

Chemical Analysis Report

CEN-DIST-2017-10-20-02

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

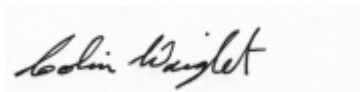
Event Description: **Louise Lk / Shaw Lk**
Request ID: **RQ-2017-10-16-40**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Michael Linger

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

Certified by: Colin Wright, Program Administrator

Date Certified: 22-NOV-2017 14:20

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: LAKE LOUISE @ CENTER OF SOUTH LOBE

Collection Date/Time: 10/19/2017 11:22

Field ID: G2CE0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939073	EPA 8321B USGS O-2060-01	Glyphosate**	0.10	U	ug/L	P333599	
		Pyraclostrobin**	0.0020	U	ug/L	P333600	
		Sucralose**	0.010	U	ug/L	P334171	MS
		2,4-D	0.0020	UQ	ug/L	P335524	
		Diuron	0.0019	I	ug/L	P333766	
		Fenuron	0.0080	UQ	ug/L	P335524	
		Imidacloprid	8.0E-04	U	ug/L	P333766	MS
		Bentazon	8.0E-04	UQ	ug/L	P335524	
		Linuron	0.0040	U	ug/L	P333766	
		Acetaminophen**	0.0080	U	ug/L	P333766	
		MCP	0.0020	UQ	ug/L	P335524	
		Carbamazepine**	4.0E-04	UQ	ug/L	P335524	
		Triclopyr**	0.0040	UQ	ug/L	P335524	
		Primidone**	0.0040	U	ug/L	P333766	
		Fluridone**	4.0E-04	U	ug/L	P333766	
1939074	EPA 8270D	Aldrin	4.4	U	ng/L	P333887	
		Alpha-BHC	2.2	U	ng/L	P333887	
		Beta-BHC	4.4	U	ng/L	P333887	
		Delta-BHC	4.4	U	ng/L	P333887	
		Gamma-BHC	4.4	U	ng/L	P333887	
		Carbophenothion	4.4	U	ng/L	P333887	
		Chlorothalonil	2.2	UJ	ng/L	P333887	RPD
		Cypermethrin	22	U	ng/L	P333887	
		DDD-p,p'	3.3	U	ng/L	P333887	
		DDE-p,p'	3.3	U	ng/L	P333887	
		DDT-p,p'	3.3	U	ng/L	P333887	
		Dieldrin	4.4	U	ng/L	P333887	
		Endosulfan I	4.4	U	ng/L	P333887	
		Endosulfan II	4.4	U	ng/L	P333887	
		Endosulfan Sulfate	2.2	U	ng/L	P333887	
		Endrin	2.2	U	ng/L	P333887	
		Endrin Aldehyde	2.2	U	ng/L	P333887	
		Heptachlor	1.6	U	ng/L	P333887	
		Heptachlor Epoxide	2.2	U	ng/L	P333887	
		Methoxychlor	4.4	U	ng/L	P333887	
		Mirex	2.2	U	ng/L	P333887	
		Permethrin	11	U	ng/L	P333887	
		Trifluralin	1.1	U	ng/L	P333887	
		Alpha-Chlordane	1.1	U	ng/L	P333887	
		Gamma-Chlordane	1.1	U	ng/L	P333887	
		Endrin Ketone	2.2	U	ng/L	P333887	
		Dicofol	33	U	ng/L	P333887	
	EPA 8276	Chlordane**	3.7	IJ	ng/L	P333887	CCV
		Toxaphene**	14	U	ng/L	P333887	

Field ID: G2CE0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939075	EPA 8270D	Alachlor	0.24	U	ng/L	P333898	
		Ametryn	0.32	U	ng/L	P333898	
		Atrazine	0.24	UJ	ng/L	P333898	MS
		Atrazine Desethyl	1.5	UJ	ng/L	P333898	MS
		Azinphos Methyl	2.2	U	ng/L	P333898	
		Bromacil	0.49	U	ng/L	P333898	
		Butylate	0.39	UJ	ng/L	P333898	RPD
		Chlorpyrifos Ethyl	4.4		ng/L	P333898	
		Chlorpyrifos Methyl	0.098	U	ng/L	P333898	
		Demeton	2.0	UJ	ng/L	P333898	RPD
		Diazinon	0.12	U	ng/L	P333898	
		Disulfoton	0.49	UJ	ng/L	P333898	RPD
		EPTC	1.2	UJ	ng/L	P333898	RPD
		Ethion	0.15	U	ng/L	P333898	
		Ethoprop	0.098	U	ng/L	P333898	
		Fenamiphos	0.24	U	ng/L	P333898	
		Fipronil	0.24	U	ng/L	P333898	
		Fipronil Sulfide	0.15	UJ	ng/L	P333898	RPD
		Fipronil Sulfone	0.15	UJ	ng/L	P333898	RPD
		Hexazinone	0.49	U	ng/L	P333898	
		Malathion	0.34	U	ng/L	P333898	
		Metribuzin	0.20	UJ	ng/L	P333898	MS
		Mevinphos	0.49	U	ng/L	P333898	
		Molinate	0.29	UJ	ng/L	P333898	RPD
		Norflurazon	2.6	J	ng/L	P333898	RPD
		Pendimethalin	0.98	U	ng/L	P333898	
		Phorate	0.24	U	ng/L	P333898	
		Prometon	0.88	U	ng/L	P333898	
		Prometryn	0.20	U	ng/L	P333898	
		Simazine	0.49	U	ng/L	P333898	
		Terbufos	0.098	U	ng/L	P333898	
		Terbutylazine	0.41	U	ng/L	P333898	
		Fonofos	0.20	U	ng/L	P333898	
		Metaxyl	0.24	U	ng/L	P333898	
		Metolachlor	1.1		ng/L	P333898	
		Acetochlor	0.24	U	ng/L	P333898	
		Cyanazine	0.49	UJ	ng/L	P333898	LCS
		Parathion Ethyl	0.24	U	ng/L	P333898	
		Parathion Methyl	0.24	U	ng/L	P333898	

Ref. Method and Comment:

USGS O-2060-01: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.

USGS O-2060-01: MS accuracy for fluridone could not be assessed due to high concentration of parameter in the spiked sample. Carbamazepine and Fenuron: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.

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

EPA 8276: MS accuracy for Chlordane not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Field ID: G2CE0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939068	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P333792	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P333850	
		Sulfate	23		mg SO4/L	P333852	
		Color (true)	42		PCU	P333799	
	SM 2320 B-97	Total Alkalinity	9.4		mg CaCO3/L	P334018	
	SM 2540 C-97	TDS	99		mg/L	P334383	
	SM 2540 D-97	TSS	3	I	mg/L	P334372	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P334462	
1939069	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P334165	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.91		mg N/L	P334174	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P334099	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P334044	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P334357	
1939070	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P333818	
1939080	EPA 200.7 Rev. 4.4	Calcium	7.21		mg/L	P333962	
		Iron	30	U	ug/L	P333962	
		Magnesium	5.67		mg/L	P333962	
		Potassium	8.3		mg/L	P333962	
		Sodium	10.4		mg/L	P333962	
		Zinc	5.0	U	ug/L	P333962	
	EPA 200.8 Rev. 5.4	Arsenic	2.09		ug/L	P333962	
		Cadmium	0.020	U	ug/L	P333962	
		Chromium	0.40	U	ug/L	P333962	
		Copper	0.30	I	ug/L	P334317	
		Lead	0.080	I	ug/L	P334317	
		Nickel	0.20	U	ug/L	P334317	
		Silver	0.010	U	ug/L	P333962	

Ref. Method and Comment:

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

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

Sample Location: SHAW LAKE @ CENTER OF NORTH LOBE

Collection Date/Time: 10/19/2017 12:18

Field ID: G2CE0127

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939065	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P333792	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P333850	
		Sulfate	6.1		mg SO4/L	P333852	
		Color (true)	590		PCU	P333799	
	SM 2320 B-97	Total Alkalinity	2.8		mg CaCO3/L	P334018	
	SM 2540 C-97	TDS	141		mg/L	P334383	
	SM 2540 D-97	TSS	3	I	mg/L	P334372	
	SM 4500 F-C-97	Fluoride	0.041	I	mg F/L	P334462	
1939066	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P334165	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P334626	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P334099	

Field ID: G2CE0127

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1939066	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P334044	
	SM 5310 B-00	Organic Carbon	44		mg C/L	P334357	
1939067	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P333818	

Ref. Method and Comment:
 EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P333792

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P333962

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P333962

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

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P334317

Component	Result	Code	Units
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.21	I	ug/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P333850

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P333852

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334165

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334174

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334626

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334099

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334044

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333818

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

Reference Method: EPA 8270D
Batch ID: P333887

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P333887

Component	Result	Code	Units
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: P333898

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D
Batch ID: P333898

Component	Result	Code	Units
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P333887

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

Reference Method: EPA 8321B
Batch ID: P333599

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P333600

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P334171

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P333799

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P334018

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

Reference Method: SM 2540 C-97
Batch ID: P334383

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P334372

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
 Batch ID: P334462

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
 Batch ID: P334357

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

Reference Method: USGS O-2060-01
 Batch ID: P333766

Component	Result	Code	Units
Acetaminophen	0.0080	U	ug/L
Diuron	8.0E-04	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0040	U	ug/L

Reference Method: USGS O-2060-01
 Batch ID: P335524

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
MCP	0.0020	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: P333962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	109		P	85 - 115
Magnesium	112		P	85 - 115
Potassium	107		P	85 - 115
Sodium	106		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P333962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.7		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	97.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	98.1		P	85 - 115
Lead	96.8		P	85 - 115
Nickel	99.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333850

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333852

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	107		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334174

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334099

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334044

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P333818

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

Reference Method: EPA 8270D
 Batch ID: P333887

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	43.9	41.0	P/P	26 - 88.0
Alpha-BHC	86.3	87.2	P/P	63 - 114
Alpha-Chlordane	86.2	84.4	P/P	56 - 117
Beta-BHC	96.7	108	P/P	57 - 138
Carbophenothion	80.8	103	P/P	36 - 148
Chlorothalonil	37.3	83.2	P/P	26 - 173
Cypermethrin	85.8	86.3	P/P	42 - 159
DDD-p,p'	96.7	99.9	P/P	62 - 126
DDE-p,p'	90.5	86.5	P/P	53 - 115
DDT-p,p'	93.4	87.7	P/P	54 - 117
Delta-BHC	94.3	95.1	P/P	68 - 158
Dicofol	81.9	83.8	P/P	25 - 114
Dieldrin	87.9	91.1	P/P	59 - 126
Endosulfan I	92.5	91.3	P/P	62 - 138
Endosulfan II	90.3	97.1	P/P	61 - 150
Endosulfan Sulfate	88.9	94.5	P/P	63 - 132
Endrin	87.1	92.5	P/P	49 - 148
Endrin Aldehyde	85.6	91.7	P/P	50 - 144
Endrin Ketone	89.0	94.3	P/P	66 - 122
Gamma-BHC	90.6	89.1	P/P	60 - 137
Gamma-Chlordane	85.4	84.1	P/P	54 - 113
Heptachlor	76.8	71.1	P/P	43 - 104
Heptachlor Epoxide	87.8	87.1	P/P	64 - 118
Methoxychlor	101	93.2	P/P	63 - 129
Mirex	76.8	70.4	P/P	39 - 93.0
Permethrin	89.0	85.2	P/P	51 - 123
Trifluralin	86.3	82.1	P/P	35 - 187

Reference Method: EPA 8270D
 Batch ID: P333898

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	98.6	97.4	P/P	78 - 118
Alachlor	86.6	87.4	P/P	77 - 119
Ametryn	62.0	66.2	P/P	61 - 136
Atrazine	120	107	P/P	73 - 120
Atrazine Desethyl	75.8	93.2	P/P	16 - 122
Azinphos Methyl	132	123	P/P	69 - 186
Bromacil	69.7	80.9	P/P	40 - 125
Butylate	33.4	33.5	P/P	32 - 87.0
Chlorpyrifos Ethyl	85.4	85.1	P/P	53 - 110
Chlorpyrifos Methyl	87.8	86.2	P/P	31 - 119
Cyanazine	289	216	F/P	36 - 224
Demeton	84.7	52.2	P/P	39 - 122
Diazinon	87.0	82.6	P/P	75 - 119
Disulfoton	79.4	43.2	P/P	42 - 139

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P333898

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
EPTC	33.1	33.2	P/P	33 - 96.0
Ethion	93.0	93.5	P/P	63 - 127
Ethoprop	85.9	80.5	P/P	65 - 107
Fenamiphos	108	93.0	P/P	64 - 137
Fipronil	88.0	86.2	P/P	60 - 126
Fipronil Sulfide	83.9	83.2	P/P	58 - 124
Fipronil Sulfone	77.1	78.9	P/P	57 - 126
Fonofos	109	102	P/P	65 - 111
Hexazinone	91.1	89.0	P/P	46 - 151
Malathion	77.4	101	P/P	68 - 132
Metalaxyl	81.4	72.2	P/P	51 - 132
Metolachlor	82.6	78.9	P/P	78 - 119
Metribuzin	124	138	P/P	58 - 148
Mevinphos	62.5	66.7	P/P	34 - 128
Molinate	46.2	46.2	P/P	44 - 101
Norflurazon	86.3	91.1	P/P	63 - 129
Parathion Ethyl	94.9	91.6	P/P	80 - 109
Parathion Methyl	109	103	P/P	74 - 125
Pendimethalin	86.9	82.4	P/P	48 - 134
Phorate	77.7	64.6	P/P	52 - 119
Prometon	86.8	83.1	P/P	69 - 124
Prometryn	83.1	82.5	P/P	66 - 124
Simazine	93.9	95.0	P/P	61 - 134
Terbufos	86.5	73.5	P/P	58 - 115
Terbuthylazine	96.6	92.8	P/P	77 - 113

Reference Method: EPA 8276

Batch ID: P333887

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.6	73.8	P/P	48 - 121
Toxaphene	91.8	89.9	P/P	43 - 135

Reference Method: EPA 8321B

Batch ID: P333599

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	104		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P333600

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	95.2		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P334171

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	94.2		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P334018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P334462

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P334357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.3		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P333766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	80.5		P	30 - 150
Diuron	57.6		P	40 - 150
Fluridone	103		P	40 - 150
Imidacloprid	105		P	40 - 160
Linuron	111		P	40 - 150
Primidone	102		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335524

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	78.0		P	40 - 150
Bentazon	82.6		P	30 - 150
Carbamazepine	101		P	40 - 150
Fenuron	98.2		P	40 - 150
MCPD	56.7		P	40 - 150
Triclopyr	61.8		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939114	Calcium	97.3		P	80 - 120
1939114	Iron	105		P	80 - 120
1939114	Magnesium	107		P	80 - 120
1939114	Potassium	105		P	80 - 120
1939114	Sodium	103		P	80 - 120
1939114	Zinc	103		P	80 - 120
1939360	Calcium	102	104	P/P	80 - 120
1939360	Iron	103	106	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939360	Magnesium	107	110	P/P	80 - 120
1939360	Potassium	98.7	101	P/P	80 - 120
1939360	Sodium	97.8	100	P/P	80 - 120
1939360	Zinc	101	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333962

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939114	Arsenic	103		P	80 - 120
1939114	Cadmium	102		P	80 - 120
1939114	Chromium	98.4		P	80 - 120
1939114	Silver	98.3		P	80 - 120
1939360	Arsenic	102	102	P/P	80 - 120
1939360	Cadmium	105	104	P/P	80 - 120
1939360	Chromium	101	100	P/P	80 - 120
1939360	Silver	98.4	97.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938506	Copper	92.0		P	80 - 120
1938506	Lead	94.3		P	80 - 120
1938506	Nickel	93.6		P	80 - 120
1939080	Copper	96.5	95.4	P/P	80 - 120
1939080	Lead	99.1	97.7	P/P	80 - 120
1939080	Nickel	99.8	98.2	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333850

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938883	Chloride	96.1		P	90 - 110
1939076	Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938883	Sulfate	95.7		P	90 - 110
1939076	Sulfate	97.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939041	Ammonia-N	103	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938993	Kjeldahl Nitrogen	96.7	94.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939455	Kjeldahl Nitrogen	96.8	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334099

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938952	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939078	Total-P	103	99.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333818

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939173	O-Phosphate-P	93.8	95.7	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P333887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939132	Aldrin	50.9	59.2	P/P	22 - 97.0
1939132	Alpha-BHC	86.7	88.1	P/P	43 - 132
1939132	Alpha-Chlordane	83.5	97.0	P/P	36 - 126
1939132	Beta-BHC	109	107	P/P	41 - 150
1939132	Carbophenothion	96.6	109	P/P	13 - 196
1939132	Chlorothalonil	107	73.7	P/P	10 - 266
1939132	Cypermethrin	98.3	88.5	P/P	37 - 161
1939132	DDD-p,p'	95.2	109	P/P	44 - 131
1939132	DDE-p,p'	83.2	97.8	P/P	32 - 127
1939132	DDT-p,p'	94.6	93.6	P/P	45 - 116
1939132	Delta-BHC	101	103	P/P	50 - 201
1939132	Dicofol	77.7	98.2	P/P	10 - 100
1939132	Dieldrin	81.8	99.6	P/P	39 - 142
1939132	Endosulfan I	86.9	105	P/P	51 - 139
1939132	Endosulfan II	99.0	109	P/P	49 - 155
1939132	Endosulfan Sulfate	100	90.3	P/P	54 - 136
1939132	Endrin	82.1	101	P/P	38 - 141
1939132	Endrin Aldehyde	85.3	99.4	P/P	14 - 152
1939132	Endrin Ketone	98.6	88.3	P/P	60 - 128
1939132	Gamma-BHC	94.3	96.3	P/P	48 - 157
1939132	Gamma-Chlordane	82.7	96.7	P/P	35 - 123
1939132	Heptachlor	69.1	82.9	P/P	25 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P333887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939132	Heptachlor Epoxide	88.6	103	P/P	48 - 125
1939132	Methoxychlor	102	101	P/P	52 - 127
1939132	Mirex	78.7	74.7	P/P	25 - 108
1939132	Permethrin	97.0	87.7	P/P	46 - 133
1939132	Trifluralin	89.0	88.3	P/P	29 - 254

Reference Method: EPA 8270D

Batch ID: P333898

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939075	Acetochlor	101	105	P/P	74 - 123
1939075	Alachlor	87.9	91.2	P/P	73 - 124
1939075	Ametryn	83.0	74.4	P/P	56 - 149
1939075	Atrazine	131	127	F/F	73 - 124
1939075	Atrazine Desethyl	104	78.2	F/P	12 - 103
1939075	Azinphos Methyl	110	107	P/P	60 - 202
1939075	Bromacil	91.8	78.8	P/P	42 - 133
1939075	Butylate	21.5	36.0	P/P	10 - 85.0
1939075	Chlorpyrifos Ethyl	89.2	94.6	P/P	53 - 113
1939075	Chlorpyrifos Methyl	82.4	84.4	P/P	40 - 115
1939075	Cyanazine	198	175	P/P	22 - 210
1939075	Demeton	95.4	105	P/P	17 - 149
1939075	Diazinon	84.9	91.5	P/P	72 - 124
1939075	Disulfoton	80.2	85.8	P/P	43 - 139
1939075	EPTC	17.5	31.0	P/P	10 - 86.0
1939075	Ethion	99.4	97.2	P/P	65 - 131
1939075	Ethoprop	92.1	95.1	P/P	59 - 110
1939075	Fenamiphos	62.6	62.4	P/P	57 - 138
1939075	Fipronil	85.8	64.4	P/P	40 - 130
1939075	Fipronil Sulfide	81.6	57.5	P/P	36 - 128
1939075	Fipronil Sulfone	67.1	39.7	P/P	16 - 145
1939075	Fonofos	104	109	P/P	60 - 112
1939075	Hexazinone	105	93.7	P/P	69 - 142
1939075	Malathion	102	98.1	P/P	68 - 132
1939075	Metalaxyl	73.0	77.7	P/P	66 - 118
1939075	Metolachlor	82.3	87.8	P/P	71 - 124
1939075	Metribuzin	198	176	F/F	61 - 140
1939075	Mevinphos	58.2	69.4	P/P	38 - 130
1939075	Molinate	32.6	53.3	P/P	23 - 99.0
1939075	Norflurazon	89.7	59.5	P/P	39 - 139
1939075	Parathion Ethyl	93.0	93.6	P/P	75 - 111
1939075	Parathion Methyl	101	98.9	P/P	64 - 130
1939075	Pendimethalin	86.6	87.9	P/P	26 - 173
1939075	Phorate	78.4	88.3	P/P	43 - 127
1939075	Prometon	101	94.9	P/P	50 - 144
1939075	Prometryn	96.7	96.8	P/P	69 - 126
1939075	Simazine	115	111	P/P	51 - 152
1939075	Terbufos	87.9	94.4	P/P	54 - 125
1939075	Terbutylazine	99.9	100	P/P	76 - 113

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P333887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939346	Toxaphene	85.8	85.7	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P333599

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938583	Glyphosate	84.8	85.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P333600

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1937371	Pyraclostrobin	96.1	95.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P334171

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939052	Sucralose	36.0	37.6	F/F	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P334462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939076	Fluoride	98.6	102	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P334357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938951	Organic Carbon	93.8	94.1	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P333766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1938977	Acetaminophen	95.0	107	P/P	30 - 150
1938977	Diuron	72.4	72.9	P/P	40 - 150
1938977	Imidacloprid	225	233	F/F	40 - 160
1938977	Linuron	97.9	103	P/P	40 - 150
1938977	Primidone	97.8	107	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939073	2,4-D	57.5	55.7	P/P	40 - 150
1939073	Bentazon	61.8	56.7	P/P	30 - 150
1939073	Carbamazepine	75.4	72.0	P/P	40 - 150
1939073	Fenuron	80.2	70.6	P/P	40 - 150
1939073	MCPP	47.1	40.2	P/P	40 - 150
1939073	Triclopyr	45.6	43.9	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P333792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939029	Turbidity	1.61	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939360	Calcium	2.03	Spike	P	0 - 20
1939360	Iron	2.59	Spike	P	0 - 20
1939360	Magnesium	2.29	Spike	P	0 - 20
1939360	Potassium	2.41	Spike	P	0 - 20
1939360	Sodium	1.85	Spike	P	0 - 20
1939360	Zinc	1.81	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939360	Arsenic	0.702	Spike	P	0 - 20
1939360	Cadmium	0.928	Spike	P	0 - 20
1939360	Chromium	0.718	Spike	P	0 - 20
1939360	Silver	0.673	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939080	Copper	1.17	Spike	P	0 - 20
1939080	Lead	1.46	Spike	P	0 - 20
1939080	Nickel	1.63	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333850

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939076	Chloride	0.122	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939041	Ammonia-N	2.51	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938993	Kjeldahl Nitrogen	0.991	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938955	Kjeldahl Nitrogen	0.730	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938952	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939078	Total-P	3.47	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939173	O-Phosphate-P	2.01	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P333887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939132	Aldrin	15.1	Spike	P	0 - 30
1939132	Alpha-BHC	1.56	Spike	P	0 - 30
1939132	Alpha-Chlordane	14.9	Spike	P	0 - 30
1939132	Beta-BHC	1.94	Spike	P	0 - 30
1939132	Carbophenothion	11.9	Spike	P	0 - 30
1939132	Chlorothalonil	36.4	Spike	F	0 - 30
1939132	Cypermethrin	10.5	Spike	P	0 - 30
1939132	DDD-p,p'	13.3	Spike	P	0 - 30
1939132	DDE-p,p'	16.1	Spike	P	0 - 30
1939132	DDT-p,p'	1.16	Spike	P	0 - 30
1939132	Delta-BHC	1.41	Spike	P	0 - 30
1939132	Dicofol	23.3	Spike	P	0 - 30
1939132	Dieldrin	13.9	Spike	P	0 - 30
1939132	Endosulfan I	18.5	Spike	P	0 - 30
1939132	Endosulfan II	10.0	Spike	P	0 - 30
1939132	Endosulfan Sulfate	10.4	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P333887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939132	Endrin	20.6	Spike	P	0 - 30
1939132	Endrin Aldehyde	15.3	Spike	P	0 - 30
1939132	Endrin Ketone	11.0	Spike	P	0 - 30
1939132	Gamma-BHC	2.08	Spike	P	0 - 30
1939132	Gamma-Chlordane	15.6	Spike	P	0 - 30
1939132	Heptachlor	18.2	Spike	P	0 - 30
1939132	Heptachlor Epoxide	14.9	Spike	P	0 - 30
1939132	Methoxychlor	1.03	Spike	P	0 - 30
1939132	Mirex	5.21	Spike	P	0 - 30
1939132	Permethrin	10.1	Spike	P	0 - 30
1939132	Trifluralin	0.860	Spike	P	0 - 30
LFB	Aldrin	6.84	LCS	P	0 - 30
LFB	Alpha-BHC	1.01	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.18	LCS	P	0 - 30
LFB	Beta-BHC	11.1	LCS	P	0 - 30
LFB	Carbophenothion	24.5	LCS	P	0 - 30
LFB	Chlorothalonil	76.2	LCS	F	0 - 30
LFB	Cypermethrin	0.573	LCS	P	0 - 30
LFB	DDD-p,p'	3.22	LCS	P	0 - 30
LFB	DDE-p,p'	4.52	LCS	P	0 - 30
LFB	DDT-p,p'	6.21	LCS	P	0 - 30
LFB	Delta-BHC	0.827	LCS	P	0 - 30
LFB	Dicofol	2.35	LCS	P	0 - 30
LFB	Dieldrin	3.63	LCS	P	0 - 30
LFB	Endosulfan I	1.30	LCS	P	0 - 30
LFB	Endosulfan II	7.26	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.07	LCS	P	0 - 30
LFB	Endrin	5.98	LCS	P	0 - 30
LFB	Endrin Aldehyde	6.89	LCS	P	0 - 30
LFB	Endrin Ketone	5.81	LCS	P	0 - 30
LFB	Gamma-BHC	1.56	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.44	LCS	P	0 - 30
LFB	Heptachlor	7.67	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.806	LCS	P	0 - 30
LFB	Methoxychlor	8.13	LCS	P	0 - 30
LFB	Mirex	8.60	LCS	P	0 - 30
LFB	Permethrin	4.38	LCS	P	0 - 30
LFB	Trifluralin	4.95	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P333898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939075	Acetochlor	4.07	Spike	P	0 - 30
1939075	Alachlor	3.75	Spike	P	0 - 30
1939075	Ametryn	11.0	Spike	P	0 - 30
1939075	Atrazine	3.41	Spike	P	0 - 30
1939075	Atrazine Desethyl	28.0	Spike	P	0 - 30
1939075	Azinphos Methyl	1.97	Spike	P	0 - 30
1939075	Bromacil	15.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P333898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939075	Butylate	50.7	Spike	F	0 - 30
1939075	Chlorpyrifos Ethyl	2.64	Spike	P	0 - 30
1939075	Chlorpyrifos Methyl	2.45	Spike	P	0 - 30
1939075	Cyanazine	12.0	Spike	P	0 - 30
1939075	Demeton	9.48	Spike	P	0 - 30
1939075	Diazinon	7.51	Spike	P	0 - 30
1939075	Disulfoton	6.72	Spike	P	0 - 30
1939075	EPTC	55.9	Spike	F	0 - 30
1939075	Ethion	2.24	Spike	P	0 - 30
1939075	Ethoprop	3.24	Spike	P	0 - 30
1939075	Fenamiphos	0.350	Spike	P	0 - 30
1939075	Fipronil	28.4	Spike	P	0 - 30
1939075	Fipronil Sulfide	34.7	Spike	F	0 - 30
1939075	Fipronil Sulfone	51.2	Spike	F	0 - 30
1939075	Fonofos	4.25	Spike	P	0 - 30
1939075	Hexazinone	11.7	Spike	P	0 - 30
1939075	Malathion	3.48	Spike	P	0 - 30
1939075	Metalaxyl	6.22	Spike	P	0 - 30
1939075	Metolachlor	5.77	Spike	P	0 - 30
1939075	Metribuzin	11.8	Spike	P	0 - 30
1939075	Mevinphos	17.5	Spike	P	0 - 30
1939075	Molinate	48.2	Spike	F	0 - 30
1939075	Norflurazon	31.3	Spike	F	0 - 30
1939075	Parathion Ethyl	0.592	Spike	P	0 - 30
1939075	Parathion Methyl	2.51	Spike	P	0 - 30
1939075	Pendimethalin	1.46	Spike	P	0 - 30
1939075	Phorate	11.9	Spike	P	0 - 30
1939075	Prometon	6.29	Spike	P	0 - 30
1939075	Prometryn	0.0801	Spike	P	0 - 30
1939075	Simazine	3.00	Spike	P	0 - 30
1939075	Terbufos	7.13	Spike	P	0 - 30
1939075	Terbuthylazine	0.153	Spike	P	0 - 30
LFB	Acetochlor	1.22	LCS	P	0 - 30
LFB	Alachlor	0.918	LCS	P	0 - 30
LFB	Ametryn	6.67	LCS	P	0 - 30
LFB	Atrazine	11.5	LCS	P	0 - 30
LFB	Atrazine Desethyl	20.6	LCS	P	0 - 30
LFB	Azinphos Methyl	6.91	LCS	P	0 - 30
LFB	Bromacil	14.9	LCS	P	0 - 30
LFB	Butylate	0.439	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	0.383	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.92	LCS	P	0 - 30
LFB	Cyanazine	29.0	LCS	P	0 - 30
LFB	Demeton	47.6	LCS	F	0 - 30
LFB	Diazinon	5.19	LCS	P	0 - 30
LFB	Disulfoton	59.0	LCS	F	0 - 30
LFB	EPTC	0.223	LCS	P	0 - 30
LFB	Ethion	0.521	LCS	P	0 - 30
LFB	Ethoprop	6.53	LCS	P	0 - 30
LFB	Fenamiphos	15.2	LCS	P	0 - 30
LFB	Fipronil	2.16	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P333898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil Sulfide	0.871	LCS	P	0 - 30
LFB	Fipronil Sulfone	2.27	LCS	P	0 - 30
LFB	Fonofos	6.42	LCS	P	0 - 30
LFB	Hexazinone	2.37	LCS	P	0 - 30
LFB	Malathion	26.3	LCS	P	0 - 30
LFB	Metalaxyl	12.1	LCS	P	0 - 30
LFB	Metolachlor	4.62	LCS	P	0 - 30
LFB	Metribuzin	11.3	LCS	P	0 - 30
LFB	Mevinphos	6.46	LCS	P	0 - 30
LFB	Molinate	0.0379	LCS	P	0 - 30
LFB	Norflurazon	5.35	LCS	P	0 - 30
LFB	Parathion Ethyl	3.56	LCS	P	0 - 30
LFB	Parathion Methyl	6.51	LCS	P	0 - 30
LFB	Pendimethalin	5.34	LCS	P	0 - 30
LFB	Phorate	18.3	LCS	P	0 - 30
LFB	Prometon	4.39	LCS	P	0 - 30
LFB	Prometryn	0.816	LCS	P	0 - 30
LFB	Simazine	1.15	LCS	P	0 - 30
LFB	Terbufos	16.3	LCS	P	0 - 30
LFB	Terbutylazine	3.97	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P333887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939346	Chlordane	1.22	Spike	P	0 - 30
1939346	Toxaphene	0.190	Spike	P	0 - 30
LFB	Chlordane	5.12	LCS	P	0 - 30
LFB	Toxaphene	2.13	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P333599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938583	Glyphosate	1.35	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P333600

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1937371	Pyraclostrobin	0.679	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P334171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939052	Sucralose	4.46	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P333799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938990	Color (true)	4.07	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P334018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939076	Total Alkalinity	0.334	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
 Batch ID: P334383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938991	TDS	3.86	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P334462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939076	Fluoride	2.95	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P334357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938951	Organic Carbon	0.186	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P333766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1938977	Acetaminophen	11.5	Spike	P	0 - 30
1938977	Diuron	0.533	Spike	P	0 - 30
1938977	Fluridone	7.15	Spike	P	0 - 30
1938977	Imidacloprid	2.69	Spike	P	0 - 30
1938977	Linuron	5.06	Spike	P	0 - 30
1938977	Primidone	7.79	Spike	P	0 - 30

Reference Method: USGS O-2060-01
 Batch ID: P335524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939073	2,4-D	3.20	Spike	P	0 - 30
1939073	Bentazon	8.59	Spike	P	0 - 30
1939073	Carbamazepine	4.70	Spike	P	0 - 30
1939073	Fenuron	12.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P335524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939073	MCP	15.7	Spike	P	0 - 30
1939073	Triclopyr	3.84	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: 1939073
Field Sample ID: G2CE0065

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.8	P	30 - 160
EPA 8321B	Diuron-d6	106	P	30 - 160
EPA 8321B	Diuron-d6	84.0	P	30 - 160
EPA 8321B	Diuron-d6	106	P	30 - 160
EPA 8321B	Diuron-d6	84.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.6	P	40 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	65.2	P	40 - 160
EPA 8321B	Sucralose-d6	65.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	56.8	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	118	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	83.8	P	30 - 160
USGS O-2060-01	Diuron-d6	106	P	30 - 160
USGS O-2060-01	Diuron-d6	84.0	P	30 - 160
USGS O-2060-01	Primidone-d5	112	P	30 - 160
USGS O-2060-01	Sucralose-d6	65.2	P	40 - 160

Lab Sample ID: 1939074
Field Sample ID: G2CE0065

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	79.9	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	54.0	P	32 - 103
EPA 8276	Decachlorobiphenyl	60.1	P	31 - 100

Lab Sample ID: 1939075
Field Sample ID: G2CE0065

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	88.4	P	53 - 135
EPA 8270D	Simazine-d10	88.9	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A79698
Included Lab Sample IDs: 1939065, 1939068

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

Reference Method: SM 2120 B
Run ID: A79699
Included Lab Sample IDs: 1939065, 1939068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115
Color (true)	99.3	99.6	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A79712
Included Lab Sample IDs: 1939067, 1939070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.8	98.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A79726
Included Lab Sample IDs: 1939065, 1939068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	101	P/P	90 - 110
Sulfate	102	99.8	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A79738
Included Lab Sample IDs: 1939073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	99.2	99.4	P/P	60 - 150

Reference Method: EPA 8321B
Run ID: A79740
Included Lab Sample IDs: 1939073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	105	108	P/P	70 - 160

Reference Method: SM 2320 B-97
Run ID: A79792
Included Lab Sample IDs: 1939065, 1939068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.5	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A79823
Included Lab Sample IDs: 1939066, 1939069

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79823

Included Lab Sample IDs: 1939066, 1939069

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79837

Included Lab Sample IDs: 1939080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	106	104	P/P	90 - 110
Cadmium	103	102	P/P	90 - 110
Chromium	102	100	P/P	90 - 110
Silver	98.2	97.3	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A79840

Included Lab Sample IDs: 1939080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.4	98.7	P/P	95 - 105
Iron	100	100	P/P	95 - 105
Magnesium	102	102	P/P	95 - 105
Potassium	102	101	P/P	95 - 105
Sodium	99.2	99.1	P/P	95 - 105
Zinc	99.2	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79843

Included Lab Sample IDs: 1939066, 1939069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.7	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79852

Included Lab Sample IDs: 1939066, 1939069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79897

Included Lab Sample IDs: 1939069

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

Reference Method: USGS O-2060-01

Run ID: A79905

Included Lab Sample IDs: 1939073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	117	118	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A79905

Included Lab Sample IDs: 1939073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Diuron	113	112	P/P	60 - 150
Fluridone	124	120	P/P	60 - 160
Imidacloprid	114	103	P/P	60 - 150
Linuron	119	118	P/P	60 - 150
Primidone	111	118	P/P	60 - 150

Reference Method: SM 5310 B-00

Run ID: A79914

Included Lab Sample IDs: 1939066, 1939069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79949

Included Lab Sample IDs: 1939065, 1939068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	101	P/P	90 - 110
Fluoride	101	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79950

Included Lab Sample IDs: 1939073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	92.0	94.4	P/P	60 - 150

Reference Method: EPA 8270D

Run ID: A79997

Included Lab Sample IDs: 1939074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.4		P	80 - 120
Alpha-BHC	98.8		P	80 - 120
Alpha-Chlordane	94.4		P	80 - 120
Beta-BHC	101		P	80 - 120
Carbophenothion	86.6		P	80 - 120
Chlorothalonil	85.4		P	80 - 120
Cypermethrin	94.1		P	80 - 120
DDD-p,p'	93.7		P	80 - 120
DDE-p,p'	96.9		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	91.9		P	80 - 120
Dicofol	98.0		P	80 - 120
Dieldrin	97.5		P	80 - 120
Endosulfan I	91.5		P	80 - 120
Endosulfan II	83.9		P	80 - 120
Endosulfan Sulfate	100		P	80 - 120
Endrin	89.7		P	80 - 120
Endrin Aldehyde	90.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A79997

Included Lab Sample IDs: 1939074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Ketone	99.1		P	80 - 120
Gamma-BHC	95.8		P	80 - 120
Gamma-Chlordane	95.7		P	80 - 120
Heptachlor	92.9		P	80 - 120
Heptachlor Epoxide	96.0		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	99.7		P	80 - 120
Permethrin	99.2		P	80 - 120
Trifluralin	97.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80006

Included Lab Sample IDs: 1939080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	98.0	99.7	P/P	90 - 110
Lead	93.8	97.0	P/P	90 - 110
Nickel	98.3	99.8	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A80063

Included Lab Sample IDs: 1939074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	78.5*		F	80 - 120
Toxaphene	92.0		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80098

Included Lab Sample IDs: 1939066

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

Reference Method: USGS O-2060-01

Run ID: A80386

Included Lab Sample IDs: 1939073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	102	P/P	50 - 150
Bentazon	122	125	P/P	50 - 150
Carbamazepine	124	127	P/P	60 - 150
Fenuron	125	126	P/P	60 - 150
MCP	102	102	P/P	50 - 150
Triclopyr	99.5	101	P/P	50 - 150

Reference Method: EPA 8270D

Run ID: A80398

Included Lab Sample IDs: 1939075

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A80398
Included Lab Sample IDs: 1939075

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.5		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	103		P	80 - 120
Atrazine	95.9		P	80 - 120
Atrazine Desethyl	90.2		P	80 - 120
Azinphos Methyl	97.5		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	98.1		P	80 - 120
Chlorpyrifos Ethyl	97.2		P	80 - 120
Chlorpyrifos Methyl	97.2		P	80 - 120
Cyanazine	96.3		P	80 - 120
Demeton	103		P	80 - 120
Diazinon	94.8		P	80 - 120
Disulfoton	95.7		P	80 - 120
EPTC	101		P	80 - 120
Ethion	91.2		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	92.5		P	80 - 120
Fipronil	96.7		P	80 - 120
Fipronil Sulfide	92.8		P	80 - 120
Fipronil Sulfone	94.5		P	80 - 120
Fonofos	95.9		P	80 - 120
Hexazinone	96.1		P	80 - 120
Malathion	95.8		P	80 - 120
Metaxyl	100		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	97.5		P	80 - 120
Mevinphos	98.4		P	80 - 120
Molinate	103		P	80 - 120
Norflurazon	99.7		P	80 - 120
Parathion Ethyl	94.3		P	80 - 120
Parathion Methyl	94.7		P	80 - 120
Pendimethalin	88.8		P	80 - 120
Phorate	98.2		P	80 - 120
Prometon	100		P	80 - 120
Prometryn	101		P	80 - 120
Simazine	94.1		P	80 - 120
Terbufos	94.8		P	80 - 120
Terbuthylazine	97.8		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				1.61	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 200.7 Rev. 4.4	Calcium	108		97.3	102	104		2.03
	Iron	109		105	103	106		2.59
	Magnesium	112		107	107	110		2.29
	Potassium	107		105	98.7	101		2.41
	Sodium	106		103	97.8	100		1.85
	Zinc	105		103	101	103		1.81
EPA 200.8 Rev. 5.4	Arsenic	101		103	102	102		0.702
	Cadmium	101		102	105	104		0.928
	Chromium	99.7		98.4	101	100		0.718
	Copper	98.1		92.0	96.5	95.4		1.17
	Lead	96.8		94.3	99.1	97.7		1.46
	Nickel	99.6		93.6	99.8	98.2		1.63
	Silver	97.5		98.3	98.4	97.7		0.673
EPA 300.0 Rev. 2.1	Chloride	100		98.3	96.1		0.122	
	Sulfate	99.0		97.0	95.7			
EPA 350.1 Rev. 2.0	Ammonia-N	107		103	106			2.51
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		96.7	94.9			0.991
	Kjeldahl Nitrogen	94.4		96.8	97.8			0.730
EPA 353.2 Rev. 2.0	NO2NO3-N	104		104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	104		103	99.1			3.47
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.6		93.8	95.7			2.01
EPA 8270D	Acetochlor	98.6	97.4	101	105	1.22		4.07
	Alachlor	86.6	87.4	87.9	91.2	0.918		3.75
	Aldrin	43.9	41.0	50.9	59.2	6.84		15.1
	Alpha-BHC	86.3	87.2	86.7	88.1	1.01		1.56
	Alpha-Chlordane	86.2	84.4	83.5	97.0	2.18		14.9
	Ametryn	62.0	66.2	83.0	74.4	6.67		11.0
	Atrazine	120	107	131	127	11.5		3.41
	Atrazine Desethyl	75.8	93.2	104	78.2	20.6		28.0
	Azinphos Methyl	132	123	110	107	6.91		1.97
	Beta-BHC	96.7	108	109	107	11.1		1.94
	Bromacil	69.7	80.9	91.8	78.8	14.9		15.2
	Butylate	33.4	33.5	21.5	36.0	0.439		50.7
	Carbophenothion	80.8	103	96.6	109	24.5		11.9
	Chlorothalonil	37.3	83.2	107	73.7	76.2		36.4
	Chlorpyrifos Ethyl	85.4	85.1	89.2	94.6	0.383		2.64
	Chlorpyrifos Methyl	87.8	86.2	82.4	84.4	1.92		2.45
	Cyanazine	289	216	198	175	29.0		12.0
	Cypermethrin	85.8	86.3	98.3	88.5	0.573		10.5
	DDD-p,p'	96.7	99.9	95.2	109	3.22		13.3
	DDE-p,p'	90.5	86.5	83.2	97.8	4.52		16.1
	DDT-p,p'	93.4	87.7	94.6	93.6	6.21		1.16
	Delta-BHC	94.3	95.1	101	103	0.827		1.41
	Demeton	84.7	52.2	95.4	105	47.6		9.48
	Diazinon	87.0	82.6	84.9	91.5	5.19		7.51
	Dicofol	81.9	83.8	77.7	98.2	2.35		23.3
	Dieldrin	87.9	91.1	81.8	99.6	3.63		13.9
	Disulfoton	79.4	43.2	80.2	85.8	59.0		6.72
	Endosulfan I	92.5	91.3	86.9	105	1.30		18.5
	Endosulfan II	90.3	97.1	99.0	109	7.26		10.0
	Endosulfan Sulfate	88.9	94.5	100	90.3	6.07		10.4
	Endrin	87.1	92.5	82.1	101	5.98		20.6
	Endrin Aldehyde	85.6	91.7	85.3	99.4	6.89		15.3
	Endrin Ketone	89.0	94.3	98.6	88.3	5.81		11.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	EPTC	33.1	33.2	17.5	31.0	0.223	55.9
	Ethion	93.0	93.5	99.4	97.2	0.521	2.24
	Ethoprop	85.9	80.5	92.1	95.1	6.53	3.24
	Fenamiphos	108	93.0	62.6	62.4	15.2	0.350
	Fipronil	88.0	86.2	85.8	64.4	2.16	28.4
	Fipronil Sulfide	83.9	83.2	81.6	57.5	0.871	34.7
	Fipronil Sulfone	77.1	78.9	67.1	39.7	2.27	51.2
	Fonofos	109	102	104	109	6.42	4.25
	Gamma-BHC	90.6	89.1	94.3	96.3	1.56	2.08
	Gamma-Chlordane	85.4	84.1	82.7	96.7	1.44	15.6
	Heptachlor	76.8	71.1	69.1	82.9	7.67	18.2
	Heptachlor Epoxide	87.8	87.1	88.6	103	0.806	14.9
	Hexazinone	91.1	89.0	105	93.7	2.37	11.7
	Malathion	77.4	101	102	98.1	26.3	3.48
	Metalaxyl	81.4	72.2	73.0	77.7	12.1	6.22
	Methoxychlor	101	93.2	102	101	8.13	1.03
	Metolachlor	82.6	78.9	82.3	87.8	4.62	5.77
	Metribuzin	124	138	198	176	11.3	11.8
	Mevinphos	62.5	66.7	58.2	69.4	6.46	17.5
	Mirex	76.8	70.4	78.7	74.7	8.60	5.21
	Molinate	46.2	46.2	32.6	53.3	0.0379	48.2
	Norflurazon	86.3	91.1	89.7	59.5	5.35	31.3
	Parathion Ethyl	94.9	91.6	93.0	93.6	3.56	0.592
	Parathion Methyl	109	103	101	98.9	6.51	2.51
	Pendimethalin	86.9	82.4	86.6	87.9	5.34	1.46
	Permethrin	89.0	85.2	97.0	87.7	4.38	10.1
	Phorate	77.7	64.6	78.4	88.3	18.3	11.9
	Prometon	86.8	83.1	101	94.9	4.39	6.29
	Prometryn	83.1	82.5	96.7	96.8	0.816	0.0801
	Simazine	93.9	95.0	115	111	1.15	3.00
	Terbufos	86.5	73.5	87.9	94.4	16.3	7.13
	Terbutylazine	96.6	92.8	99.9	100	3.97	0.153
	Trifluralin	86.3	82.1	89.0	88.3	4.95	0.860
EPA 8276	Chlordane	77.6	73.8			5.12	1.22
	Toxaphene	91.8	89.9	85.8	85.7	2.13	0.190
EPA 8321B	Glyphosate	104		84.8	85.9		1.35
	Pyraclostrobin	95.2		96.1	95.4		0.679
	Sucralose	94.2		36.0	37.6		4.46
SM 2120 B	Color (true)					4.07	
SM 2320 B-97	Total Alkalinity	101				0.334	
SM 2540 C-97	TDS					3.86	
SM 4500 F-C-97	Fluoride	99.1		98.6	102		2.95
SM 5310 B-00	Organic Carbon	96.3		93.8	94.1		0.186
USGS O-2060-01	2,4-D	78.0		57.5	55.7		3.20
	Acetaminophen	80.5		95.0	107		11.5
	Bentazon	82.6		61.8	56.7		8.59
	Carbamazepine	101		75.4	72.0		4.70
	Diuron	57.6		72.4	72.9		0.533
	Fenuron	98.2		80.2	70.6		12.7
	Fluridone	103					7.15
	Imidacloprid	105		225	233		2.69
	Linuron	111		97.9	103		5.06
	MCPP	56.7		47.1	40.2		15.7
	Primidone	102		97.8	107		7.79

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
USGS O-2060-01	Triclopyr	61.8	45.6 43.9			3.84

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1939065, 1939068
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1939080
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1939080
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1939065, 1939068
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1939065, 1939068
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1939066, 1939069
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1939066, 1939069
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1939066, 1939069
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1939066, 1939069
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1939067, 1939070
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1939074
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1939075
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1939074
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1939073
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1939073
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1939073
SM 2120 B / E31780	True Color measured at 450 nm	1939065, 1939068
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1939065, 1939068
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1939065, 1939068
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1939065, 1939068
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1939065, 1939068
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1939066, 1939069
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1939073
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1939073

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	10/20/2017			10/20/2017 15:20	DeAsia Armster	1939065, 1939068
EPA 200.7 Rev. 4.4	10/20/2017	10/24/2017	Elliott D. Healy	10/26/2017	Betina Topolski	1939080
EPA 200.8 Rev. 5.4	10/20/2017	10/24/2017	Elliott D. Healy	10/26/2017	Nadine Brooks	1939080
	10/20/2017	10/30/2017	Elliott D. Healy	11/03/2017	Nadine Brooks	1939080
EPA 300.0 Rev. 2.1	10/20/2017			10/21/2017	Julia Storbeck	1939065, 1939068
EPA 350.1 Rev. 2.0	10/20/2017			10/26/2017	Sofia Elnemr	1939066, 1939069
EPA 351.2 Rev. 2.0	10/20/2017	10/27/2017	Adrian Shelby	10/30/2017	Tanya Welborn	1939069
	10/20/2017	11/03/2017	Adrian Shelby	11/06/2017	Joseph Suarez	1939066
EPA 353.2 Rev. 2.0	10/20/2017			10/26/2017	Beverly Y. Sanders	1939066, 1939069
EPA 365.1 Rev. 2.0	10/20/2017	10/25/2017	Sima Feizi	10/27/2017	Lipi Saha	1939066, 1939069
EPA 365.1 Rev. 2.0 dissolved	10/20/2017			10/20/2017 16:20	Megan Treadwell	1939067, 1939070
EPA 8270D	10/20/2017	10/24/2017	John Kaba	11/03/2017	Marek Topolski	1939075
	10/20/2017	10/25/2017	Fe-Val Siddell	10/27/2017	Marek Topolski	1939074
EPA 8276	10/20/2017	10/25/2017	Fe-Val Siddell	11/04/2017	Marek Topolski	1939074
EPA 8321B	10/20/2017	10/20/2017	Mohammad Ghaffari	10/20/2017	Mohammad Ghaffari	1939073
	10/20/2017	10/20/2017	Mohammad Ghaffari	10/21/2017	Mohammad Ghaffari	1939073
	10/20/2017	10/27/2017	Julie Michelle Frank	10/28/2017	Juyoung Kim	1939073
SM 2120 B	10/20/2017			10/20/2017 15:04	Tanya Welborn	1939068
	10/20/2017			10/20/2017 15:25	Tanya Welborn	1939065
SM 2320 B-97	10/20/2017			10/24/2017	Dale L. Simmons	1939065, 1939068
SM 2540 C-97	10/20/2017			10/25/2017	Yijie Li	1939065, 1939068
SM 2540 D-97	10/20/2017			10/25/2017	Yijie Li	1939065, 1939068
SM 4500 F-C-97	10/20/2017			10/31/2017	Dale L. Simmons	1939065, 1939068
SM 5310 B-00	10/20/2017			10/30/2017	Ping Hua	1939066, 1939069
USGS O-2060-01	10/20/2017	10/25/2017	Hoor Shaik	10/30/2017	Julie Michelle Frank	1939073
	10/20/2017	11/16/2017	Hoor Shaik	11/19/2017	Julie Michelle Frank	1939073