Cadmium	0.020	U	ug/L	P326400	
		Chromium	0.40	U	ug/L	P326400	
		Copper	0.20	U	ug/L	P326400	
		Lead	0.19	I	ug/L	P326400	
		Nickel	0.22	I	ug/L	P326400	
		Silver	0.010	U	ug/L	P326400	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Tick Island Mud Lake @ 350m S of Center

Collection Date/Time: 05/22/2017 12:47

Field ID: G4CE0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900692	EPA 8321B	Glyphosate**	10	U	ug/L	P325790	
		Pyraclostrobin**	0.0040	U	ug/L	P325788	
		Sucralose**	0.33		ug/L	P325694	
	USGS O-2060-01	2,4-D	0.0064		ug/L	P325543	
		Diuron	8.0E-04	U	ug/L	P325543	
		Fenuron	0.0040	U	ug/L	P325543	MS
		Imidacloprid	8.0E-04	U	ug/L	P325543	
		Bentazon	0.0031	I	ug/L	P325543	MS

Field ID: G4CE0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900692	USGS O-2060-01	Linuron	0.0040	U	ug/L	P325543	
		Acetaminophen**	0.0080	U	ug/L	P325543	RPD
		MCPP	0.0020	U	ug/L	P325543	
		Carbamazepine**	8.8E-04	I	ug/L	P325543	
		Triclopyr**	0.0040	U	ug/L	P325543	
		Primidone**	0.0040	U	ug/L	P325543	
		Fluridone**	0.0046		ug/L	P325543	
1900694	EPA 8270D	Aldrin	4.1	U	ng/L	P326163	
		Alpha-BHC	2.1	U	ng/L	P326163	
		Beta-BHC	4.1	U	ng/L	P326163	
		Delta-BHC	4.1	U	ng/L	P326163	
		Gamma-BHC	4.1	U	ng/L	P326163	
		Carbophenothion	4.1	U	ng/L	P326163	
		Chlorothalonil	2.1	UJ	ng/L	P326163	CCV, RPD
		Cypermethrin	21	U	ng/L	P326163	
		DDD-p,p'	2.1	U	ng/L	P326163	
		DDE-p,p'	3.1	U	ng/L	P326163	
		DDT-p,p'	3.1	U	ng/L	P326163	
		Dieldrin	4.1	U	ng/L	P326163	
		Endosulfan I	4.1	U	ng/L	P326163	
		Endosulfan II	4.1	U	ng/L	P326163	
		Endosulfan Sulfate	2.1	U	ng/L	P326163	
		Endrin	2.1	U	ng/L	P326163	
		Endrin Aldehyde	2.1	U	ng/L	P326163	
		Heptachlor	1.6	U	ng/L	P326163	
		Heptachlor Epoxide	2.1	U	ng/L	P326163	
		Methoxychlor	4.1	U	ng/L	P326163	
		Mirex	2.1	U	ng/L	P326163	
		Permethrin	10	U	ng/L	P326163	RPD
		Trifluralin	1.0	U	ng/L	P326163	
		Alpha-Chlordane	1.0	U	ng/L	P326163	
		Gamma-Chlordane	1.0	U	ng/L	P326163	
		Endrin Ketone	2.1	U	ng/L	P326163	
		Dicofol	31	U	ng/L	P326163	
	EPA 8276	Chlordane**	2.6	U	ng/L	P326163	
		Toxaphene**	13	U	ng/L	P326163	
1900695	EPA 8270D	Ametryn	0.31	U	ng/L	P325833	
		Atrazine	2.1		ng/L	P325833	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P325833	
		Chlorpyrifos Methyl	0.095	U	ng/L	P325833	
		Disulfoton	0.31	U	ng/L	P325833	
		Ethion	0.14	U	ng/L	P325833	
		Ethoprop	0.095	UJ	ng/L	P325833	MS
		Hexazinone	2.1		ng/L	P325833	
		Malathion	0.33	U	ng/L	P325833	

Field ID: G4CE0135

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1900695	EPA 8270D	Metribuzin	0.19	U	ng/L	P325833	
		Mevinphos	0.48	U	ng/L	P325833	
		Norflurazon	0.48	U	ng/L	P325833	
		Phorate	0.24	UJ	ng/L	P325833	RPD
		Prometryn	0.19	U	ng/L	P325833	
		Simazine	0.48	U	ng/L	P325833	
		Atrazine Desethyl	1.4	UJ	ng/L	P325833	RPD
		Prometon	0.86	U	ng/L	P325833	
		Fipronil	0.24	U	ng/L	P325833	
		Molinate	0.29	U	ng/L	P325833	
		Pendimethalin	1.4	U	ng/L	P325833	
		Terbufos	0.095	U	ng/L	P325833	
		EPTC	1.2	U	ng/L	P325833	
		Terbuthylazine	0.41	U	ng/L	P325833	
		Bromacil	0.48	U	ng/L	P325833	
		Fipronil Sulfide	0.14	U	ng/L	P325833	
		Fipronil Sulfone	0.14	U	ng/L	P325833	
		Alachlor	0.24	U	ng/L	P325833	
		Azinphos Methyl	2.1	U	ng/L	P325833	
		Butylate	0.38	U	ng/L	P325833	
		Demeton	1.9	U	ng/L	P325833	
		Diazinon	0.12	U	ng/L	P325833	
		Fenamiphos	0.24	U	ng/L	P325833	
		Fonofos	0.19	U	ng/L	P325833	
		Metalaxyl	0.19	U	ng/L	P325833	
		Metolachlor	0.24	U	ng/L	P325833	
		Acetochlor	0.24	U	ng/L	P325833	
		Cyanazine	0.48	U	ng/L	P325833	
		Parathion Ethyl	0.24	U	ng/L	P325833	
		Parathion Methyl	0.24	U	ng/L	P325833	

Ref. Method and Comment:
 EPA 8270D: 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: P325721

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P325839

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325839

Component	Result	Code	Units
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: P326400

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: P326772

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326774

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325859

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325728

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325755

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325749

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325742

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

Reference Method: EPA 8270D
Batch ID: P325833

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	0.32	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P326163

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P326163

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

Reference Method: EPA 8276

Batch ID: P326163

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

Reference Method: EPA 8321B

Batch ID: P325694

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P325788

Component	Result	Code	Units
Pyraclostrobin	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P325790

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P325711

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P325879

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

Reference Method: SM 2540 C-97
Batch ID: P325989

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P326002

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325881

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P326022

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

Reference Method: USGS O-2060-01
Batch ID: P325543

Component	Result	Code	Units
2,4-D	8.00E-04	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.00E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0040	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.00200	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.00400	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	107		P	85 - 115
Magnesium	113		P	85 - 115
Potassium	102		P	85 - 115
Sodium	103		P	85 - 115
Zinc	98.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	93.3		P	85 - 115
Cadmium	97.7		P	85 - 115
Chromium	94.8		P	85 - 115
Copper	88.3		P	85 - 115
Lead	92.8		P	85 - 115
Nickel	91.7		P	85 - 115
Silver	92.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326772

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325859

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325728

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325755

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P325749

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P325742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.8		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P325833

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	92.7	86.9	P/P	78 - 118
Alachlor	90.4	87.6	P/P	77 - 119
Ametryn	107	96.7	P/P	61 - 136
Atrazine	98.8	97.8	P/P	73 - 120
Atrazine Desethyl	70.8	58.2	P/P	16 - 122
Azinphos Methyl	145	114	P/P	69 - 186
Bromacil	70.5	72.4	P/P	40 - 125
Butylate	64.7	52.2	P/P	32 - 87.0
Chlorpyrifos Ethyl	91.5	85.9	P/P	53 - 110
Chlorpyrifos Methyl	96.5	84.4	P/P	31 - 119
Cyanazine	107	93.6	P/P	36 - 224
Demeton	98.8	81.1	P/P	39 - 122
Diazinon	93.0	87.2	P/P	75 - 119
Disulfoton	89.1	71.5	P/P	42 - 139
EPTC	63.8	50.8	P/P	33 - 96.0
Ethion	94.8	92.9	P/P	63 - 127
Ethoprop	97.8	81.4	P/P	65 - 107
Fenamiphos	106	92.4	P/P	64 - 137
Fipronil	92.6	93.9	P/P	60 - 126
Fipronil Sulfide	86.4	89.1	P/P	58 - 124
Fipronil Sulfone	75.6	83.6	P/P	57 - 126
Fonofos	91.9	76.5	P/P	65 - 111
Hexazinone	88.5	89.8	P/P	46 - 151
Malathion	103	95.9	P/P	68 - 132
Metaxyl	87.0	72.5	P/P	51 - 132
Metolachlor	91.3	90.2	P/P	78 - 119
Metribuzin	120	98.5	P/P	64 - 138
Mevinphos	97.7	74.1	P/P	34 - 128
Molinate	68.7	57.1	P/P	44 - 101
Norflurazon	92.1	86.4	P/P	63 - 129
Parathion Ethyl	95.3	95.5	P/P	80 - 109
Parathion Methyl	103	94.8	P/P	74 - 125
Pendimethalin	90.2	89.1	P/P	48 - 134
Phorate	115	83.1	P/P	52 - 119
Prometon	102	85.8	P/P	69 - 124
Prometryn	102	90.4	P/P	66 - 124
Simazine	97.3	92.2	P/P	61 - 134
Terbufos	91.6	75.5	P/P	58 - 115
Terbutylazine	92.4	91.7	P/P	77 - 113

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P326163

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	52.5	56.5	P/P	30 - 83.0
Alpha-BHC	80.1	82.2	P/P	62 - 119
Alpha-Chlordane	81.7	75.1	P/P	56 - 119
Beta-BHC	91.6	83.4	P/P	54 - 141
Carbophenothion	44.2	43.8	P/P	33 - 147
Chlorothalonil	40.9	68.5	P/P	25 - 175
Cypermethrin	132	121	P/P	50 - 155
DDD-p,p'	92.2	88.2	P/P	56 - 135
DDE-p,p'	81.2	76.7	P/P	48 - 120
DDT-p,p'	84.4	81.2	P/P	51 - 121
Delta-BHC	121	103	P/P	65 - 163
Dicofol	55.6	45.3	P/P	15 - 112
Dieldrin	80.6	70.6	P/P	59 - 134
Endosulfan I	84.7	86.3	P/P	65 - 142
Endosulfan II	91.4	95.0	P/P	65 - 154
Endosulfan Sulfate	81.7	84.3	P/P	65 - 136
Endrin	81.2	80.1	P/P	53 - 156
Endrin Aldehyde	81.4	77.3	P/P	47 - 156
Endrin Ketone	70.9	73.6	P/P	70 - 124
Gamma-BHC	88.0	87.0	P/P	64 - 142
Gamma-Chlordane	78.3	75.6	P/P	55 - 114
Heptachlor	75.0	71.1	P/P	42 - 105
Heptachlor Epoxide	79.0	76.6	P/P	67 - 120
Methoxychlor	94.1	95.0	P/P	63 - 134
Mirex	61.5	63.8	P/P	40 - 90.0
Permethrin	111	100	P/P	36 - 144
Trifluralin	95.4	99.7	P/P	40 - 170

Reference Method: EPA 8276

Batch ID: P326163

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	87.8	92.8	P/P	44 - 118
Toxaphene	90.3	98.7	P/P	36 - 136

Reference Method: EPA 8321B

Batch ID: P325694

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	76.7		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P325788

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	47.2		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P325790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	91.2		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
 Batch ID: P325879

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

Reference Method: SM 4500 F-C-97
 Batch ID: P325881

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.8		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P326022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.4		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P325543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	70.2		P	40 - 140
Acetaminophen	92.6		P	40 - 140
Bentazon	66.0		P	40 - 140
Carbamazepine	85.6		P	40 - 140
Diuron	87.0		P	40 - 140
Fenuron	78.2		P	40 - 140
Fluridone	82.4		P	40 - 140
Imidacloprid	75.4		P	40 - 160
Linuron	76.4		P	40 - 140
MCP	83.6		P	40 - 140
Primidone	72.4		P	40 - 140
Triclopyr	76.6		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P325839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901001	Calcium	107		P	80 - 120
1901001	Iron	107		P	80 - 120
1901001	Magnesium	108		P	80 - 120
1901001	Sodium	104		P	80 - 120
1901001	Zinc	101		P	80 - 120
1901456	Calcium	98.6		P	80 - 120
1901456	Iron	109	102	P/P	80 - 120
1901456	Magnesium	112	102	P/P	80 - 120
1901456	Potassium	101	95.6	P/P	80 - 120
1901456	Sodium	105		P	80 - 120
1901456	Zinc	103	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900666	Arsenic	100	99.0	P/P	80 - 120
1900666	Cadmium	98.3	98.9	P/P	80 - 120
1900666	Chromium	90.3	89.5	P/P	80 - 120
1900666	Copper	87.6	86.3	P/P	80 - 120
1900666	Lead	99.1	98.2	P/P	80 - 120
1900666	Nickel	90.1	89.4	P/P	80 - 120
1900666	Silver	94.7	95.8	P/P	80 - 120
1901316	Arsenic	94.6		P	80 - 120
1901316	Cadmium	99.0		P	80 - 120
1901316	Chromium	92.1		P	80 - 120
1901316	Copper	85.4		P	80 - 120
1901316	Lead	95.2		P	80 - 120
1901316	Nickel	88.7		P	80 - 120
1901316	Silver	97.1		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900916	Chloride	103		P	90 - 110
1900917	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900916	Sulfate	101		P	90 - 110
1900917	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900703	Ammonia-N	99.0	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325728

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900632	Kjeldahl Nitrogen	93.2	95.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900656	NO2NO3-N	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900639	O-Phosphate-P	101	102	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P325833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900695	Acetochlor	101	100	P/P	74 - 123
1900695	Alachlor	106	104	P/P	73 - 124
1900695	Ametryn	147	145	P/P	56 - 149
1900695	Atrazine	103	103	P/P	73 - 124
1900695	Atrazine Desethyl	47.6	71.3	P/P	12 - 103
1900695	Azinphos Methyl	163	161	P/P	60 - 202
1900695	Bromacil	90.4	89.2	P/P	42 - 133
1900695	Butylate	52.1	55.3	P/P	10 - 85.0
1900695	Chlorpyrifos Ethyl	86.6	89.5	P/P	53 - 113
1900695	Chlorpyrifos Methyl	96.5	93.0	P/P	40 - 115
1900695	Cyanazine	103	98.9	P/P	22 - 210
1900695	Demeton	106	103	P/P	17 - 149
1900695	Diazinon	108	107	P/P	72 - 124
1900695	Disulfoton	92.3	89.8	P/P	43 - 139
1900695	EPTC	52.7	52.7	P/P	10 - 86.0
1900695	Ethion	101	100	P/P	65 - 131
1900695	Ethoprop	116	112	F/F	59 - 110
1900695	Fenamiphos	98.0	94.1	P/P	57 - 138
1900695	Fipronil	92.3	91.8	P/P	40 - 130
1900695	Fipronil Sulfide	81.1	79.8	P/P	36 - 128
1900695	Fipronil Sulfone	68.4	66.4	P/P	16 - 145
1900695	Fonofos	104	104	P/P	60 - 112
1900695	Hexazinone	97.5	96.3	P/P	69 - 142
1900695	Malathion	104	101	P/P	68 - 132
1900695	Metalaxyl	90.4	90.3	P/P	66 - 118
1900695	Metolachlor	99.1	98.3	P/P	71 - 124
1900695	Metribuzin	116	114	P/P	61 - 140
1900695	Mevinphos	108	111	P/P	38 - 130
1900695	Molinate	66.3	65.2	P/P	23 - 99.0
1900695	Norflurazon	87.5	87.3	P/P	39 - 139
1900695	Parathion Ethyl	101	100	P/P	75 - 111
1900695	Parathion Methyl	108	109	P/P	64 - 130
1900695	Pendimethalin	98.3	98.6	P/P	26 - 173
1900695	Phorate	115	109	P/P	43 - 127
1900695	Prometon	117	116	P/P	50 - 144
1900695	Prometryn	91.6	90.6	P/P	69 - 126
1900695	Simazine	93.4	98.3	P/P	51 - 152
1900695	Terbufos	107	106	P/P	54 - 125
1900695	Terbutylazine	99.4	97.9	P/P	76 - 113

Reference Method: EPA 8270D

Batch ID: P326163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900816	Aldrin	57.3	73.6	P/P	30 - 83.0
1900816	Alpha-BHC	81.7	92.2	P/P	62 - 119
1900816	Alpha-Chlordane	67.6	84.7	P/P	56 - 119
1900816	Beta-BHC	87.1	91.3	P/P	54 - 141
1900816	Carbophenothion	89.2	114	P/P	33 - 147
1900816	Chlorothalonil	53.4	74.6	P/P	25 - 175
1900816	Cypermethrin	98.9	128	P/P	50 - 155
1900816	DDD-p,p'	74.8	92.8	P/P	56 - 135

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P326163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900816	DDE-p,p'	66.4	85.1	P/P	48 - 120
1900816	DDT-p,p'	71.5	89.4	P/P	51 - 121
1900816	Delta-BHC	96.0	110	P/P	65 - 163
1900816	Dicofol	43.0	46.8	P/P	15 - 112
1900816	Dieldrin	77.1	91.1	P/P	59 - 134
1900816	Endosulfan I	74.5	93.3	P/P	65 - 142
1900816	Endosulfan II	79.3	99.2	P/P	65 - 154
1900816	Endosulfan Sulfate	87.3	96.0	P/P	65 - 136
1900816	Endrin	67.8	85.6	P/P	53 - 156
1900816	Endrin Aldehyde	66.6	78.1	P/P	47 - 156
1900816	Endrin Ketone	71.2	89.9	P/P	70 - 124
1900816	Gamma-BHC	101	92.8	P/P	64 - 142
1900816	Gamma-Chlordane	67.2	85.1	P/P	55 - 114
1900816	Heptachlor	64.6	82.8	P/P	42 - 105
1900816	Heptachlor Epoxide	76.1	89.6	P/P	67 - 120
1900816	Methoxychlor	89.4	102	P/P	63 - 134
1900816	Mirex	59.5	79.4	P/P	40 - 90.0
1900816	Permethrin	78.8	107	P/P	36 - 144
1900816	Trifluralin	109	133	P/P	40 - 170

Reference Method: EPA 8276
Batch ID: P326163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901314	Chlordane	89.0	86.2	P/P	44 - 118
1901314	Toxaphene	98.2	90.1	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P325694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900888	Sucralose	99.0	68.0	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P325788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901499	Pyraclostrobin	89.6	101	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P325790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900995	Glyphosate	101	97.0	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P325881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900626	Fluoride	93.6	99.3	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P326022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900630	Organic Carbon	96.8	97.1	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P325543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899967	2,4-D	67.8	69.4	P/P	40 - 140
1899967	Acetaminophen	57.4	79.2	P/P	40 - 140
1899967	Bentazon	30.0	28.6	F/F	40 - 140
1899967	Carbamazepine	52.6	55.6	P/P	40 - 140
1899967	Diuron	47.0	40.8	P/P	40 - 140
1899967	Fenuron	40.2	37.8	P/F	40 - 140
1899967	Fluridone	53.4	58.2	P/P	40 - 140
1899967	Imidacloprid	99.4	101	P/P	40 - 160
1899967	Linuron	60.6	67.4	P/P	40 - 140
1899967	MCP	54.0	59.6	P/P	40 - 140
1899967	Primidone	52.8	63.0	P/P	40 - 140
1899967	Triclopyr	60.2	66.8	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325721

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900671	Turbidity	0.906	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901456	Calcium	3.19	Spike	P	0 - 20
1901456	Iron	5.89	Spike	P	0 - 20
1901456	Magnesium	6.00	Spike	P	0 - 20
1901456	Potassium	3.76	Spike	P	0 - 20
1901456	Sodium	3.54	Spike	P	0 - 20
1901456	Zinc	1.28	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900666	Arsenic	1.01	Spike	P	0 - 20
1900666	Cadmium	0.552	Spike	P	0 - 20
1900666	Chromium	0.886	Spike	P	0 - 20
1900666	Copper	1.41	Spike	P	0 - 20
1900666	Lead	0.921	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900666	Nickel	0.712	Spike	P	0 - 20
1900666	Silver	1.17	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900916	Chloride	0.798	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900916	Sulfate	0.523	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900703	Ammonia-N	0.575	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900632	Kjeldahl Nitrogen	1.71	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900656	NO2NO3-N	0.475	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900656	Total-P	2.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900639	O-Phosphate-P	1.57	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P325833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900695	Acetochlor	0.235	Spike	P	0 - 30
1900695	Alachlor	1.81	Spike	P	0 - 30
1900695	Ametryn	0.894	Spike	P	0 - 30
1900695	Atrazine	0.0496	Spike	P	0 - 30
1900695	Atrazine Desethyl	39.9	Spike	F	0 - 30
1900695	Azinphos Methyl	1.49	Spike	P	0 - 30
1900695	Bromacil	1.37	Spike	P	0 - 30
1900695	Butylate	5.99	Spike	P	0 - 30
1900695	Chlorpyrifos Ethyl	3.24	Spike	P	0 - 30
1900695	Chlorpyrifos Methyl	3.69	Spike	P	0 - 30
1900695	Cyanazine	4.41	Spike	P	0 - 30
1900695	Demeton	2.49	Spike	P	0 - 30
1900695	Diazinon	1.15	Spike	P	0 - 30
1900695	Disulfoton	2.69	Spike	P	0 - 30
1900695	EPTC	0.0211	Spike	P	0 - 30
1900695	Ethion	1.10	Spike	P	0 - 30
1900695	Ethoprop	3.38	Spike	P	0 - 30
1900695	Fenamiphos	4.01	Spike	P	0 - 30
1900695	Fipronil	0.514	Spike	P	0 - 30
1900695	Fipronil Sulfide	1.65	Spike	P	0 - 30
1900695	Fipronil Sulfone	3.02	Spike	P	0 - 30
1900695	Fonofos	0.396	Spike	P	0 - 30
1900695	Hexazinone	1.09	Spike	P	0 - 30
1900695	Malathion	2.82	Spike	P	0 - 30
1900695	Metalaxyl	0.142	Spike	P	0 - 30
1900695	Metolachlor	0.769	Spike	P	0 - 30
1900695	Metribuzin	1.94	Spike	P	0 - 30
1900695	Mevinphos	2.86	Spike	P	0 - 30
1900695	Molinate	1.65	Spike	P	0 - 30
1900695	Norflurazon	0.258	Spike	P	0 - 30
1900695	Parathion Ethyl	1.06	Spike	P	0 - 30
1900695	Parathion Methyl	0.524	Spike	P	0 - 30
1900695	Pendimethalin	0.210	Spike	P	0 - 30
1900695	Phorate	5.40	Spike	P	0 - 30
1900695	Prometon	0.593	Spike	P	0 - 30
1900695	Prometryn	1.07	Spike	P	0 - 30
1900695	Simazine	4.32	Spike	P	0 - 30
1900695	Terbufos	0.876	Spike	P	0 - 30
1900695	Terbuthylazine	1.58	Spike	P	0 - 30
LFB	Acetochlor	6.48	LCS	P	0 - 30
LFB	Alachlor	3.09	LCS	P	0 - 30
LFB	Ametryn	10.3	LCS	P	0 - 30
LFB	Atrazine	0.989	LCS	P	0 - 30
LFB	Atrazine Desethyl	19.5	LCS	P	0 - 30
LFB	Azinphos Methyl	24.2	LCS	P	0 - 30
LFB	Bromacil	2.61	LCS	P	0 - 30
LFB	Butylate	21.3	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.36	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	13.3	LCS	P	0 - 30
LFB	Cyanazine	13.3	LCS	P	0 - 30
LFB	Demeton	19.6	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P325833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	6.47	LCS	P	0 - 30
LFB	Disulfoton	21.9	LCS	P	0 - 30
LFB	EPTC	22.6	LCS	P	0 - 30
LFB	Ethion	2.03	LCS	P	0 - 30
LFB	Ethoprop	18.3	LCS	P	0 - 30
LFB	Fenamiphos	13.2	LCS	P	0 - 30
LFB	Fipronil	1.43	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.12	LCS	P	0 - 30
LFB	Fipronil Sulfone	9.97	LCS	P	0 - 30
LFB	Fonofos	18.3	LCS	P	0 - 30
LFB	Hexazinone	1.41	LCS	P	0 - 30
LFB	Malathion	7.00	LCS	P	0 - 30
LFB	Metalaxyl	18.2	LCS	P	0 - 30
LFB	Metolachlor	1.25	LCS	P	0 - 30
LFB	Metribuzin	19.5	LCS	P	0 - 30
LFB	Mevinphos	27.6	LCS	P	0 - 30
LFB	Molinate	18.5	LCS	P	0 - 30
LFB	Norflurazon	6.39	LCS	P	0 - 30
LFB	Parathion Ethyl	0.125	LCS	P	0 - 30
LFB	Parathion Methyl	8.30	LCS	P	0 - 30
LFB	Pendimethalin	1.25	LCS	P	0 - 30
LFB	Phorate	32.0	LCS	F	0 - 30
LFB	Prometon	16.8	LCS	P	0 - 30
LFB	Prometryn	12.4	LCS	P	0 - 30
LFB	Simazine	5.38	LCS	P	0 - 30
LFB	Terbufos	19.2	LCS	P	0 - 30
LFB	Terbutylazine	0.753	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P326163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900816	Aldrin	25.0	Spike	P	0 - 30
1900816	Alpha-BHC	12.1	Spike	P	0 - 30
1900816	Alpha-Chlordane	22.5	Spike	P	0 - 30
1900816	Beta-BHC	4.70	Spike	P	0 - 30
1900816	Carbophenothion	24.5	Spike	P	0 - 30
1900816	Chlorothalonil	33.1	Spike	F	0 - 30
1900816	Cypermethrin	25.8	Spike	P	0 - 30
1900816	DDD-p,p'	21.4	Spike	P	0 - 30
1900816	DDE-p,p'	24.6	Spike	P	0 - 30
1900816	DDT-p,p'	22.3	Spike	P	0 - 30
1900816	Delta-BHC	13.3	Spike	P	0 - 30
1900816	Dicofol	8.49	Spike	P	0 - 30
1900816	Dieldrin	16.6	Spike	P	0 - 30
1900816	Endosulfan I	22.4	Spike	P	0 - 30
1900816	Endosulfan II	22.3	Spike	P	0 - 30
1900816	Endosulfan Sulfate	9.56	Spike	P	0 - 30
1900816	Endrin	23.2	Spike	P	0 - 30
1900816	Endrin Aldehyde	15.8	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P326163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900816	Endrin Ketone	23.2	Spike	P	0 - 30
1900816	Gamma-BHC	8.04	Spike	P	0 - 30
1900816	Gamma-Chlordane	23.5	Spike	P	0 - 30
1900816	Heptachlor	24.7	Spike	P	0 - 30
1900816	Heptachlor Epoxide	16.3	Spike	P	0 - 30
1900816	Methoxychlor	13.4	Spike	P	0 - 30
1900816	Mirex	28.6	Spike	P	0 - 30
1900816	Permethrin	30.6	Spike	F	0 - 30
1900816	Trifluralin	19.3	Spike	P	0 - 30
LFB	Aldrin	7.37	LCS	P	0 - 30
LFB	Alpha-BHC	2.60	LCS	P	0 - 30
LFB	Alpha-Chlordane	8.36	LCS	P	0 - 30
LFB	Beta-BHC	9.40	LCS	P	0 - 30
LFB	Carbophenothion	0.843	LCS	P	0 - 30
LFB	Chlorothalonil	50.6	LCS	F	0 - 30
LFB	Cypermethrin	9.08	LCS	P	0 - 30
LFB	DDD-p,p'	4.45	LCS	P	0 - 30
LFB	DDE-p,p'	5.65	LCS	P	0 - 30
LFB	DDT-p,p'	3.80	LCS	P	0 - 30
LFB	Delta-BHC	16.2	LCS	P	0 - 30
LFB	Dicofol	20.4	LCS	P	0 - 30
LFB	Dieldrin	13.2	LCS	P	0 - 30
LFB	Endosulfan I	1.93	LCS	P	0 - 30
LFB	Endosulfan II	3.91	LCS	P	0 - 30
LFB	Endosulfan Sulfate	3.15	LCS	P	0 - 30
LFB	Endrin	1.29	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.17	LCS	P	0 - 30
LFB	Endrin Ketone	3.82	LCS	P	0 - 30
LFB	Gamma-BHC	1.14	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.53	LCS	P	0 - 30
LFB	Heptachlor	5.35	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.03	LCS	P	0 - 30
LFB	Methoxychlor	0.932	LCS	P	0 - 30
LFB	Mirex	3.76	LCS	P	0 - 30
LFB	Permethrin	10.4	LCS	P	0 - 30
LFB	Trifluralin	4.36	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P326163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901314	Chlordane	3.23	Spike	P	0 - 30
1901314	Toxaphene	8.59	Spike	P	0 - 30
LFB	Chlordane	5.50	LCS	P	0 - 30
LFB	Toxaphene	8.84	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P325694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900888	Sucralose	3.15	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P325788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901499	Pyraclostrobin	11.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P325790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900995	Glyphosate	4.44	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P325711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900707	Color (true)	0.731	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P325879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900626	Total Alkalinity	0.199	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P325989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900702	TDS	2.35	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P325881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900626	Fluoride	4.43	Spike	F	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P326022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900630	Organic Carbon	0.159	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P325543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899967	2,4-D	2.33	Spike	P	0 - 30
1899967	Acetaminophen	31.9	Spike	F	0 - 30
1899967	Bentazon	4.78	Spike	P	0 - 30
1899967	Carbamazepine	5.55	Spike	P	0 - 30
1899967	Diuron	14.1	Spike	P	0 - 30
1899967	Fenuron	6.15	Spike	P	0 - 30
1899967	Fluridone	8.60	Spike	P	0 - 30
1899967	Imidacloprid	1.60	Spike	P	0 - 30
1899967	Linuron	10.6	Spike	P	0 - 30
1899967	MCP	9.86	Spike	P	0 - 30
1899967	Primidone	17.6	Spike	P	0 - 30
1899967	Triclopyr	10.4	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: 1900692
Field Sample ID: G4CE0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	124	P	30 - 150
EPA 8321B	Carbamazepine-d10	77.5	P	30 - 160
EPA 8321B	Diuron-d6	98.1	P	30 - 160
EPA 8321B	Diuron-d6	75.6	P	30 - 150
EPA 8321B	Glyphosate 13C 15N	111	P	40 - 150
EPA 8321B	Primidone-d5	83.6	P	30 - 150
EPA 8321B	Sucralose-d6	85.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	84.6	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	124	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	77.5	P	30 - 160
USGS O-2060-01	Diuron-d6	98.1	P	30 - 160
USGS O-2060-01	Diuron-d6	75.6	P	30 - 150
USGS O-2060-01	Primidone-d5	83.6	P	30 - 150

Lab Sample ID: 1900694
Field Sample ID: G4CE0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	54.9	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	46.2	P	31 - 111
EPA 8276	Decachlorobiphenyl	56.8	P	41 - 106

Lab Sample ID: 1900695
Field Sample ID: G4CE0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	72.0	P	62 - 132

Quality Assurance Report Surrogates

Lab Sample ID: 1900695
 Field Sample ID: G4CE0135

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	103	P	72 - 127

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
 Run ID: A76628
 Included Lab Sample IDs: 1900685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	99.0	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A76632
 Included Lab Sample IDs: 1900685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Run ID: A76634
 Included Lab Sample IDs: 1900687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A76646
 Included Lab Sample IDs: 1900686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Run ID: A76666
 Included Lab Sample IDs: 1900686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	109	107	P/P	90 - 110

Reference Method: USGS O-2060-01
 Run ID: A76673
 Included Lab Sample IDs: 1900692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	87.2	87.6	P/P	50 - 150
Acetaminophen	95.2	97.6	P/P	60 - 150
Bentazon	88.4	91.6	P/P	50 - 150
Carbamazepine	90.8	97.6	P/P	60 - 150
Diuron	92.0	92.8	P/P	60 - 150
Fenuron	96.4	100	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A76673

Included Lab Sample IDs: 1900692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	97.2	102	P/P	60 - 160
Imidacloprid	89.6	97.6	P/P	60 - 150
Linuron	92.4	95.2	P/P	60 - 150
MCPP	97.6	95.2	P/P	50 - 150
Primidone	87.2	84.4	P/P	60 - 150
Triclopyr	95.6	92.4	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76683

Included Lab Sample IDs: 1900686

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76684

Included Lab Sample IDs: 1900686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.7	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76685

Included Lab Sample IDs: 1900685

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

Reference Method: SM 4500 F-C-97

Run ID: A76685

Included Lab Sample IDs: 1900685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	95.5	97.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A76722

Included Lab Sample IDs: 1900692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	99.6	93.4	P/P	70 - 160

Reference Method: EPA 8321B

Run ID: A76745

Included Lab Sample IDs: 1900692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	67.8	66.4	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00
Run ID: A76775
Included Lab Sample IDs: 1900686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.4	90.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A76818
Included Lab Sample IDs: 1900696

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A76847
Included Lab Sample IDs: 1900696

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

Reference Method: EPA 8270D
Run ID: A76862
Included Lab Sample IDs: 1900694

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.7		P	80 - 120
Alpha-BHC	103		P	80 - 120
Alpha-Chlordane	95.6		P	80 - 120
Beta-BHC	105		P	80 - 120
Carbophenothion	89.7		P	80 - 120
Chlorothalonil	128*		F	80 - 120
Cypermethrin	100		P	80 - 120
DDD-p,p'	96.0		P	80 - 120
DDE-p,p'	97.8		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	118		P	80 - 120
Dicofol	85.2		P	80 - 120
Dieldrin	97.1		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	102		P	80 - 120
Endrin	94.2		P	80 - 120
Endrin Aldehyde	85.8		P	80 - 120
Endrin Ketone	96.7		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	98.0		P	80 - 120
Heptachlor	92.2		P	80 - 120
Heptachlor Epoxide	95.2		P	80 - 120
Methoxychlor	109		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	93.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A76862
Included Lab Sample IDs: 1900694

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Trifluralin	99.1		P	80 - 120

Reference Method: EPA 8321B
Run ID: A76863
Included Lab Sample IDs: 1900692

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	98.4	89.6	P/P	60 - 150

Reference Method: EPA 8276
Run ID: A76874
Included Lab Sample IDs: 1900694

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	105		P	80 - 120
Toxaphene	99.5		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76907
Included Lab Sample IDs: 1900695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.3		P	80 - 120
Alachlor	99.3		P	80 - 120
Ametryn	101		P	80 - 120
Atrazine	104		P	80 - 120
Atrazine Desethyl	100		P	80 - 120
Azinphos Methyl	97.4		P	80 - 120
Bromacil	110		P	80 - 120
Butylate	99.2		P	80 - 120
Chlorpyrifos Ethyl	98.1		P	80 - 120
Chlorpyrifos Methyl	98.5		P	80 - 120
Cyanazine	99.2		P	80 - 120
Demeton	95.9		P	80 - 120
Diazinon	100		P	80 - 120
Disulfoton	95.2		P	80 - 120
EPTC	100		P	80 - 120
Ethion	96.0		P	80 - 120
Ethoprop	98.8		P	80 - 120
Fenamiphos	98.5		P	80 - 120
Fipronil	98.3		P	80 - 120
Fipronil Sulfide	100		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fonofos	99.1		P	80 - 120
Hexazinone	99.0		P	80 - 120
Malathion	95.8		P	80 - 120
Metaxyl	100		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	88.9		P	80 - 120
Molinate	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A76907
 Included Lab Sample IDs: 1900695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Norflurazon	93.9		P	80 - 120
Parathion Ethyl	95.0		P	80 - 120
Parathion Methyl	98.8		P	80 - 120
Pendimethalin	98.0		P	80 - 120
Phorate	96.8		P	80 - 120
Prometon	98.7		P	80 - 120
Prometryn	98.6		P	80 - 120
Terbufos	96.6		P	80 - 120
Terbuthylazine	98.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A76969
 Included Lab Sample IDs: 1900696

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	94.1	93.3	P/P	90 - 110
Cadmium	97.4	97.5	P/P	90 - 110
Chromium	97.0	97.1	P/P	90 - 110
Copper	91.4	91.5	P/P	90 - 110
Lead	93.8	94.6	P/P	90 - 110
Nickel	91.5	91.8	P/P	90 - 110
Silver	97.5	97.6	P/P	90 - 110

Reference Method: EPA 8270D
 Run ID: A77010
 Included Lab Sample IDs: 1900695

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Simazine	92.5		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
 Run ID: A77076
 Included Lab Sample IDs: 1900685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.1	97.5	P/P	90 - 110
Sulfate	99.8	103	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.906	
EPA 200.7 Rev. 4.4	Calcium	104	98.6	107		3.19
	Iron	107	107	109 102		5.89

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision SMP	MS
EPA 200.7 Rev. 4.4	Magnesium	113		108	112	102		6.00
	Potassium	102		101	95.6			3.76
	Sodium	103		104	105			3.54
	Zinc	98.7		101	103	101		1.28
EPA 200.8 Rev. 5.4	Arsenic	93.3		99.0	100	94.6		1.01
	Cadmium	97.7		98.3	98.9	99.0		0.552
	Chromium	94.8		90.3	89.5	92.1		0.886
	Copper	88.3		87.6	86.3	85.4		1.41
	Lead	92.8		99.1	98.2	95.2		0.921
	Nickel	91.7		90.1	89.4	88.7		0.712
	Silver	92.9		94.7	95.8	97.1		1.17
EPA 300.0 Rev. 2.1	Chloride	101		103	101		0.798	
	Sulfate	98.4		101	99.1		0.523	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2		99.0	100			0.575
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.3		93.2	95.1			1.71
EPA 353.2 Rev. 2.0	NO2NO3-N	105		106	105			0.475
EPA 365.1 Rev. 2.0	Total-P	106						2.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.8		101	102			1.57
EPA 8270D	Acetochlor	92.7	86.9	100	101	6.48		0.235
	Alachlor	90.4	87.6	104	106	3.09		1.81
	Aldrin	52.5	56.5	57.3	73.6	7.37		25.0
	Alpha-BHC	80.1	82.2	81.7	92.2	2.60		12.1
	Alpha-Chlordane	81.7	75.1	67.6	84.7	8.36		22.5
	Ametryn	107	96.7	145	147	10.3		0.894
	Atrazine	98.8	97.8	103	103	0.989		0.0496
	Atrazine Desethyl	70.8	58.2	71.3	47.6	19.5		39.9
	Azinphos Methyl	145	114	161	163	24.2		1.49
	Beta-BHC	91.6	83.4	87.1	91.3	9.40		4.70
	Bromacil	70.5	72.4	89.2	90.4	2.61		1.37
	Butylate	64.7	52.2	55.3	52.1	21.3		5.99
	Carbophenothion	44.2	43.8	89.2	114	0.843		24.5
	Chlorothalonil	68.5	40.9	53.4	74.6	50.6		33.1
	Chlorpyrifos Ethyl	91.5	85.9	89.5	86.6	6.36		3.24
	Chlorpyrifos Methyl	96.5	84.4	93.0	96.5	13.3		3.69
	Cyanazine	107	93.6	98.9	103	13.3		4.41
	Cypermethrin	121	132	98.9	128	9.08		25.8
	DDD-p,p'	88.2	92.2	74.8	92.8	4.45		21.4
	DDE-p,p'	76.7	81.2	66.4	85.1	5.65		24.6
	DDT-p,p'	81.2	84.4	71.5	89.4	3.80		22.3
	Delta-BHC	103	121	96.0	110	16.2		13.3
	Demeton	98.8	81.1	103	106	19.6		2.49
	Diazinon	93.0	87.2	107	108	6.47		1.15
	Dicofol	45.3	55.6	43.0	46.8	20.4		8.49
	Dieldrin	70.6	80.6	77.1	91.1	13.2		16.6
	Disulfoton	89.1	71.5	89.8	92.3	21.9		2.69
	Endosulfan I	86.3	84.7	74.5	93.3	1.93		22.4
	Endosulfan II	95.0	91.4	79.3	99.2	3.91		22.3
	Endosulfan Sulfate	84.3	81.7	87.3	96.0	3.15		9.56
	Endrin	80.1	81.2	67.8	85.6	1.29		23.2
	Endrin Aldehyde	77.3	81.4	66.6	78.1	5.17		15.8
	Endrin Ketone	73.6	70.9	71.2	89.9	3.82		23.2
	EPTC	63.8	50.8	52.7	52.7	22.6		0.0211
	Ethion	94.8	92.9	100	101	2.03		1.10
	Ethoprop	97.8	81.4	112	116	18.3		3.38

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						SMP	MS
EPA 8270D	Fenamiphos	106	92.4	94.1	98.0	13.2	4.01
	Fipronil	92.6	93.9	91.8	92.3	1.43	0.514
	Fipronil Sulfide	86.4	89.1	79.8	81.1	3.12	1.65
	Fipronil Sulfone	75.6	83.6	66.4	68.4	9.97	3.02
	Fonofos	91.9	76.5	104	104	18.3	0.396
	Gamma-BHC	87.0	88.0	101	92.8	1.14	8.04
	Gamma-Chlordane	75.6	78.3	67.2	85.1	3.53	23.5
	Heptachlor	71.1	75.0	64.6	82.8	5.35	24.7
	Heptachlor Epoxide	76.6	79.0	76.1	89.6	3.03	16.3
	Hexazinone	88.5	89.8	96.3	97.5	1.41	1.09
	Malathion	103	95.9	101	104	7.00	2.82
	Metalaxyl	87.0	72.5	90.4	90.3	18.2	0.142
	Methoxychlor	95.0	94.1	89.4	102	0.932	13.4
	Metolachlor	91.3	90.2	99.1	98.3	1.25	0.769
	Metribuzin	120	98.5	116	114	19.5	1.94
	Mevinphos	97.7	74.1	108	111	27.6	2.86
	Mirex	63.8	61.5	59.5	79.4	3.76	28.6
	Molinate	68.7	57.1	66.3	65.2	18.5	1.65
	Norflurazon	92.1	86.4	87.5	87.3	6.39	0.258
	Parathion Ethyl	95.3	95.5	101	100	0.125	1.06
	Parathion Methyl	103	94.8	108	109	8.30	0.524
	Pendimethalin	90.2	89.1	98.3	98.6	1.25	0.210
	Permethrin	100	111	78.8	107	10.4	30.6
	Phorate	115	83.1	115	109	32.0	5.40
	Prometon	102	85.8	117	116	16.8	0.593
	Prometryn	102	90.4	91.6	90.6	12.4	1.07
	Simazine	97.3	92.2	93.4	98.3	5.38	4.32
	Terbufos	91.6	75.5	107	106	19.2	0.876
	Terbuthylazine	92.4	91.7	99.4	97.9	0.753	1.58
	Trifluralin	99.7	95.4	109	133	4.36	19.3
EPA 8276	Chlordane	87.8	92.8	89.0	86.2	5.50	3.23
	Toxaphene	90.3	98.7	98.2	90.1	8.84	8.59
EPA 8321B	Glyphosate	91.2		101	97.0		4.44
	Pyraclostrobin	47.2		89.6	101		11.8
	Sucralose	76.7		99.0	68.0		3.15
SM 2120 B	Color (true)					0.731	
SM 2320 B-97	Total Alkalinity	103				0.199	
SM 2540 C-97	TDS					2.35	
SM 4500 F-C-97	Fluoride	95.8		93.6	99.3		4.43
SM 5310 B-00	Organic Carbon	97.4		96.8	97.1		0.159
USGS O-2060-01	2,4-D	70.2		69.4	67.8		2.33
	Acetaminophen	92.6		57.4	79.2		31.9
	Bentazon	66.0		28.6	30.0		4.78
	Carbamazepine	85.6		52.6	55.6		5.55
	Diuron	87.0		47.0	40.8		14.1
	Fenuron	78.2		40.2	37.8		6.15
	Fluridone	82.4		53.4	58.2		8.60
	Imidacloprid	75.4		99.4	101		1.60
	Linuron	76.4		60.6	67.4		10.6
	MCPP	83.6		54.0	59.6		9.86
	Primidone	72.4		52.8	63.0		17.6
	Triclopyr	76.6		60.2	66.8		10.4

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1900685
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1900696
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1900696
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1900685
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1900685
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1900686
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1900686
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1900686
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1900686
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1900687
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1900694
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1900695
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1900694
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1900692
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1900692
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1900692
SM 2120 B / E31780	True Color measured at 450 nm	1900685
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1900685
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1900685
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1900685
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1900685
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1900686
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1900692
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1900692

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	05/23/2017			05/23/2017 15:59	Sima Feizi	1900685
EPA 200.7 Rev. 4.4	05/23/2017	05/25/2017	Elliott D. Healy	06/01/2017	Betina Topolski	1900696
	05/23/2017	05/25/2017	Elliott D. Healy	06/02/2017	Betina Topolski	1900696
EPA 200.8 Rev. 5.4	05/23/2017	06/07/2017	Elliott D. Healy	06/08/2017	Robert K Palmer	1900696
EPA 300.0 Rev. 2.1	05/23/2017			06/12/2017	Julia Storbeck	1900685
EPA 350.1 Rev. 2.0	05/23/2017			05/25/2017	Julia Storbeck	1900686
EPA 351.2 Rev. 2.0	05/23/2017	05/24/2017	Adrian Shelby	05/25/2017	Joseph Suarez	1900686
EPA 353.2 Rev. 2.0	05/23/2017			05/24/2017	Beverly Y. Sanders	1900686
EPA 365.1 Rev. 2.0	05/23/2017	05/24/2017	Vijayalakshmi Reddy	05/25/2017	Lipi Saha	1900686
EPA 365.1 Rev. 2.0 dissolved	05/23/2017			05/23/2017 15:06	Anthony C. Onicha	1900687
EPA 8270D	05/23/2017	05/26/2017	Fe-Val Siddell	06/01/2017	Marek Topolski	1900695
	05/23/2017	05/26/2017	Fe-Val Siddell	06/08/2017	Marek Topolski	1900695
	05/23/2017	05/26/2017	Rasheda Ghaffari	06/01/2017	Marek Topolski	1900694
EPA 8276	05/23/2017	05/26/2017	Rasheda Ghaffari	06/02/2017	John P. Burgos	1900694
EPA 8321B	05/23/2017	05/26/2017	Fe-Val Siddell	05/31/2017	Juyoung Kim	1900692
	05/23/2017	05/26/2017	Mohammad Ghaffari	05/26/2017	Mohammad Ghaffari	1900692
	05/23/2017	05/27/2017	Mohammad Ghaffari	05/27/2017	Mohammad Ghaffari	1900692
SM 2120 B	05/23/2017			05/23/2017 14:52	Tanya Welborn	1900685
SM 2320 B-97	05/23/2017			05/26/2017	Dale L. Simmons	1900685
SM 2540 C-97	05/23/2017			05/24/2017	Yijie Li	1900685
SM 2540 D-97	05/23/2017			05/24/2017	Yijie Li	1900685
SM 4500 F-C-97	05/23/2017			05/26/2017	Dale L. Simmons	1900685
SM 5310 B-00	05/23/2017			05/30/2017	Julie Michelle Frank	1900686
USGS O-2060-01	05/23/2017	05/24/2017	Hoor Shaik	05/26/2017	Juyoung Kim	1900692