

Chemical Analysis Report

TLH-ROC-2017-12-05-03

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

Event Description: **SMP**
Request ID: **RQ-2017-12-04-68**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Curtis Musson

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 22-DEC-2017 14:48

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored 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: Horsehole Creek 50 meters east of US 19/98

Collection Date/Time: 12/04/2017 16:50

Field ID: G1TLHR0077

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950926	EPA 180.1 Rev. 2.0	Turbidity	3.2	A	NTU	P336517	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P336534	
		Sulfate	2.2		mg SO4/L	P336536	
	SM 2120 B	Color (true)	240		PCU	P336508	
	SM 2320 B-97	Total Alkalinity	63		mg CaCO3/L	P336989	
	SM 2540 C-97	TDS	139		mg/L	P336956	
	SM 2540 D-97	TSS	6	I	mg/L	P337095	
	SM 4500 F-C-97	Fluoride	0.045	I	mg F/L	P336992	
1950927	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P336936	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P336755	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P336500	
	EPA 365.1 Rev. 2.0	Total-P	0.072		mg P/L	P336733	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P336704	
1950928	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P336439	
1950930	EPA 8321B	Glyphosate**	0.10	U	ug/L	P336449	
		Pyraclostrobin**	0.0020	UJ	ug/L	P336448	MS
		Sucralose**	0.10		ug/L	P336428	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P336290	
		Diuron	8.0E-04	U	ug/L	P336290	
		Fenuron	0.0080	U	ug/L	P336290	
		Imidacloprid	8.0E-04	U	ug/L	P336290	
		Bentazon	8.0E-04	U	ug/L	P336290	
		Linuron	0.0040	U	ug/L	P336290	
		Acetaminophen**	0.0080	U	ug/L	P336290	
		MCP	0.0020	U	ug/L	P336290	
		Carbamazepine**	4.0E-04	U	ug/L	P336290	
		Triclopyr**	0.0040	U	ug/L	P336290	
		Primidone**	0.0040	U	ug/L	P336290	
		Fluridone**	4.0E-04	U	ug/L	P336290	
	EPA 8270D	Aldrin	5.0	U	ng/L	P336458	
		Alpha-BHC	2.5	U	ng/L	P336458	
		Beta-BHC	5.0	UJ	ng/L	P336458	RPD
		Delta-BHC	5.0	U	ng/L	P336458	
		Gamma-BHC	5.0	U	ng/L	P336458	
		Carbophenothion	5.0	U	ng/L	P336458	
		Chlorothalonil	2.5	UJ	ng/L	P336458	RPD
		Cypermethrin	25	U	ng/L	P336458	
		DDD-p,p'	3.7	U	ng/L	P336458	
		DDE-p,p'	3.7	U	ng/L	P336458	
		DDT-p,p'	3.7	UJ	ng/L	P336458	MS
		Dieldrin	5.0	U	ng/L	P336458	
		Endosulfan I	5.0	U	ng/L	P336458	
		Endosulfan II	5.0	U	ng/L	P336458	

Field ID: G1TLHR0077

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950931	EPA 8270D	Endosulfan Sulfate	2.5	U	ng/L	P336458	
		Endrin	2.5	U	ng/L	P336458	
		Endrin Aldehyde	2.5	U	ng/L	P336458	
		Heptachlor	1.9	U	ng/L	P336458	
		Heptachlor Epoxide	2.5	U	ng/L	P336458	
		Methoxychlor	5.0	U	ng/L	P336458	
		Mirex	2.5	U	ng/L	P336458	
		Permethrin	12	UJ	ng/L	P336458	RPD
		Trifluralin	1.2	U	ng/L	P336458	
		Alpha-Chlordane	1.2	U	ng/L	P336458	
		Gamma-Chlordane	1.2	U	ng/L	P336458	
		Endrin Ketone	2.5	U	ng/L	P336458	
		Dicofol	37	U	ng/L	P336458	
		Chlordane**	3.1	U	ng/L	P336458	
		Toxaphene**	16	U	ng/L	P336458	
1950932	EPA 8270D	Alachlor	0.28	U	ng/L	P336632	
		Ametryn	0.37	U	ng/L	P336632	
		Atrazine	0.28	U	ng/L	P336632	
		Atrazine Desethyl	1.7	UJ	ng/L	P336632	LCS, MS
		Azinphos Methyl	2.5	U	ng/L	P336632	
		Bromacil	0.56	U	ng/L	P336632	
		Butylate	0.45	UJ	ng/L	P336632	RPD
		Chlorpyrifos Ethyl	0.28	U	ng/L	P336632	
		Chlorpyrifos Methyl	0.11	U	ng/L	P336632	
		Demeton	2.3	UJ	ng/L	P336632	RPD
		Diazinon	0.14	U	ng/L	P336632	
		Disulfoton	0.56	U	ng/L	P336632	
		EPTC	1.4	UJ	ng/L	P336632	RPD
		Ethion	0.17	U	ng/L	P336632	
		Ethoprop	0.11	U	ng/L	P336632	
		Fenamiphos	0.28	UJ	ng/L	P336632	MS, RPD
		Fipronil	0.28	U	ng/L	P336632	
		Fipronil Sulfide	0.17	U	ng/L	P336632	
		Fipronil Sulfone	0.17	U	ng/L	P336632	
		Hexazinone	0.56	U	ng/L	P336632	
		Malathion	0.39	U	ng/L	P336632	
		Metribuzin	0.23	UJ	ng/L	P336632	LCS, MS
		Mevinphos	0.56	U	ng/L	P336632	
		Molinate	0.34	UJ	ng/L	P336632	RPD
		Norflurazon	0.56	U	ng/L	P336632	
		Pendimethalin	1.1	U	ng/L	P336632	
		Phorate	0.28	U	ng/L	P336632	
		Prometon	1.0	U	ng/L	P336632	
		Prometryn	0.23	U	ng/L	P336632	
		Simazine	0.56	U	ng/L	P336632	

Field ID: G1TLHR0077

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950932	EPA 8270D	Terbufos	0.11	U	ng/L	P336632	
		Terbuthylazine	0.48	U	ng/L	P336632	
		Fonofos	0.23	U	ng/L	P336632	
		Metalaxyl	0.28	U	ng/L	P336632	
		Metolachlor	0.28	U	ng/L	P336632	
		Acetochlor	0.28	U	ng/L	P336632	
		Cyanazine	0.56	U	ng/L	P336632	
		Parathion Ethyl	0.28	U	ng/L	P336632	
		Parathion Methyl	0.28	U	ng/L	P336632	
1950933	EPA 200.7 Rev. 4.4	Calcium	26.4		mg/L	P336550	
		Iron	880		ug/L	P336550	
		Magnesium	3.56		mg/L	P336550	
		Potassium	0.30	U	mg/L	P336550	
		Sodium	6.4		mg/L	P336550	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P336550	
		Arsenic	0.66		ug/L	P336550	
		Cadmium	0.020	U	ug/L	P336550	
		Chromium	0.62	I	ug/L	P336550	
		Copper	0.32	I	ug/L	P336550	
		Lead	0.22		ug/L	P336550	
		Nickel	0.42	I	ug/L	P336550	
		Silver	0.010	U	ug/L	P336550	

Ref. Method and Comment:

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

EPA 8321B: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes.

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P336517

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P336550

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P336550

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: P336534

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336536

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336936

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336755

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336500

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336733

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P336439

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P336458

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

Reference Method: EPA 8270D
Batch ID: P336632

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P336632

Component	Result	Code	Units
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P336458

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

Reference Method: EPA 8321B

Batch ID: P336428

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P336448

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B

Batch ID: P336449

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L

Reference Method: SM 2120 B

Batch ID: P336508

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P336989

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

Reference Method: SM 2540 C-97
Batch ID: P336956

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P337095

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P336992

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P336704

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

Reference Method: USGS O-2060-01
Batch ID: P336290

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	8.0E-04	U	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: P336550

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P336550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	102		P	85 - 115
Sodium	105		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P336550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	101		P	85 - 115
Copper	99.4		P	85 - 115
Lead	100		P	85 - 115
Nickel	101		P	85 - 115
Silver	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P336534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	93.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P336536

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	93.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P336936

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P336755

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P336500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P336733

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P336733

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P336439

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

Reference Method: EPA 8270D

Batch ID: P336458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	61.5	62.7	P/P	26 - 88.0
Alpha-BHC	94.4	97.0	P/P	63 - 114
Alpha-Chlordane	98.7	94.5	P/P	56 - 117
Beta-BHC	114	108	P/P	57 - 138
Carbophenothion	92.1	87.7	P/P	36 - 148
Chlorothalonil	73.7	49.7	P/P	26 - 173
Cypermethrin	93.5	91.3	P/P	42 - 159
DDD-p,p'	106	102	P/P	62 - 126
DDE-p,p'	101	99.6	P/P	53 - 115
DDT-p,p'	98.9	99.2	P/P	54 - 117
Delta-BHC	118	114	P/P	68 - 158
Dicofol	96.8	95.5	P/P	25 - 114
Dieldrin	98.7	96.0	P/P	59 - 126
Endosulfan I	104	106	P/P	62 - 138
Endosulfan II	109	98.0	P/P	61 - 150
Endosulfan Sulfate	99.2	88.4	P/P	63 - 132
Endrin	101	96.9	P/P	49 - 148
Endrin Aldehyde	104	97.4	P/P	50 - 144
Endrin Ketone	96.8	92.0	P/P	66 - 122
Gamma-BHC	105	101	P/P	60 - 137
Gamma-Chlordane	97.1	92.2	P/P	54 - 113
Heptachlor	85.8	82.5	P/P	43 - 104
Heptachlor Epoxide	97.5	94.7	P/P	64 - 118
Methoxychlor	105	101	P/P	63 - 129
Mirex	84.8	81.2	P/P	40 - 96.0
Permethrin	89.4	90.8	P/P	51 - 123
Trifluralin	94.0	90.2	P/P	35 - 187

Reference Method: EPA 8270D

Batch ID: P336632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	103	106	P/P	78 - 118
Alachlor	109	112	P/P	77 - 119
Ametryn	107	81.5	P/P	61 - 136
Atrazine	101	105	P/P	73 - 120
Atrazine Desethyl	145	142	F/F	16 - 122
Azinphos Methyl	115	123	P/P	69 - 186
Bromacil	99.4	104	P/P	40 - 125
Butylate	44.3	52.1	P/P	32 - 87.0

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P336632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorpyrifos Ethyl	88.1	92.8	P/P	53 - 110
Chlorpyrifos Methyl	90.4	95.2	P/P	31 - 119
Cyanazine	221	210	P/P	36 - 224
Demeton	66.3	71.8	P/P	39 - 122
Diazinon	100	109	P/P	75 - 119
Disulfoton	90.4	104	P/P	42 - 139
EPTC	42.4	44.8	P/P	33 - 96.0
Ethion	88.7	67.9	P/P	63 - 127
Ethoprop	85.2	98.2	P/P	65 - 107
Fenamiphos	94.4	97.2	P/P	64 - 137
Fipronil	106	105	P/P	60 - 126
Fipronil Sulfide	89.7	92.9	P/P	58 - 124
Fipronil Sulfone	84.2	87.2	P/P	57 - 126
Fonofos	84.1	97.5	P/P	65 - 111
Hexazinone	86.0	85.1	P/P	46 - 151
Malathion	87.5	92.3	P/P	68 - 132
Metaxyl	104	107	P/P	51 - 132
Metolachlor	104	103	P/P	78 - 119
Metribuzin	199	188	F/F	58 - 148
Mevinphos	65.3	77.0	P/P	34 - 128
Molinate	68.0	76.8	P/P	44 - 101
Norflurazon	98.5	93.6	P/P	63 - 129
Parathion Ethyl	88.2	91.0	P/P	80 - 109
Parathion Methyl	95.2	102	P/P	74 - 125
Pendimethalin	98.6	108	P/P	48 - 134
Phorate	75.1	86.2	P/P	52 - 119
Prometon	87.3	90.0	P/P	69 - 124
Prometryn	97.7	101	P/P	66 - 124
Simazine	103	103	P/P	61 - 134
Terbufos	88.1	101	P/P	58 - 115
Terbutylazine	97.0	101	P/P	77 - 113

Reference Method: EPA 8276
Batch ID: P336458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	93.2	95.7	P/P	48 - 121
Toxaphene	114	111	P/P	43 - 135

Reference Method: EPA 8321B
Batch ID: P336428

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	112		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P336448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	141		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P336449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	131		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P336989

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P336992

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P336704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P336290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	85.6		P	40 - 150
Acetaminophen	104		P	30 - 150
Bentazon	58.7		P	30 - 150
Carbamazepine	109		P	40 - 150
Diuron	103		P	40 - 150
Fenuron	109		P	40 - 150
Fluridone	113		P	40 - 150
Imidacloprid	108		P	40 - 160
Linuron	104		P	40 - 150
MCPP	87.8		P	40 - 150
Primidone	109		P	40 - 150
Triclopyr	83.1		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P336550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950451	Iron	105		P	80 - 120
1950451	Magnesium	108		P	80 - 120
1950451	Potassium	104		P	80 - 120
1950451	Sodium	107		P	80 - 120
1950451	Zinc	103		P	80 - 120
1951294	Calcium	102		P	80 - 120
1951294	Iron	107	106	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P336550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1951294	Magnesium	104	104	P/P	80 - 120
1951294	Potassium	102	102	P/P	80 - 120
1951294	Sodium	102	103	P/P	80 - 120
1951294	Zinc	100	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P336550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950451	Arsenic	104		P	80 - 120
1950451	Cadmium	104		P	80 - 120
1950451	Chromium	98.4		P	80 - 120
1950451	Copper	95.8		P	80 - 120
1950451	Lead	100		P	80 - 120
1950451	Nickel	99.9		P	80 - 120
1950451	Silver	102		P	80 - 120
1951294	Arsenic	102	100	P/P	80 - 120
1951294	Cadmium	103	99.7	P/P	80 - 120
1951294	Chromium	98.8	97.3	P/P	80 - 120
1951294	Copper	95.5	94.2	P/P	80 - 120
1951294	Lead	100	97.6	P/P	80 - 120
1951294	Nickel	98.7	96.4	P/P	80 - 120
1951294	Silver	102	100	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950836	Chloride	92.2		P	90 - 110
1950903	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950836	Sulfate	93.6		P	90 - 110
1950903	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336936

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950907	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950907	Kjeldahl Nitrogen	93.9	94.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950927	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950972	Total-P	108	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P336439

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950912	O-Phosphate-P	97.6	98.6	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P336458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950931	Aldrin	72.2	72.9	P/P	22 - 97.0
1950931	Alpha-BHC	98.5	90.9	P/P	43 - 132
1950931	Alpha-Chlordane	84.4	82.8	P/P	36 - 126
1950931	Beta-BHC	91.9	65.3	P/P	41 - 150
1950931	Carbophenothion	91.8	68.9	P/P	13 - 196
1950931	Chlorothalonil	50.6	72.5	P/P	10 - 266
1950931	Cypermethrin	96.3	94.8	P/P	37 - 161
1950931	DDD-p,p'	87.4	94.4	P/P	44 - 131
1950931	DDE-p,p'	85.5	84.8	P/P	32 - 127
1950931	DDT-p,p'	105	129	P/F	45 - 116
1950931	Delta-BHC	94.3	94.6	P/P	50 - 201
1950931	Dicofol	71.1	72.1	P/P	10 - 100
1950931	Dieldrin	86.0	82.3	P/P	39 - 142
1950931	Endosulfan I	98.0	105	P/P	51 - 139
1950931	Endosulfan II	116	112	P/P	49 - 155
1950931	Endosulfan Sulfate	91.5	85.2	P/P	54 - 136
1950931	Endrin	88.8	91.3	P/P	38 - 141
1950931	Endrin Aldehyde	81.7	86.9	P/P	14 - 152
1950931	Endrin Ketone	87.8	97.5	P/P	60 - 128
1950931	Gamma-BHC	102	101	P/P	48 - 157
1950931	Gamma-Chlordane	83.2	81.9	P/P	35 - 123
1950931	Heptachlor	75.5	78.7	P/P	25 - 112
1950931	Heptachlor Epoxide	85.1	84.3	P/P	48 - 125
1950931	Methoxychlor	113	95.2	P/P	52 - 127
1950931	Mirex	83.5	79.4	P/P	25 - 108
1950931	Permethrin	92.1	129	P/P	46 - 133
1950931	Trifluralin	86.3	83.8	P/P	29 - 254

Reference Method: EPA 8270D
Batch ID: P336632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950932	Acetochlor	82.8	85.1	P/P	74 - 123
1950932	Alachlor	90.6	90.7	P/P	73 - 124

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P336632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950932	Ametryn	84.2	84.8	P/P	56 - 149
1950932	Atrazine	91.2	90.9	P/P	73 - 124
1950932	Atrazine Desethyl	113	141	F/F	12 - 103
1950932	Azinphos Methyl	89.1	93.7	P/P	60 - 202
1950932	Bromacil	70.5	89.0	P/P	42 - 133
1950932	Butylate	17.7	27.8	P/P	10 - 85.0
1950932	Chlorpyrifos Ethyl	71.5	67.9	P/P	53 - 113
1950932	Chlorpyrifos Methyl	70.6	72.3	P/P	40 - 115
1950932	Cyanazine	143	168	P/P	22 - 210
1950932	Demeton	82.7	113	P/P	17 - 149
1950932	Diazinon	84.6	86.8	P/P	72 - 124
1950932	Disulfoton	70.6	81.0	P/P	43 - 139
1950932	EPTC	15.6	23.8	P/P	10 - 86.0
1950932	Ethion	73.5	65.0	P/P	65 - 131
1950932	Ethoprop	73.1	81.7	P/P	59 - 110
1950932	Fenamiphos	92.6	165	P/F	57 - 138
1950932	Fipronil	82.1	92.4	P/P	40 - 130
1950932	Fipronil Sulfide	70.3	79.7	P/P	36 - 128
1950932	Fipronil Sulfone	62.2	78.6	P/P	16 - 145
1950932	Fonofos	70.9	76.4	P/P	60 - 112
1950932	Hexazinone	85.8	86.3	P/P	69 - 142
1950932	Malathion	73.8	75.0	P/P	68 - 132
1950932	Metalaxyl	75.2	82.6	P/P	66 - 118
1950932	Metolachlor	82.4	82.5	P/P	71 - 124
1950932	Metribuzin	168	188	F/F	61 - 140
1950932	Mevinphos	58.0	68.7	P/P	38 - 130
1950932	Molinate	28.0	38.6	P/P	23 - 99.0
1950932	Norflurazon	75.4	92.2	P/P	39 - 139
1950932	Parathion Ethyl	77.1	75.6	P/P	75 - 111
1950932	Parathion Methyl	81.0	81.1	P/P	64 - 130
1950932	Pendimethalin	92.8	91.8	P/P	26 - 173
1950932	Phorate	59.5	65.5	P/P	43 - 127
1950932	Prometon	76.5	80.6	P/P	50 - 144
1950932	Prometryn	69.1	76.9	P/P	69 - 126
1950932	Simazine	89.9	90.1	P/P	51 - 152
1950932	Terbufos	73.0	81.5	P/P	54 - 125
1950932	Terbutylazine	80.4	82.9	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P336458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1951219	Chlordane	71.4	76.1	P/P	44 - 134
1951219	Toxaphene	77.1	91.0	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P336428

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950864	Sucralose	115	115	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P336448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950930	Pyraclostrobin	140	156	P/F	40 - 150

Reference Method: EPA 8321B
 Batch ID: P336449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950930	Glyphosate	148	142	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P336992

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1951399	Fluoride	98.0	98.0	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P336704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950871	Organic Carbon	99.7	101	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P336290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950117	2,4-D	86.3	81.7	P/P	40 - 150
1950117	Acetaminophen	79.5	76.5	P/P	30 - 150
1950117	Bentazon	52.7	49.4	P/P	30 - 150
1950117	Carbamazepine	110	112	P/P	40 - 150
1950117	Diuron	95.5	101	P/P	40 - 150
1950117	Fenuron	104	109	P/P	40 - 150
1950117	Fluridone	96.4	103	P/P	40 - 150
1950117	Imidacloprid	141	141	P/P	40 - 160
1950117	Linuron	97.8	104	P/P	40 - 150
1950117	MCP	68.3	67.7	P/P	40 - 150
1950117	Primidone	118	121	P/P	40 - 150
1950117	Triclopyr	66.1	64.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P336517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950926	Turbidity	0.617	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P336550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1951294	Calcium	1.09	Spike	P	0 - 20
1951294	Iron	0.352	Spike	P	0 - 20
1951294	Magnesium	0.245	Spike	P	0 - 20
1951294	Potassium	0.0912	Spike	P	0 - 20
1951294	Sodium	0.542	Spike	P	0 - 20
1951294	Zinc	1.23	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P336550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1951294	Arsenic	2.03	Spike	P	0 - 20
1951294	Cadmium	2.92	Spike	P	0 - 20
1951294	Chromium	1.52	Spike	P	0 - 20
1951294	Copper	1.39	Spike	P	0 - 20
1951294	Lead	2.47	Spike	P	0 - 20
1951294	Nickel	2.42	Spike	P	0 - 20
1951294	Silver	2.31	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950903	Chloride	0.260	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950903	Sulfate	0.300	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336936

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950907	Ammonia-N	1.77	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950907	Kjeldahl Nitrogen	0.323	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P336500

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950927	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P336733

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950972	Total-P	6.77	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P336439

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950912	O-Phosphate-P	0.721	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P336458

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950931	Aldrin	0.902	Spike	P	0 - 30
1950931	Alpha-BHC	7.99	Spike	P	0 - 30
1950931	Alpha-Chlordane	2.00	Spike	P	0 - 30
1950931	Beta-BHC	33.8	Spike	F	0 - 30
1950931	Carbophenothion	28.5	Spike	P	0 - 30
1950931	Chlorothalonil	35.7	Spike	F	0 - 30
1950931	Cypermethrin	1.57	Spike	P	0 - 30
1950931	DDD-p,p'	7.70	Spike	P	0 - 30
1950931	DDE-p,p'	0.795	Spike	P	0 - 30
1950931	DDT-p,p'	20.8	Spike	P	0 - 30
1950931	Delta-BHC	0.370	Spike	P	0 - 30
1950931	Dicofol	1.34	Spike	P	0 - 30
1950931	Dieldrin	4.33	Spike	P	0 - 30
1950931	Endosulfan I	6.94	Spike	P	0 - 30
1950931	Endosulfan II	3.68	Spike	P	0 - 30
1950931	Endosulfan Sulfate	7.15	Spike	P	0 - 30
1950931	Endrin	2.80	Spike	P	0 - 30
1950931	Endrin Aldehyde	6.15	Spike	P	0 - 30
1950931	Endrin Ketone	10.5	Spike	P	0 - 30
1950931	Gamma-BHC	1.17	Spike	P	0 - 30
1950931	Gamma-Chlordane	1.67	Spike	P	0 - 30
1950931	Heptachlor	4.09	Spike	P	0 - 30
1950931	Heptachlor Epoxide	0.981	Spike	P	0 - 30
1950931	Methoxychlor	16.9	Spike	P	0 - 30
1950931	Mirex	5.03	Spike	P	0 - 30
1950931	Permethrin	33.7	Spike	F	0 - 30
1950931	Trifluralin	2.93	Spike	P	0 - 30
LFB	Aldrin	1.94	LCS	P	0 - 30
LFB	Alpha-BHC	2.72	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.30	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P336458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-BHC	5.56	LCS	P	0 - 30
LFB	Carbophenothion	4.88	LCS	P	0 - 30
LFB	Chlorothalonil	38.9	LCS	F	0 - 30
LFB	Cypermethrin	2.37	LCS	P	0 - 30
LFB	DDD-p,p'	3.09	LCS	P	0 - 30
LFB	DDE-p,p'	1.88	LCS	P	0 - 30
LFB	DDT-p,p'	0.280	LCS	P	0 - 30
LFB	Delta-BHC	3.65	LCS	P	0 - 30
LFB	Dicofol	1.42	LCS	P	0 - 30
LFB	Dieldrin	2.80	LCS	P	0 - 30
LFB	Endosulfan I	1.23	LCS	P	0 - 30
LFB	Endosulfan II	10.7	LCS	P	0 - 30
LFB	Endosulfan Sulfate	11.6	LCS	P	0 - 30
LFB	Endrin	4.17	LCS	P	0 - 30
LFB	Endrin Aldehyde	6.45	LCS	P	0 - 30
LFB	Endrin Ketone	5.17	LCS	P	0 - 30
LFB	Gamma-BHC	3.64	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.23	LCS	P	0 - 30
LFB	Heptachlor	3.90	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.97	LCS	P	0 - 30
LFB	Methoxychlor	3.99	LCS	P	0 - 30
LFB	Mirex	4.26	LCS	P	0 - 30
LFB	Permethrin	1.53	LCS	P	0 - 30
LFB	Trifluralin	4.15	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P336632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950932	Acetochlor	2.65	Spike	P	0 - 30
1950932	Alachlor	0.101	Spike	P	0 - 30
1950932	Ametryn	0.745	Spike	P	0 - 30
1950932	Atrazine	0.423	Spike	P	0 - 30
1950932	Atrazine Desethyl	22.3	Spike	P	0 - 30
1950932	Azinphos Methyl	5.02	Spike	P	0 - 30
1950932	Bromacil	23.3	Spike	P	0 - 30
1950932	Butylate	44.2	Spike	F	0 - 30
1950932	Chlorpyrifos Ethyl	5.10	Spike	P	0 - 30
1950932	Chlorpyrifos Methyl	2.39	Spike	P	0 - 30
1950932	Cyanazine	16.3	Spike	P	0 - 30
1950932	Demeton	30.6	Spike	F	0 - 30
1950932	Diazinon	2.62	Spike	P	0 - 30
1950932	Disulfoton	13.7	Spike	P	0 - 30
1950932	EPTC	41.6	Spike	F	0 - 30
1950932	Ethion	12.3	Spike	P	0 - 30
1950932	Ethoprop	11.0	Spike	P	0 - 30
1950932	Fenamiphos	56.0	Spike	F	0 - 30
1950932	Fipronil	11.8	Spike	P	0 - 30
1950932	Fipronil Sulfide	12.5	Spike	P	0 - 30
1950932	Fipronil Sulfone	23.3	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P336632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950932	Fonofos	7.55	Spike	P	0 - 30
1950932	Hexazinone	0.534	Spike	P	0 - 30
1950932	Malathion	1.56	Spike	P	0 - 30
1950932	Metalaxyl	9.41	Spike	P	0 - 30
1950932	Metolachlor	0.156	Spike	P	0 - 30
1950932	Metribuzin	10.8	Spike	P	0 - 30
1950932	Mevinphos	16.9	Spike	P	0 - 30
1950932	Molinate	32.0	Spike	F	0 - 30
1950932	Norflurazon	20.0	Spike	P	0 - 30
1950932	Parathion Ethyl	1.97	Spike	P	0 - 30
1950932	Parathion Methyl	0.207	Spike	P	0 - 30
1950932	Pendimethalin	1.03	Spike	P	0 - 30
1950932	Phorate	9.64	Spike	P	0 - 30
1950932	Prometon	5.21	Spike	P	0 - 30
1950932	Prometryn	10.7	Spike	P	0 - 30
1950932	Simazine	0.196	Spike	P	0 - 30
1950932	Terbufos	11.0	Spike	P	0 - 30
1950932	Terbutylazine	3.10	Spike	P	0 - 30
LFB	Acetochlor	2.62	LCS	P	0 - 30
LFB	Alachlor	3.07	LCS	P	0 - 30
LFB	Ametryn	27.5	LCS	P	0 - 30
LFB	Atrazine	3.59	LCS	P	0 - 30
LFB	Atrazine Desethyl	2.05	LCS	P	0 - 30
LFB	Azinphos Methyl	6.41	LCS	P	0 - 30
LFB	Bromacil	4.35	LCS	P	0 - 30
LFB	Butylate	16.2	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	5.17	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.12	LCS	P	0 - 30
LFB	Cyanazine	5.24	LCS	P	0 - 30
LFB	Demeton	7.87	LCS	P	0 - 30
LFB	Diazinon	8.41	LCS	P	0 - 30
LFB	Disulfoton	14.0	LCS	P	0 - 30
LFB	EPTC	5.56	LCS	P	0 - 30
LFB	Ethion	26.5	LCS	P	0 - 30
LFB	Ethoprop	14.2	LCS	P	0 - 30
LFB	Fenamiphos	2.89	LCS	P	0 - 30
LFB	Fipronil	1.16	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.52	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.55	LCS	P	0 - 30
LFB	Fonofos	14.8	LCS	P	0 - 30
LFB	Hexazinone	0.982	LCS	P	0 - 30
LFB	Malathion	5.44	LCS	P	0 - 30
LFB	Metalaxyl	3.44	LCS	P	0 - 30
LFB	Metolachlor	0.519	LCS	P	0 - 30
LFB	Metribuzin	5.55	LCS	P	0 - 30
LFB	Mevinphos	16.4	LCS	P	0 - 30
LFB	Molinate	12.1	LCS	P	0 - 30
LFB	Norflurazon	5.15	LCS	P	0 - 30
LFB	Parathion Ethyl	3.07	LCS	P	0 - 30
LFB	Parathion Methyl	6.60	LCS	P	0 - 30
LFB	Pendimethalin	9.47	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P336632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	13.8	LCS	P	0 - 30
LFB	Prometon	3.07	LCS	P	0 - 30
LFB	Prometryn	3.77	LCS	P	0 - 30
LFB	Simazine	0.140	LCS	P	0 - 30
LFB	Terbufos	13.5	LCS	P	0 - 30
LFB	Terbutylazine	4.19	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P336458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1951219	Chlordane	6.32	Spike	P	0 - 30
1951219	Toxaphene	14.6	Spike	P	0 - 30
LFB	Chlordane	2.66	LCS	P	0 - 30
LFB	Toxaphene	2.74	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P336428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950864	Sucralose	0.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P336448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950930	Pyraclostrobin	11.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P336449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950930	Glyphosate	3.55	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P336508

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950968	Color (true)	1.80	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P336989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1951399	Total Alkalinity	0.485	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P336956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950903	TDS	5.53	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P336992

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1951399	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P336704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950871	Organic Carbon	0.988	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P336290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950117	2,4-D	5.32	Spike	P	0 - 30
1950117	Acetaminophen	2.93	Spike	P	0 - 30
1950117	Bentazon	2.80	Spike	P	0 - 30
1950117	Carbamazepine	1.60	Spike	P	0 - 30
1950117	Diuron	5.30	Spike	P	0 - 30
1950117	Fenuron	4.15	Spike	P	0 - 30
1950117	Fluridone	4.52	Spike	P	0 - 30
1950117	Imidacloprid	0.0721	Spike	P	0 - 30
1950117	Linuron	5.99	Spike	P	0 - 30
1950117	MCP	0.952	Spike	P	0 - 30
1950117	Primidone	2.27	Spike	P	0 - 30
1950117	Triclopyr	2.33	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: 1950930
 Field Sample ID: G1TLHR0077

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.5	P	30 - 160
EPA 8321B	Diuron-d6	120	P	30 - 160
EPA 8321B	Diuron-d6	91.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1950930
Field Sample ID: G1TLHR0077

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	120	P	30 - 160
EPA 8321B	Diuron-d6	91.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	132	P	40 - 160
EPA 8321B	Primidone-d5	94.5	P	30 - 160
EPA 8321B	Primidone-d5	94.5	P	30 - 160
EPA 8321B	Sucralose-d6	71.4	P	40 - 160
EPA 8321B	Sucralose-d6	71.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	89.3	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	108	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	92.5	P	30 - 160
USGS O-2060-01	Diuron-d6	120	P	30 - 160
USGS O-2060-01	Diuron-d6	91.1	P	30 - 160
USGS O-2060-01	Primidone-d5	94.5	P	30 - 160
USGS O-2060-01	Sucralose-d6	71.4	P	40 - 160

Lab Sample ID: 1950931
Field Sample ID: G1TLHR0077

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	82.4	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	70.3	P	32 - 103
EPA 8276	Decachlorobiphenyl	78.8	P	31 - 100

Lab Sample ID: 1950932
Field Sample ID: G1TLHR0077

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	62.5	P	53 - 135
EPA 8270D	Simazine-d10	90.9	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A80693
Included Lab Sample IDs: 1950930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.8	88.4	P/P	50 - 150
Bentazon	102	90.0	P/P	50 - 150
MCP	95.6	106	P/P	50 - 150
Triclopyr	92.4	100	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A80719
Included Lab Sample IDs: 1950928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	98.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A80735

Included Lab Sample IDs: 1950926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	97.7	P/P	90 - 110
Sulfate	97.5	96.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A80739

Included Lab Sample IDs: 1950927

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

Reference Method: SM 2120 B

Run ID: A80742

Included Lab Sample IDs: 1950926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.6	98.4	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A80743

Included Lab Sample IDs: 1950926

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

Reference Method: EPA 8321B

Run ID: A80771

Included Lab Sample IDs: 1950930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	105	70.7	P/P	60 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80801

Included Lab Sample IDs: 1950933

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	101	P/P	90 - 110
Cadmium	100	99.6	P/P	90 - 110
Chromium	100	100	P/P	90 - 110
Copper	101	99.5	P/P	90 - 110
Lead	99.6	99.9	P/P	90 - 110
Nickel	100	99.7	P/P	90 - 110
Silver	99.7	99.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A80803

Included Lab Sample IDs: 1950930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	104	114	P/P	60 - 150
Pyraclostrobin	102	107	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A80804

Included Lab Sample IDs: 1950933

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	101	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Potassium	100	100	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	104	105	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A80808

Included Lab Sample IDs: 1950927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	99.5	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A80824

Included Lab Sample IDs: 1950930

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	101	99.2	P/P	60 - 150
Carbamazepine	109	110	P/P	60 - 150
Diuron	98.6	105	P/P	60 - 150
Fenuron	102	106	P/P	60 - 150
Fluridone	113	109	P/P	60 - 160
Imidacloprid	98.0	96.0	P/P	60 - 150
Linuron	106	116	P/P	60 - 150
Primidone	101	99.1	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A80855

Included Lab Sample IDs: 1950927

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80863

Included Lab Sample IDs: 1950927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.9	99.3	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A80868

Included Lab Sample IDs: 1950931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.0		P	80 - 120
Alpha-BHC	97.4		P	80 - 120
Alpha-Chlordane	97.6		P	80 - 120
Beta-BHC	105		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A80868
 Included Lab Sample IDs: 1950931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	90.5		P	80 - 120
Chlorothalonil	96.5		P	80 - 120
Cypermethrin	92.5		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	99.7		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	99.6		P	80 - 120
Dicofol	105		P	80 - 120
Dieldrin	98.8		P	80 - 120
Endosulfan I	91.9		P	80 - 120
Endosulfan II	107		P	80 - 120
Endosulfan Sulfate	98.5		P	80 - 120
Endrin	93.5		P	80 - 120
Endrin Aldehyde	91.9		P	80 - 120
Endrin Ketone	103		P	80 - 120
Gamma-BHC	91.4		P	80 - 120
Gamma-Chlordane	99.3		P	80 - 120
Heptachlor	93.4		P	80 - 120
Heptachlor Epoxide	99.2		P	80 - 120
Methoxychlor	106		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	95.6		P	80 - 120
Trifluralin	98.2		P	80 - 120

Reference Method: EPA 8276
 Run ID: A80885
 Included Lab Sample IDs: 1950931

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	108		P	80 - 120
Toxaphene	109		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A80886
 Included Lab Sample IDs: 1950927

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

Reference Method: SM 2320 B-97
 Run ID: A80909
 Included Lab Sample IDs: 1950926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.3	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
 Run ID: A80909
 Included Lab Sample IDs: 1950926

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

Reference Method: SM 4500 F-C-97

Run ID: A80909

Included Lab Sample IDs: 1950926

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

Reference Method: EPA 8270D

Run ID: A80919

Included Lab Sample IDs: 1950932

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	103		P	80 - 120
Atrazine Desethyl	112		P	80 - 120
Azinphos Methyl	91.7		P	80 - 120
Bromacil	95.4		P	80 - 120
Butylate	103		P	80 - 120
Chlorpyrifos Ethyl	97.0		P	80 - 120
Chlorpyrifos Methyl	98.3		P	80 - 120
Cyanazine	98.5		P	80 - 120
Demeton	98.9		P	80 - 120
Diazinon	101		P	80 - 120
Disulfoton	96.1		P	80 - 120
EPTC	102		P	80 - 120
Ethion	95.7		P	80 - 120
Ethoprop	99.7		P	80 - 120
Fenamiphos	94.0		P	80 - 120
Fipronil	99.9		P	80 - 120
Fipronil Sulfide	95.6		P	80 - 120
Fipronil Sulfone	93.8		P	80 - 120
Fonofos	96.4		P	80 - 120
Hexazinone	93.8		P	80 - 120
Malathion	93.7		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	99.0		P	80 - 120
Mevinphos	96.2		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	100		P	80 - 120
Parathion Ethyl	91.3		P	80 - 120
Parathion Methyl	90.8		P	80 - 120
Pendimethalin	101		P	80 - 120
Phorate	94.9		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	102		P	80 - 120
Simazine	100		P	80 - 120
Terbufos	96.3		P	80 - 120
Terbuthylazine	99.9		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							0.617	
EPA 200.7 Rev. 4.4	Calcium	104		102					1.09
	Iron	105		105	107	106			0.352
	Magnesium	109		108	104	104			0.245
	Potassium	102		104	102	102			0.0912
	Sodium	105		107	102	103			0.542
	Zinc	102		103	100	102			1.23
EPA 200.8 Rev. 5.4	Arsenic	103		104	102	100			2.03
	Cadmium	102		104	103	99.7			2.92
	Chromium	101		98.4	98.8	97.3			1.52
	Copper	99.4		95.8	95.5	94.2			1.39
	Lead	100		100	100	97.6			2.47
	Nickel	101		99.9	98.7	96.4			2.42
	Silver	102		102	102	100			2.31
EPA 300.0 Rev. 2.1	Chloride	93.0		104	92.2			0.260	
	Sulfate	93.3		103	93.6			0.300	
EPA 350.1 Rev. 2.0	Ammonia-N	103		101	103				1.77
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		93.9	94.2				0.323
EPA 353.2 Rev. 2.0	NO2NO3-N	105		101	101				0.0
EPA 365.1 Rev. 2.0	Total-P	102		108	101				6.77
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2		97.6	98.6				0.721
EPA 8270D	Acetochlor	103	106	82.8	85.1	2.62			2.65
	Alachlor	109	112	90.6	90.7	3.07			0.101
	Aldrin	61.5	62.7	72.2	72.9	1.94			0.902
	Alpha-BHC	94.4	97.0	98.5	90.9	2.72			7.99
	Alpha-Chlordane	98.7	94.5	84.4	82.8	4.30			2.00
	Ametryn	107	81.5	84.2	84.8	27.5			0.745
	Atrazine	101	105	91.2	90.9	3.59			0.423
	Atrazine Desethyl	145	142	113	141	2.05			22.3
	Azinphos Methyl	115	123	89.1	93.7	6.41			5.02
	Beta-BHC	114	108	91.9	65.3	5.56			33.8
	Bromacil	99.4	104	70.5	89.0	4.35			23.3
	Butylate	44.3	52.1	17.7	27.8	16.2			44.2
	Carbophenothion	92.1	87.7	91.8	68.9	4.88			28.5
	Chlorothalonil	73.7	49.7	50.6	72.5	38.9			35.7
	Chlorpyrifos Ethyl	88.1	92.8	71.5	67.9	5.17			5.10
	Chlorpyrifos Methyl	90.4	95.2	70.6	72.3	5.12			2.39
	Cyanazine	221	210	143	168	5.24			16.3
	Cypermethrin	93.5	91.3	96.3	94.8	2.37			1.57
	DDD-p,p'	106	102	87.4	94.4	3.09			7.70
	DDE-p,p'	101	99.6	85.5	84.8	1.88			0.795
	DDT-p,p'	98.9	99.2	105	129	0.280			20.8
	Delta-BHC	118	114	94.3	94.6	3.65			0.370
	Demeton	66.3	71.8	82.7	113	7.87			30.6
	Diazinon	100	109	84.6	86.8	8.41			2.62
	Dicofol	96.8	95.5	71.1	72.1	1.42			1.34
	Dieldrin	98.7	96.0	86.0	82.3	2.80			4.33
	Disulfoton	90.4	104	70.6	81.0	14.0			13.7
	Endosulfan I	104	106	98.0	105	1.23			6.94
	Endosulfan II	109	98.0	116	112	10.7			3.68
	Endosulfan Sulfate	99.2	88.4	91.5	85.2	11.6			7.15
	Endrin	101	96.9	88.8	91.3	4.17			2.80
	Endrin Aldehyde	104	97.4	81.7	86.9	6.45			6.15
	Endrin Ketone	96.8	92.0	87.8	97.5	5.17			10.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	EPTC	42.4	44.8	15.6	23.8	5.56	41.6
	Ethion	88.7	67.9	73.5	65.0	26.5	12.3
	Ethoprop	85.2	98.2	73.1	81.7	14.2	11.0
	Fenamiphos	94.4	97.2	92.6	165	2.89	56.0
	Fipronil	106	105	82.1	92.4	1.16	11.8
	Fipronil Sulfide	89.7	92.9	70.3	79.7	3.52	12.5
	Fipronil Sulfone	84.2	87.2	62.2	78.6	3.55	23.3
	Fonofos	84.1	97.5	70.9	76.4	14.8	7.55
	Gamma-BHC	105	101	102	101	3.64	1.17
	Gamma-Chlordane	97.1	92.2	83.2	81.9	5.23	1.67
	Heptachlor	85.8	82.5	75.5	78.7	3.90	4.09
	Heptachlor Epoxide	97.5	94.7	85.1	84.3	2.97	0.981
	Hexazinone	86.0	85.1	85.8	86.3	0.982	0.534
	Malathion	87.5	92.3	73.8	75.0	5.44	1.56
	Metalaxyl	104	107	75.2	82.6	3.44	9.41
	Methoxychlor	105	101	113	95.2	3.99	16.9
	Metolachlor	104	103	82.4	82.5	0.519	0.156
	Metribuzin	199	188	168	188	5.55	10.8
	Mevinphos	65.3	77.0	58.0	68.7	16.4	16.9
	Mirex	84.8	81.2	83.5	79.4	4.26	5.03
	Molinate	68.0	76.8	28.0	38.6	12.1	32.0
	Norflurazon	98.5	93.6	75.4	92.2	5.15	20.0
	Parathion Ethyl	88.2	91.0	77.1	75.6	3.07	1.97
	Parathion Methyl	95.2	102	81.0	81.1	6.60	0.207
	Pendimethalin	98.6	108	92.8	91.8	9.47	1.03
	Permethrin	89.4	90.8	92.1	129	1.53	33.7
	Phorate	75.1	86.2	59.5	65.5	13.8	9.64
	Prometon	87.3	90.0	76.5	80.6	3.07	5.21
	Prometryn	97.7	101	69.1	76.9	3.77	10.7
	Simazine	103	103	89.9	90.1	0.140	0.196
	Terbufos	88.1	101	73.0	81.5	13.5	11.0
	Terbutylazine	97.0	101	80.4	82.9	4.19	3.10
	Trifluralin	94.0	90.2	86.3	83.8	4.15	2.93
EPA 8276	Chlordane	93.2	95.7	71.4	76.1	2.66	6.32
	Toxaphene	114	111	77.1	91.0	2.74	14.6
EPA 8321B	Glyphosate	131		148	142		3.55
	Pyraclostrobin	141		140	156		11.3
	Sucralose	112		115	115		0.0
SM 2120 B	Color (true)					1.80	
SM 2320 B-97	Total Alkalinity	100				0.485	
SM 2540 C-97	TDS					5.53	
SM 4500 F-C-97	Fluoride	96.4		98.0	98.0		0.0
SM 5310 B-00	Organic Carbon	96.4		99.7	101		0.988
USGS O-2060-01	2,4-D	85.6		86.3	81.7		5.32
	Acetaminophen	104		79.5	76.5		2.93
	Bentazon	58.7		52.7	49.4		2.80
	Carbamazepine	109		110	112		1.60
	Diuron	103		95.5	101		5.30
	Fenuron	109		104	109		4.15
	Fluridone	113		96.4	103		4.52
	Imidacloprid	108		141	141		0.0721
	Linuron	104		97.8	104		5.99
	MCPP	87.8		68.3	67.7		0.952
	Primidone	109		118	121		2.27

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
USGS O-2060-01	Triclopyr	83.1	66.1 64.6			2.33

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1950926
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1950933
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1950933
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1950926
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1950926
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1950927
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1950927
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1950927
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1950927
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1950928
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1950931
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1950932
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1950931
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1950930
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1950930
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1950930
SM 2120 B / E31780	True Color measured at 450 nm	1950926
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1950926
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1950926
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1950926
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1950926
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1950927
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1950930
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1950930

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	12/05/2017			12/06/2017 14:08	DeAsia Armster	1950926
EPA 200.7 Rev. 4.4	12/05/2017	12/07/2017	Elliott D. Healy	12/08/2017	Betina Topolski	1950933
EPA 200.8 Rev. 5.4	12/05/2017	12/07/2017	Elliott D. Healy	12/08/2017	Nadine Brooks	1950933
EPA 300.0 Rev. 2.1	12/05/2017			12/07/2017	Julia Storbeck	1950926
EPA 350.1 Rev. 2.0	12/05/2017			12/13/2017	Sofia Elnemr	1950927
EPA 351.2 Rev. 2.0	12/05/2017	12/11/2017	Adrian Shelby	12/13/2017	Joseph Suarez	1950927
EPA 353.2 Rev. 2.0	12/05/2017			12/06/2017	Lauren Bottorf	1950927
EPA 365.1 Rev. 2.0	12/05/2017	12/11/2017	Sima Feizi	12/12/2017	Lipi Saha	1950927
EPA 365.1 Rev. 2.0 dissolved	12/05/2017			12/06/2017 09:59	Megan Treadwell	1950928
EPA 8270D	12/05/2017	12/07/2017	Fe-Val Siddell	12/09/2017	Goutam Palui	1950931
	12/05/2017	12/08/2017	John Kaba	12/12/2017	Vandana T. Nagar	1950932
EPA 8276	12/05/2017	12/07/2017	Fe-Val Siddell	12/11/2017	John P. Burgos	1950931
EPA 8321B	12/05/2017	12/07/2017	Juyoung Kim	12/07/2017	Juyoung Kim	1950930
	12/05/2017	12/08/2017	Juyoung Kim	12/08/2017	Juyoung Kim	1950930
SM 2120 B	12/05/2017			12/06/2017 15:51	Tanya Welborn	1950926
SM 2320 B-97	12/05/2017			12/14/2017	Dale L. Simmons	1950926
SM 2540 C-97	12/05/2017			12/08/2017	Yijie Li	1950926
SM 2540 D-97	12/05/2017			12/08/2017	Yijie Li	1950926
SM 4500 F-C-97	12/05/2017			12/14/2017	Dale L. Simmons	1950926
SM 5310 B-00	12/05/2017			12/08/2017	Ping Hua	1950927
USGS O-2060-01	12/05/2017	12/06/2017	Hoor Shaik	12/07/2017	Julie Michelle Frank	1950930
	12/05/2017	12/06/2017	Hoor Shaik	12/08/2017	Julie Michelle Frank	1950930