

Chemical Analysis Report

WQ-ASSESS-2017-09-06-01

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

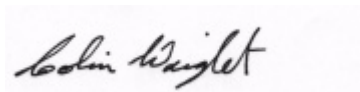
Event Description: **Bellows Lake & Rocky Crk**
Request ID: **RQ-2017-09-04-29**
Customer: **WQ-ASSESS**
Project ID: **SMP**

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

Date Certified: 29-SEP-2017 11:07

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Collection Date/Time: 09/05/2017 10:40

Matrix: W-SURF-FRH

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

Collection Date/Time: 09/05/2017 10:40

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927875	EPA 8321B	Glyphosate**	0.50	U	ug/L	P331308	RPD
		Pyraclostrobin**	0.0050	U	ug/L	P331322	
		Sucralose**	0.026	I	ug/L	P331186	MS, RPD
	USGS O-2060-01	2,4-D	1.5		ug/L	P331187	
		Diuron	0.0027	I	ug/L	P331187	
		Fenuron	0.0080	U	ug/L	P331187	
		Imidacloprid	0.0071		ug/L	P331187	MS
		Bentazon	8.0E-04	U	ug/L	P331187	MS
		Linuron	0.0040	U	ug/L	P331187	
		Acetaminophen**	0.0080	U	ug/L	P331187	

Field ID: G1SW0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927875	USGS O-2060-01	MCP	0.0020	U	ug/L	P331187	
		Carbamazepine**	4.0E-04	U	ug/L	P331187	
		Triclopyr**	0.0040	U	ug/L	P331187	
		Primidone**	0.0040	UJ	ug/L	P331187	SUR
		Fluridone**	0.033		ug/L	P331187	
1927877	EPA 8270D	Aldrin	4.2	UJ	ng/L	P331295	LCS
		Alpha-BHC	2.1	U	ng/L	P331295	
		Beta-BHC	4.2	U	ng/L	P331295	RPD
		Delta-BHC	4.2	U	ng/L	P331295	
		Gamma-BHC	4.2	U	ng/L	P331295	
		Carbophenothion	4.2	U	ng/L	P331295	
		Chlorothalonil	2.1	UJ	ng/L	P331295	CCV
		Cypermethrin	21	U	ng/L	P331295	
		DDD-p,p'	3.1	U	ng/L	P331295	
		DDE-p,p'	3.1	U	ng/L	P331295	
		DDT-p,p'	3.1	U	ng/L	P331295	
		Dieldrin	4.2	U	ng/L	P331295	
		Endosulfan I	4.2	U	ng/L	P331295	
		Endosulfan II	4.2	U	ng/L	P331295	
		Endosulfan Sulfate	2.1	U	ng/L	P331295	
		Endrin	2.1	U	ng/L	P331295	
		Endrin Aldehyde	2.1	U	ng/L	P331295	RPD
		Heptachlor	1.6	U	ng/L	P331295	
		Heptachlor Epoxide	2.1	U	ng/L	P331295	
		Methoxychlor	4.2	U	ng/L	P331295	
		Mirex	2.1	U	ng/L	P331295	
		Permethrin	10	U	ng/L	P331295	
		Trifluralin	1.0	U	ng/L	P331295	
		Alpha-Chlordane	1.0	U	ng/L	P331295	
		Gamma-Chlordane	1.0	U	ng/L	P331295	
		Endrin Ketone	2.1	U	ng/L	P331295	
		Dicofol	31	U	ng/L	P331295	RPD
	EPA 8276	Chlordane**	2.6	U	ng/L	P331295	
		Toxaphene**	13	UJ	ng/L	P331295	LCS
1927878	EPA 8270D	Alachlor	0.24	U	ng/L	P331400	
		Ametryn	0.60	I	ng/L	P331400	
		Atrazine	14	J	ng/L	P331400	LCS, RPD
		Atrazine Desethyl	1.4	UJ	ng/L	P331400	MS, RPD
		Azinphos Methyl	2.2	U	ng/L	P331400	
		Bromacil	0.48	UJ	ng/L	P331400	RPD
		Butylate	0.38	U	ng/L	P331400	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P331400	
		Chlorpyrifos Methyl	0.096	U	ng/L	P331400	
		Demeton	1.9	U	ng/L	P331400	
		Diazinon	0.12	U	ng/L	P331400	

Field ID: G1SW0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927878	EPA 8270D	Disulfoton	0.48	U	ng/L	P331400	
		EPTC	1.2	U	ng/L	P331400	
		Ethion	0.14	UJ	ng/L	P331400	LCS, MS
		Ethoprop	0.096	UJ	ng/L	P331400	LCS, RPD
		Fenamiphos	0.24	UJ	ng/L	P331400	RPD
		Fipronil	0.29	IJ	ng/L	P331400	RPD
		Fipronil Sulfide	0.16	IJ	ng/L	P331400	LCS, RPD
		Fipronil Sulfone	0.30	IJ	ng/L	P331400	LCS, RPD
		Hexazinone	0.93	IJ	ng/L	P331400	RPD
		Malathion	0.34	UJ	ng/L	P331400	LCS
		Metribuzin	0.19	UJ	ng/L	P331400	MS, RPD
		Mevinphos	0.48	UJ	ng/L	P331400	RPD
		Molinate	0.29	U	ng/L	P331400	
		Norflurazon	0.48	UJ	ng/L	P331400	LCS, RPD
		Pendimethalin	0.96	U	ng/L	P331400	
		Phorate	0.24	U	ng/L	P331400	
		Prometon	0.86	U	ng/L	P331400	
		Prometryn	0.19	U	ng/L	P331400	
		Simazine	0.48	UJ	ng/L	P331400	RPD
		Terbufos	0.096	U	ng/L	P331400	
		Terbutylazine	0.41	UJ	ng/L	P331400	LCS
		Fonofos	0.19	UJ	ng/L	P331400	LCS, RPD
		Metalaxyl	0.19	U	ng/L	P331400	
		Metolachlor	0.25	I	ng/L	P331400	
		Acetochlor	0.24	U	ng/L	P331400	
		Cyanazine	0.48	UJ	ng/L	P331400	MS, RPD
		Parathion Ethyl	0.24	UJ	ng/L	P331400	LCS
		Parathion Methyl	0.24	UJ	ng/L	P331400	RPD

Ref. Method and Comment:

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes. Primidone-d5 surrogate spike recovery exceeding the control limits.

EPA 8270D: Refer to the narrative for an explanation of QC Codes. MS accuracy for Heptachlor Epoxide not assessed due to high content of this parameter in the sample spiked.

EPA 8276: Refer to the narrative for an explanation of QC Codes.

Sample Location: Rocky Creek

Collection Date/Time: 09/05/2017 12:25

Field ID: G1SW0053

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927876	EPA 8321B	Sucralose**	0.83		ug/L	P331186	MS, RPD
		2,4-D	0.034		ug/L	P331187	
	USGS O-2060-01	Diuron	0.018		ug/L	P331187	
		Fenuron	0.0080	U	ug/L	P331187	
		Imidacloprid	0.12		ug/L	P331187	MS
		Bentazon	0.028		ug/L	P331187	MS
		Linuron	0.0040	U	ug/L	P331187	
		Acetaminophen**	0.0080	U	ug/L	P331187	
		MCP	0.0020	U	ug/L	P331187	

Field ID: G1SW0053

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1927876	USGS O-2060-01	Carbamazepine**	0.0064		ug/L	P331187	
		Triclopyr**	0.0040	U	ug/L	P331187	
		Primidone**	0.013	IJ	ug/L	P331187	SUR
		Fluridone**	0.018		ug/L	P331187	

Ref. Method and Comment:
 USGS O-2060-01: Refer to the narrative for an explanation of QC Codes. Primidone-d5 surrogate spike recovery exceeding the control limits. Results confirmed.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P331392

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P331579

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: P331579

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: P331757

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P331760

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331594

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331574

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331547

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331562

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331473

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

Reference Method: EPA 8270D
Batch ID: P331295

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P331295

Component	Result	Code	Units
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D

Batch ID: P331400

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8276
Batch ID: P331295

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

Reference Method: EPA 8321B
Batch ID: P331186

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P331308

Component	Result	Code	Units
Glyphosate	0.50	U	ug/L

Reference Method: EPA 8321B
Batch ID: P331322

Component	Result	Code	Units
Pyraclostrobin	0.0050	U	ug/L

Reference Method: SM 2120 B
Batch ID: P331378

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P331729

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

Reference Method: SM 2540 C-97
Batch ID: P331698

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P331825

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P331735

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00

Batch ID: P331894

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

Reference Method: USGS O-2060-01

Batch ID: P331187

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: P331579

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	109		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	98.2		P	85 - 115
Sodium	96.3		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P331579

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	97.6		P	85 - 115
Chromium	97.1		P	85 - 115
Copper	98.6		P	85 - 115
Lead	98.9		P	85 - 115
Nickel	99.4		P	85 - 115
Silver	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P331757

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P331760

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P331594

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P331574

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P331547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	107		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P331562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P331473

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

Reference Method: EPA 8270D

Batch ID: P331295

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	18.3	16.3	F/F	26 - 88.0
Alpha-BHC	68.1	77.8	P/P	63 - 114
Alpha-Chlordane	80.1	78.6	P/P	56 - 117
Beta-BHC	93.3	118	P/P	57 - 138
Carbophenothion	59.8	66.7	P/P	36 - 148
Chlorothalonil	85.3	64.3	P/P	26 - 173
Cypermethrin	92.4	89.1	P/P	42 - 159
DDD-p,p'	95.0	108	P/P	62 - 126
DDE-p,p'	70.0	80.1	P/P	53 - 115
DDT-p,p'	88.9	84.6	P/P	54 - 117
Delta-BHC	105	115	P/P	68 - 158
Dicofol	73.1	80.0	P/P	25 - 114
Dieldrin	83.7	93.7	P/P	59 - 126
Endosulfan I	78.9	76.9	P/P	62 - 138
Endosulfan II	99.4	111	P/P	61 - 150
Endosulfan Sulfate	98.0	89.0	P/P	63 - 132

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P331295

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	94.1	104	P/P	49 - 148
Endrin Aldehyde	84.9	94.0	P/P	50 - 144
Endrin Ketone	93.0	83.5	P/P	66 - 122
Gamma-BHC	72.1	94.5	P/P	60 - 137
Gamma-Chlordane	85.7	81.0	P/P	54 - 113
Heptachlor	52.2	62.1	P/P	43 - 104
Heptachlor Epoxide	86.3	82.5	P/P	64 - 118
Methoxychlor	95.8	92.5	P/P	63 - 129
Mirex	72.6	68.9	P/P	39 - 93.0
Permethrin	85.3	80.6	P/P	51 - 123
Trifluralin	104	113	P/P	35 - 187

Reference Method: EPA 8270D

Batch ID: P331400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	81.2	97.2	P/P	78 - 118
Alachlor	83.7	96.5	P/P	77 - 119
Ametryn	74.3	94.5	P/P	61 - 136
Atrazine	63.4	89.5	F/P	73 - 120
Atrazine Desethyl	29.0	95.9	P/P	16 - 122
Azinphos Methyl	89.7	118	P/P	69 - 186
Bromacil	47.6	90.4	P/P	40 - 125
Butylate	47.7	40.2	P/P	32 - 87.0
Chlorpyrifos Ethyl	67.8	83.5	P/P	53 - 110
Chlorpyrifos Methyl	67.5	90.5	P/P	31 - 119
Cyanazine	56.1	162	P/P	36 - 224
Demeton	65.6	74.7	P/P	39 - 122
Diazinon	84.9	108	P/P	75 - 119
Disulfoton	74.5	83.7	P/P	42 - 139
EPTC	46.8	37.8	P/P	33 - 96.0
Ethion	60.1	78.6	F/P	63 - 127
Ethoprop	57.1	79.9	F/P	65 - 107
Fenamiphos	65.1	88.6	P/P	64 - 137
Fipronil	71.4	108	P/P	60 - 126
Fipronil Sulfide	51.5	74.9	F/P	58 - 124
Fipronil Sulfone	46.3	81.3	F/P	57 - 126
Fonofos	63.2	87.9	F/P	65 - 111
Hexazinone	60.8	85.9	P/P	46 - 151
Malathion	63.6	85.5	F/P	68 - 132
Metalaxyl	69.3	93.1	P/P	51 - 132
Metolachlor	80.0	89.5	P/P	78 - 119
Metribuzin	77.0	145	P/P	58 - 148
Mevinphos	41.7	70.6	P/P	34 - 128
Molinate	52.1	45.9	P/P	44 - 101
Norflurazon	48.2	97.0	F/P	63 - 129
Parathion Ethyl	66.1	88.3	F/P	80 - 109
Parathion Methyl	76.7	113	P/P	74 - 125
Pendimethalin	66.5	79.4	P/P	48 - 134
Phorate	66.4	74.2	P/P	52 - 119
Prometon	76.8	97.7	P/P	69 - 124
Prometryn	75.2	96.2	P/P	66 - 124

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P331400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	68.6	103	P/P	61 - 134
Terbufos	68.6	84.5	P/P	58 - 115
Terbutylazine	68.4	91.9	F/P	77 - 113

Reference Method: EPA 8276

Batch ID: P331295

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	116	121	P/P	48 - 121
Toxaphene	136	148	F/F	43 - 135

Reference Method: EPA 8321B

Batch ID: P331186

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	96.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P331308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	86.7		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P331322

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	119		P	40 - 150

Reference Method: SM 2320 B-97

Batch ID: P331729

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

Reference Method: SM 4500 F-C-97

Batch ID: P331735

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	92 - 103

Reference Method: SM 5310 B-00

Batch ID: P331894

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Reference Method: USGS O-2060-01

Batch ID: P331187

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	53.0		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01

Batch ID: P331187

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	134		P	30 - 150
Bentazon	41.4		P	40 - 150
Carbamazepine	124		P	40 - 150
Diuron	103		P	40 - 150
Fenuron	114		P	40 - 150
Fluridone	68.5		P	40 - 150
Imidacloprid	94.9		P	40 - 160
Linuron	86.9		P	40 - 150
MCPD	52.9		P	40 - 150
Primidone	111		P	40 - 150
Triclopyr	54.0		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P331579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927943	Calcium	101		P	80 - 120
1927943	Iron	107		P	80 - 120
1927943	Magnesium	106		P	80 - 120
1927943	Potassium	98.0		P	80 - 120
1927943	Sodium	95.8		P	80 - 120
1927943	Zinc	99.4		P	80 - 120
1928636	Calcium	103		P	80 - 120
1928636	Iron	107	109	P/P	80 - 120
1928636	Magnesium	104		P	80 - 120
1928636	Potassium	98.7		P	80 - 120
1928636	Sodium	96.0		P	80 - 120
1928636	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P331579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927943	Arsenic	102		P	80 - 120
1927943	Cadmium	101		P	80 - 120
1927943	Chromium	96.6		P	80 - 120
1927943	Copper	97.4		P	80 - 120
1927943	Lead	101		P	80 - 120
1927943	Nickel	99.1		P	80 - 120
1927943	Silver	105		P	80 - 120
1928636	Arsenic	105	103	P/P	80 - 120
1928636	Cadmium	102	101	P/P	80 - 120
1928636	Chromium	97.6	95.6	P/P	80 - 120
1928636	Copper	98.5	97.2	P/P	80 - 120
1928636	Lead	104	103	P/P	80 - 120
1928636	Nickel	100	97.7	P/P	80 - 120
1928636	Silver	105	103	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927594	Sulfate	92.0		P	90 - 110
1928348	Sulfate	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331760

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927594	Chloride	94.5		P	90 - 110
1928348	Chloride	95.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331594

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927870	Ammonia-N	100	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331574

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927804	Kjeldahl Nitrogen	98.4	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927870	NO2NO3-N	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927543	Total-P	93.6	92.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927871	O-Phosphate-P	95.7	96.5	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P331295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927200	Aldrin	30.8	29.0	P/P	22 - 97.0
1927200	Alpha-BHC	88.2	85.0	P/P	43 - 132
1927200	Alpha-Chlordane	111	90.8	P/P	36 - 126
1927200	Beta-BHC	93.5	136	P/P	41 - 150
1927200	Carbophenothion	128	126	P/P	13 - 196
1927200	Chlorothalonil	121	140	P/P	10 - 266
1927200	Cypermethrin	95.3	110	P/P	37 - 161
1927200	DDD-p,p'	98.4	114	P/P	44 - 131

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P331295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927200	DDE-p,p'	97.3	84.4	P/P	32 - 127
1927200	DDT-p,p'	91.5	89.0	P/P	45 - 116
1927200	Delta-BHC	123	163	P/P	50 - 201
1927200	Dicofol	29.6	50.4	P/P	10 - 100
1927200	Dieldrin	119	105	P/P	39 - 142
1927200	Endosulfan I	100	87.4	P/P	51 - 139
1927200	Endosulfan II	123	141	P/P	49 - 155
1927200	Endosulfan Sulfate	89.1	113	P/P	54 - 136
1927200	Endrin	107	108	P/P	38 - 141
1927200	Endrin Aldehyde	53.4	75.0	P/P	14 - 152
1927200	Endrin Ketone	78.6	96.9	P/P	60 - 128
1927200	Gamma-BHC	86.6	103	P/P	48 - 157
1927200	Gamma-Chlordane	109	92.7	P/P	35 - 123
1927200	Heptachlor	74.0	70.8	P/P	25 - 112
1927200	Methoxychlor	98.9	93.3	P/P	52 - 127
1927200	Mirex	82.7	78.7	P/P	25 - 108
1927200	Permethrin	91.1	95.5	P/P	46 - 133
1927200	Trifluralin	159	160	P/P	29 - 254

Reference Method: EPA 8270D

Batch ID: P331400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927878	Acetochlor	92.8	95.5	P/P	74 - 123
1927878	Alachlor	88.9	90.1	P/P	73 - 124
1927878	Ametryn	93.2	86.6	P/P	56 - 149
1927878	Atrazine	86.3	111	P/P	73 - 124
1927878	Atrazine Desethyl	104	114	F/F	12 - 103
1927878	Azinphos Methyl	110	116	P/P	60 - 202
1927878	Bromacil	99.7	97.8	P/P	42 - 133
1927878	Butylate	40.4	47.5	P/P	10 - 85.0
1927878	Chlorpyrifos Ethyl	66.0	69.6	P/P	53 - 113
1927878	Chlorpyrifos Methyl	86.3	87.0	P/P	40 - 115
1927878	Cyanazine	273	276	F/F	22 - 210
1927878	Demeton	97.9	110	P/P	17 - 149
1927878	Diazinon	106	109	P/P	72 - 124
1927878	Disulfoton	96.1	104	P/P	43 - 139
1927878	EPTC	34.6	43.3	P/P	10 - 86.0
1927878	Ethion	67.9	61.6	P/F	65 - 131
1927878	Ethoprop	97.1	107	P/P	59 - 110
1927878	Fenamiphos	87.2	98.0	P/P	57 - 138
1927878	Fipronil	102	101	P/P	40 - 130
1927878	Fipronil Sulfide	78.1	80.3	P/P	36 - 128
1927878	Fipronil Sulfone	70.1	74.8	P/P	16 - 145
1927878	Fonofos	94.1	96.4	P/P	60 - 112
1927878	Hexazinone	86.4	94.0	P/P	69 - 142
1927878	Malathion	75.6	76.7	P/P	68 - 132
1927878	Metalaxyl	94.7	92.6	P/P	66 - 118
1927878	Metolachlor	88.2	91.3	P/P	71 - 124
1927878	Metribuzin	160	158	F/F	61 - 140
1927878	Mevinphos	82.5	92.0	P/P	38 - 130
1927878	Molinate	48.4	51.3	P/P	23 - 99.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P331400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927878	Norflurazon	91.5	93.1	P/P	39 - 139
1927878	Parathion Ethyl	85.5	89.0	P/P	75 - 111
1927878	Parathion Methyl	105	107	P/P	64 - 130
1927878	Pendimethalin	74.5	75.7	P/P	26 - 173
1927878	Phorate	89.0	99.3	P/P	43 - 127
1927878	Prometon	112	112	P/P	50 - 144
1927878	Prometryn	88.6	88.7	P/P	69 - 126
1927878	Simazine	109	91.0	P/P	51 - 152
1927878	Terbufos	93.4	103	P/P	54 - 125
1927878	Terbutylazine	89.2	95.6	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P331295

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927270	Chlordane	113	111	P/P	44 - 134
1927270	Toxaphene	136	127	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P331186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927171	Sucralose	34.7	9.82	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P331308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927171	Glyphosate	96.6	141	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P331322

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927875	Pyraclostrobin	96.0	96.1	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P331735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1928613	Fluoride	98.1	97.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P331894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927934	Organic Carbon	93.6	95.0	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P331187

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

Reference Method: USGS O-2060-01

Batch ID: P331187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1927171	2,4-D	58.1	60.9	P/P	40 - 150
1927171	Acetaminophen	64.5	63.0	P/P	30 - 150
1927171	Bentazon	30.9	29.1	F/F	40 - 150
1927171	Carbamazepine	100	98.5	P/P	40 - 150
1927171	Diuron	80.4	79.7	P/P	40 - 150
1927171	Fenuron	89.9	91.9	P/P	40 - 150
1927171	Fluridone	54.5	54.6	P/P	40 - 150
1927171	Imidacloprid	228	228	F/F	40 - 160
1927171	Linuron	95.7	94.0	P/P	40 - 150
1927171	MCP	51.0	51.3	P/P	40 - 150
1927171	Primidone	111	107	P/P	40 - 150
1927171	Triclopyr	48.6	50.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P331392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927786	Turbidity	2.87	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P331579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928636	Calcium	0.816	Spike	P	0 - 20
1928636	Iron	1.80	Spike	P	0 - 20
1928636	Magnesium	0.980	Spike	P	0 - 20
1928636	Potassium	0.348	Spike	P	0 - 20
1928636	Sodium	1.47	Spike	P	0 - 20
1928636	Zinc	1.18	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P331579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928636	Arsenic	2.39	Spike	P	0 - 20
1928636	Cadmium	1.36	Spike	P	0 - 20
1928636	Chromium	2.06	Spike	P	0 - 20
1928636	Copper	1.29	Spike	P	0 - 20
1928636	Lead	1.13	Spike	P	0 - 20
1928636	Nickel	2.53	Spike	P	0 - 20
1928636	Silver	1.94	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927594	Sulfate	5.51	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P331760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927594	Chloride	9.59	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927870	Ammonia-N	0.844	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331574

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927804	Kjeldahl Nitrogen	0.560	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P331547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927870	NO2NO3-N	0.926	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P331562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927543	Total-P	0.997	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P331473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927871	O-Phosphate-P	0.832	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P331295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927200	Aldrin	5.91	Spike	P	0 - 30
1927200	Alpha-BHC	3.78	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P331295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927200	Alpha-Chlordane	11.2	Spike	P	0 - 30
1927200	Beta-BHC	36.9	Spike	F	0 - 30
1927200	Carbophenothion	1.11	Spike	P	0 - 30
1927200	Chlorothalonil	14.4	Spike	P	0 - 30
1927200	Cypermethrin	14.7	Spike	P	0 - 30
1927200	DDD-p,p'	14.8	Spike	P	0 - 30
1927200	DDE-p,p'	14.3	Spike	P	0 - 30
1927200	DDT-p,p'	2.76	Spike	P	0 - 30
1927200	Delta-BHC	28.0	Spike	P	0 - 30
1927200	Dicofol	51.9	Spike	F	0 - 30
1927200	Dieldrin	12.8	Spike	P	0 - 30
1927200	Endosulfan I	13.5	Spike	P	0 - 30
1927200	Endosulfan II	13.6	Spike	P	0 - 30
1927200	Endosulfan Sulfate	23.4	Spike	P	0 - 30
1927200	Endrin	0.852	Spike	P	0 - 30
1927200	Endrin Aldehyde	33.7	Spike	F	0 - 30
1927200	Endrin Ketone	20.8	Spike	P	0 - 30
1927200	Gamma-BHC	17.3	Spike	P	0 - 30
1927200	Gamma-Chlordane	10.7	Spike	P	0 - 30
1927200	Heptachlor	4.39	Spike	P	0 - 30
1927200	Heptachlor Epoxide	5.27	Spike	P	0 - 30
1927200	Methoxychlor	5.84	Spike	P	0 - 30
1927200	Mirex	5.03	Spike	P	0 - 30
1927200	Permethrin	4.78	Spike	P	0 - 30
1927200	Trifluralin	0.312	Spike	P	0 - 30
LFB	Aldrin	11.4	LCS	P	0 - 30
LFB	Alpha-BHC	13.3	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.94	LCS	P	0 - 30
LFB	Beta-BHC	23.0	LCS	P	0 - 30
LFB	Carbophenothion	11.0	LCS	P	0 - 30
LFB	Chlorothalonil	28.0	LCS	P	0 - 30
LFB	Cypermethrin	3.63	LCS	P	0 - 30
LFB	DDD-p,p'	12.7	LCS	P	0 - 30
LFB	DDE-p,p'	13.5	LCS	P	0 - 30
LFB	DDT-p,p'	5.00	LCS	P	0 - 30
LFB	Delta-BHC	8.66	LCS	P	0 - 30
LFB	Dicofol	8.99	LCS	P	0 - 30
LFB	Dieldrin	11.3	LCS	P	0 - 30
LFB	Endosulfan I	2.57	LCS	P	0 - 30
LFB	Endosulfan II	11.4	LCS	P	0 - 30
LFB	Endosulfan Sulfate	9.63	LCS	P	0 - 30
LFB	Endrin	10.0	LCS	P	0 - 30
LFB	Endrin Aldehyde	10.2	LCS	P	0 - 30
LFB	Endrin Ketone	10.7	LCS	P	0 - 30
LFB	Gamma-BHC	27.0	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.61	LCS	P	0 - 30
LFB	Heptachlor	17.3	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.47	LCS	P	0 - 30
LFB	Methoxychlor	3.50	LCS	P	0 - 30
LFB	Mirex	5.17	LCS	P	0 - 30
LFB	Permethrin	5.68	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P331295

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Trifluralin	8.75	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P331400

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927878	Acetochlor	2.89	Spike	P	0 - 30
1927878	Alachlor	1.41	Spike	P	0 - 30
1927878	Ametryn	6.32	Spike	P	0 - 30
1927878	Atrazine	5.19	Spike	P	0 - 30
1927878	Atrazine Desethyl	9.23	Spike	P	0 - 30
1927878	Azinphos Methyl	5.54	Spike	P	0 - 30
1927878	Bromacil	2.00	Spike	P	0 - 30
1927878	Butylate	16.3	Spike	P	0 - 30
1927878	Chlorpyrifos Ethyl	5.33	Spike	P	0 - 30
1927878	Chlorpyrifos Methyl	0.894	Spike	P	0 - 30
1927878	Cyanazine	1.01	Spike	P	0 - 30
1927878	Demeton	12.0	Spike	P	0 - 30
1927878	Diazinon	3.62	Spike	P	0 - 30
1927878	Disulfoton	7.55	Spike	P	0 - 30
1927878	EPTC	22.4	Spike	P	0 - 30
1927878	Ethion	9.77	Spike	P	0 - 30
1927878	Ethoprop	9.28	Spike	P	0 - 30
1927878	Fenamiphos	11.6	Spike	P	0 - 30
1927878	Fipronil	0.578	Spike	P	0 - 30
1927878	Fipronil Sulfide	2.48	Spike	P	0 - 30
1927878	Fipronil Sulfone	5.26	Spike	P	0 - 30
1927878	Fonofos	2.44	Spike	P	0 - 30
1927878	Hexazinone	7.74	Spike	P	0 - 30
1927878	Malathion	1.35	Spike	P	0 - 30
1927878	Metalaxyl	2.19	Spike	P	0 - 30
1927878	Metolachlor	3.32	Spike	P	0 - 30
1927878	Metribuzin	1.74	Spike	P	0 - 30
1927878	Mevinphos	10.9	Spike	P	0 - 30
1927878	Molinate	5.83	Spike	P	0 - 30
1927878	Norflurazon	1.71	Spike	P	0 - 30
1927878	Parathion Ethyl	4.00	Spike	P	0 - 30
1927878	Parathion Methyl	2.55	Spike	P	0 - 30
1927878	Pendimethalin	1.63	Spike	P	0 - 30
1927878	Phorate	11.0	Spike	P	0 - 30
1927878	Prometon	0.225	Spike	P	0 - 30
1927878	Prometryn	0.121	Spike	P	0 - 30
1927878	Simazine	18.0	Spike	P	0 - 30
1927878	Terbufos	10.2	Spike	P	0 - 30
1927878	Terbuthylazine	6.89	Spike	P	0 - 30
LFB	Acetochlor	17.9	LCS	P	0 - 30
LFB	Alachlor	14.2	LCS	P	0 - 30
LFB	Ametryn	24.0	LCS	P	0 - 30
LFB	Atrazine	34.2	LCS	F	0 - 30
LFB	Atrazine Desethyl	107	LCS	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P331400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Azinphos Methyl	27.2	LCS	P	0 - 30
LFB	Bromacil	62.1	LCS	F	0 - 30
LFB	Butylate	16.9	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	20.8	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	29.1	LCS	P	0 - 30
LFB	Cyanazine	96.9	LCS	F	0 - 30
LFB	Demeton	12.9	LCS	P	0 - 30
LFB	Diazinon	23.9	LCS	P	0 - 30
LFB	Disulfoton	11.6	LCS	P	0 - 30
LFB	EPTC	21.2	LCS	P	0 - 30
LFB	Ethion	26.7	LCS	P	0 - 30
LFB	Ethoprop	33.2	LCS	F	0 - 30
LFB	Fenamiphos	30.7	LCS	F	0 - 30
LFB	Fipronil	41.2	LCS	F	0 - 30
LFB	Fipronil Sulfide	36.9	LCS	F	0 - 30
LFB	Fipronil Sulfone	55.0	LCS	F	0 - 30
LFB	Fonofos	32.7	LCS	F	0 - 30
LFB	Hexazinone	34.2	LCS	F	0 - 30
LFB	Malathion	29.4	LCS	P	0 - 30
LFB	Metalaxyl	29.3	LCS	P	0 - 30
LFB	Metolachlor	11.2	LCS	P	0 - 30
LFB	Metribuzin	61.0	LCS	F	0 - 30
LFB	Mevinphos	51.5	LCS	F	0 - 30
LFB	Molinate	12.7	LCS	P	0 - 30
LFB	Norflurazon	67.2	LCS	F	0 - 30
LFB	Parathion Ethyl	28.8	LCS	P	0 - 30
LFB	Parathion Methyl	38.6	LCS	F	0 - 30
LFB	Pendimethalin	17.7	LCS	P	0 - 30
LFB	Phorate	11.0	LCS	P	0 - 30
LFB	Prometon	24.0	LCS	P	0 - 30
LFB	Prometryn	24.5	LCS	P	0 - 30
LFB	Simazine	40.1	LCS	F	0 - 30
LFB	Terbufos	20.8	LCS	P	0 - 30
LFB	Terbuthylazine	29.4	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P331295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927270	Chlordane	1.97	Spike	P	0 - 30
1927270	Toxaphene	6.75	Spike	P	0 - 30
LFB	Chlordane	3.49	LCS	P	0 - 30
LFB	Toxaphene	8.82	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P331186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927171	Sucralose	39.6	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P331308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927171	Glyphosate	35.8	Spike	F	0 - 30

Reference Method: EPA 8321B
Batch ID: P331322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927875	Pyraclostrobin	0.104	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P331378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927865	Color (true)	5.02	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P331729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928613	Total Alkalinity	0.249	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P331698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927906	TDS	2.29	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P331735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928613	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P331894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927934	Organic Carbon	1.33	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P331187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927171	2,4-D	3.87	Spike	P	0 - 30
1927171	Acetaminophen	2.42	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01

Batch ID: P331187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1927171	Bentazon	5.87	Spike	P	0 - 30
1927171	Carbamazepine	1.73	Spike	P	0 - 30
1927171	Diuron	0.775	Spike	P	0 - 30
1927171	Fenuron	2.22	Spike	P	0 - 30
1927171	Fluridone	0.257	Spike	P	0 - 30
1927171	Imidacloprid	0.0876	Spike	P	0 - 30
1927171	Linuron	1.86	Spike	P	0 - 30
1927171	MCP	0.743	Spike	P	0 - 30
1927171	Primidone	3.77	Spike	P	0 - 30
1927171	Triclopyr	4.03	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: 1927875

Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	160	P	30 - 160
EPA 8321B	Carbamazepine-d10	160	P	30 - 160
EPA 8321B	Diuron-d6	90.1	P	30 - 160
EPA 8321B	Diuron-d6	116	P	30 - 160
EPA 8321B	Diuron-d6	90.1	P	30 - 160
EPA 8321B	Diuron-d6	116	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.9	P	40 - 160
EPA 8321B	Primidone-d5	163	F	30 - 160
EPA 8321B	Primidone-d5	163	F	30 - 160
EPA 8321B	Sucralose-d6	102	P	40 - 160
EPA 8321B	Sucralose-d6	102	P	40 - 160
USGS O-2060-01	2,4-D-d3	124	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	112	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	160	P	30 - 160
USGS O-2060-01	Diuron-d6	90.1	P	30 - 160
USGS O-2060-01	Diuron-d6	116	P	30 - 160
USGS O-2060-01	Primidone-d5	163	F	30 - 160
USGS O-2060-01	Sucralose-d6	102	P	40 - 160

Lab Sample ID: 1927876

Field Sample ID: G1SW0053

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	154	P	30 - 160
EPA 8321B	Carbamazepine-d10	125	P	30 - 160
EPA 8321B	Diuron-d6	97.4	P	30 - 160
EPA 8321B	Primidone-d5	170	F	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1927876
Field Sample ID: G1SW0053

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	64.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	126	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	154	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	125	P	30 - 160
USGS O-2060-01	Diuron-d6	97.4	P	30 - 160
USGS O-2060-01	Primidone-d5	170	F	30 - 160
USGS O-2060-01	Sucralose-d6	64.6	P	40 - 160

Lab Sample ID: 1927877
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	56.8	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	35.5	P	32 - 103
EPA 8276	Decachlorobiphenyl	60.1	P	31 - 100

Lab Sample ID: 1927878
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	68.0	P	53 - 135
EPA 8270D	Simazine-d10	85.4	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A78813
Included Lab Sample IDs: 1927875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	75.8	88.2	P/P	70 - 160

Reference Method: EPA 8321B
Run ID: A78821
Included Lab Sample IDs: 1927875, 1927876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	115	116	P/P	60 - 150

Reference Method: SM 2120 B
Run ID: A78828
Included Lab Sample IDs: 1927869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	104	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A78829

Included Lab Sample IDs: 1927869

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A78860

Included Lab Sample IDs: 1927871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.1	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78876

Included Lab Sample IDs: 1927870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78895

Included Lab Sample IDs: 1927870

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78919

Included Lab Sample IDs: 1927889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	107	104	P/P	90 - 110
Iron	106	104	P/P	90 - 110
Magnesium	105	103	P/P	90 - 110
Potassium	99.0	98.0	P/P	90 - 110
Sodium	98.1	96.6	P/P	90 - 110
Zinc	103	104	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78940

Included Lab Sample IDs: 1927869

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78941

Included Lab Sample IDs: 1927870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	96.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78951

Included Lab Sample IDs: 1927889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	98.5	99.4	P/P	90 - 110
Copper	102	99.4	P/P	90 - 110
Lead	100	101	P/P	90 - 110
Nickel	101	98.0	P/P	90 - 110
Silver	96.6	97.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78957

Included Lab Sample IDs: 1927875

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

Reference Method: SM 2320 B-97

Run ID: A78958

Included Lab Sample IDs: 1927869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.1	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78958

Included Lab Sample IDs: 1927869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78966

Included Lab Sample IDs: 1927870

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

Reference Method: EPA 8270D

Run ID: A78977

Included Lab Sample IDs: 1927877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	91.7		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	91.1		P	80 - 120
Beta-BHC	112		P	80 - 120
Carbophenothion	115		P	80 - 120
Chlorothalonil	136*		F	80 - 120
Cypermethrin	101		P	80 - 120
DDD-p,p'	116		P	80 - 120
DDE-p,p'	92.5		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	116		P	80 - 120
Dicofol	119		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A78977

Included Lab Sample IDs: 1927877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dieldrin	109		P	80 - 120
Endosulfan I	87.8		P	80 - 120
Endosulfan II	105		P	80 - 120
Endosulfan Sulfate	103		P	80 - 120
Endrin	105		P	80 - 120
Endrin Aldehyde	106		P	80 - 120
Endrin Ketone	100		P	80 - 120
Gamma-BHC	107		P	80 - 120
Gamma-Chlordane	95.0		P	80 - 120
Heptachlor	95.4		P	80 - 120
Heptachlor Epoxide	99.6		P	80 - 120
Methoxychlor	105		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	99.0		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8276

Run ID: A78984

Included Lab Sample IDs: 1927877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	105		P	80 - 120
Toxaphene	115		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79021

Included Lab Sample IDs: 1927889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	104	100	P/P	90 - 110
Cadmium	103	105	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A79030

Included Lab Sample IDs: 1927875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	98.8	P/P	50 - 150
Acetaminophen	103	102	P/P	60 - 150
Bentazon	100	110	P/P	50 - 150
Carbamazepine	116	121	P/P	60 - 150
Diuron	98.8	108	P/P	60 - 150
Fenuron	100	102	P/P	60 - 150
Fluridone	102	109	P/P	60 - 160
Imidacloprid	95.1	98.5	P/P	60 - 150
Linuron	91.6	109	P/P	60 - 150
MCPP	91.6	99.5	P/P	50 - 150
Primidone	97.7	106	P/P	60 - 150
Triclopyr	101	96.3	P/P	50 - 150

Quality Assurance Report

Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A79031

Included Lab Sample IDs: 1927870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.9	95.5	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A79126

Included Lab Sample IDs: 1927878

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	98.1		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	85.8		P	80 - 120
Azinphos Methyl	86.3		P	80 - 120
Bromacil	97.3		P	80 - 120
Butylate	99.3		P	80 - 120
Chlorpyrifos Ethyl	99.5		P	80 - 120
Chlorpyrifos Methyl	98.5		P	80 - 120
Cyanazine	105		P	80 - 120
Demeton	98.1		P	80 - 120
Diazinon	98.4		P	80 - 120
Disulfoton	95.0		P	80 - 120
EPTC	101		P	80 - 120
Ethion	96.4		P	80 - 120
Ethoprop	98.2		P	80 - 120
Fenamiphos	96.2		P	80 - 120
Fipronil	97.0		P	80 - 120
Fipronil Sulfide	98.6		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	94.6		P	80 - 120
Hexazinone	98.7		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	104		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	97.3		P	80 - 120
Mevinphos	95.3		P	80 - 120
Molinate	92.7		P	80 - 120
Norflurazon	97.9		P	80 - 120
Parathion Ethyl	95.4		P	80 - 120
Parathion Methyl	97.5		P	80 - 120
Pendimethalin	87.2		P	80 - 120
Phorate	94.0		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	104		P	80 - 120
Simazine	91.7		P	80 - 120
Terbufos	95.9		P	80 - 120
Terbuthylazine	99.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01
 Run ID: A79179
 Included Lab Sample IDs: 1927876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	120	P/P	50 - 150
Acetaminophen	96.5	101	P/P	60 - 150
Bentazon	119	128	P/P	50 - 150
Carbamazepine	112	112	P/P	60 - 150
Diuron	106	103	P/P	60 - 150
Fenuron	101	103	P/P	60 - 150
Fluridone	117	116	P/P	60 - 160
Imidacloprid	96.4	99.9	P/P	60 - 150
Linuron	97.0	107	P/P	60 - 150
MCPD	107	97.1	P/P	50 - 150
Primidone	95.4	103	P/P	60 - 150
Triclopyr	103	109	P/P	50 - 150

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.87	
EPA 200.7 Rev. 4.4	Calcium	106		101	103				0.816
	Iron	109		107	107	109			1.80
	Magnesium	105		106	104				0.980
	Potassium	98.2		98.0	98.7				0.348
	Sodium	96.3		95.8	96.0				1.47
	Zinc	102		99.4	101	102			1.18
EPA 200.8 Rev. 5.4	Arsenic	102		102	105	103			2.39
	Cadmium	97.6		101	102	101			1.36
	Chromium	97.1		96.6	97.6	95.6			2.06
	Copper	98.6		97.4	98.5	97.2			1.29
	Lead	98.9		101	104	103			1.13
	Nickel	99.4		99.1	100	97.7			2.53
	Silver	102		105	105	103			1.94
EPA 300.0 Rev. 2.1	Chloride	100		94.5	95.9			9.59	
	Sulfate	101		92.0	98.6			5.51	
EPA 350.1 Rev. 2.0	Ammonia-N	105		100	98.8				0.844
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108		98.4	97.5				0.560
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	107		108	108				0.926
EPA 365.1 Rev. 2.0	Total-P	96.9		93.6	92.6				0.997
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		95.7	96.5				0.832
EPA 8270D	Acetochlor	81.2	97.2	92.8	95.5		17.9		2.89
	Alachlor	83.7	96.5	88.9	90.1		14.2		1.41
	Aldrin	16.3	18.3	30.8	29.0		11.4		5.91
	Alpha-BHC	77.8	68.1	88.2	85.0		13.3		3.78
	Alpha-Chlordane	80.1	78.6	111	90.8		1.94		11.2
	Ametryn	74.3	94.5	93.2	86.6		24.0		6.32
	Atrazine	63.4	89.5	86.3	111		34.2		5.19

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Atrazine Desethyl	29.0	95.9	104	114	107	9.23
	Azinphos Methyl	89.7	118	110	116	27.2	5.54
	Beta-BHC	93.3	118	93.5	136	23.0	36.9
	Bromacil	47.6	90.4	97.8	99.7	62.1	2.00
	Butylate	47.7	40.2	47.5	40.4	16.9	16.3
	Carbophenothion	59.8	66.7	128	126	11.0	1.11
	Chlorothalonil	85.3	64.3	121	140	28.0	14.4
	Chlorpyrifos Ethyl	67.8	83.5	69.6	66.0	20.8	5.33
	Chlorpyrifos Methyl	67.5	90.5	87.0	86.3	29.1	0.894
	Cyanazine	56.1	162	273	276	96.9	1.01
	Cypermethrin	92.4	89.1	95.3	110	3.63	14.7
	DDD-p,p'	95.0	108	98.4	114	12.7	14.8
	DDE-p,p'	80.1	70.0	97.3	84.4	13.5	14.3
	DDT-p,p'	84.6	88.9	91.5	89.0	5.00	2.76
	Delta-BHC	105	115	123	163	8.66	28.0
	Demeton	65.6	74.7	97.9	110	12.9	12.0
	Diazinon	84.9	108	106	109	23.9	3.62
	Dicofol	73.1	80.0	29.6	50.4	8.99	51.9
	Dieldrin	93.7	83.7	119	105	11.3	12.8
	Disulfoton	74.5	83.7	96.1	104	11.6	7.55
	Endosulfan I	76.9	78.9	100	87.4	2.57	13.5
	Endosulfan II	111	99.4	123	141	11.4	13.6
	Endosulfan Sulfate	89.0	98.0	89.1	113	9.63	23.4
	Endrin	104	94.1	107	108	10.0	0.852
	Endrin Aldehyde	94.0	84.9	53.4	75.0	10.2	33.7
	Endrin Ketone	93.0	83.5	78.6	96.9	10.7	20.8
	EPTC	46.8	37.8	34.6	43.3	21.2	22.4
	Ethion	60.1	78.6	67.9	61.6	26.7	9.77
	Ethoprop	57.1	79.9	97.1	107	33.2	9.28
	Fenamiphos	65.1	88.6	87.2	98.0	30.7	11.6
	Fipronil	71.4	108	102	101	41.2	0.578
	Fipronil Sulfide	51.5	74.9	78.1	80.3	36.9	2.48
	Fipronil Sulfone	46.3	81.3	70.1	74.8	55.0	5.26
	Fonofos	63.2	87.9	94.1	96.4	32.7	2.44
	Gamma-BHC	72.1	94.5	86.6	103	27.0	17.3
	Gamma-Chlordane	85.7	81.0	109	92.7	5.61	10.7
	Heptachlor	62.1	52.2	74.0	70.8	17.3	4.39
	Heptachlor Epoxide	82.5	86.3			4.47	5.27
	Hexazinone	60.8	85.9	86.4	94.0	34.2	7.74
	Malathion	63.6	85.5	75.6	76.7	29.4	1.35
	Metalaxyl	69.3	93.1	94.7	92.6	29.3	2.19
	Methoxychlor	92.5	95.8	98.9	93.3	3.50	5.84
	Metolachlor	80.0	89.5	88.2	91.3	11.2	3.32
	Metribuzin	77.0	145	160	158	61.0	1.74
	Mevinphos	41.7	70.6	82.5	92.0	51.5	10.9
	Mirex	72.6	68.9	82.7	78.7	5.17	5.03
	Molinate	52.1	45.9	48.4	51.3	12.7	5.83
	Norflurazon	48.2	97.0	91.5	93.1	67.2	1.71
	Parathion Ethyl	66.1	88.3	85.5	89.0	28.8	4.00
	Parathion Methyl	76.7	113	105	107	38.6	2.55
	Pendimethalin	66.5	79.4	74.5	75.7	17.7	1.63
	Permethrin	85.3	80.6	91.1	95.5	5.68	4.78
	Phorate	66.4	74.2	89.0	99.3	11.0	11.0
	Prometon	76.8	97.7	112	112	24.0	0.225

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Prometryn	75.2	96.2	88.6	88.7	24.5	0.121
	Simazine	68.6	103	109	91.0	40.1	18.0
	Terbufos	68.6	84.5	93.4	103	20.8	10.2
	Terbutylazine	68.4	91.9	89.2	95.6	29.4	6.89
	Trifluralin	104	113	159	160	8.75	0.312
EPA 8276	Chlordane	116	121	113	111	3.49	1.97
	Toxaphene	136	148	136	127	8.82	6.75
EPA 8321B	Glyphosate	86.7		96.6	141		35.8
	Pyraclostrobin	119		96.0	96.1		0.104
	Sucralose	96.6		34.7	9.82		39.6
SM 2120 B	Color (true)					5.02	
SM 2320 B-97	Total Alkalinity	101				0.249	
SM 2540 C-97	TDS					2.29	
SM 4500 F-C-97	Fluoride	95.4		98.1	97.4		0.473
SM 5310 B-00	Organic Carbon	95.8		93.6	95.0		1.33
USGS O-2060-01	2,4-D	53.0		58.1	60.9		3.87
	Acetaminophen	134		64.5	63.0		2.42
	Bentazon	41.4		30.9	29.1		5.87
	Carbamazepine	124		100	98.5		1.73
	Diuron	103		80.4	79.7		0.775
	Fenuron	114		89.9	91.9		2.22
	Fluridone	68.5		54.5	54.6		0.257
	Imidacloprid	94.9		228	228		0.0876
	Linuron	86.9		95.7	94.0		1.86
	MCPP	52.9		51.0	51.3		0.743
	Primidone	111		111	107		3.77
	Triclopyr	54.0		48.6	50.6		4.03

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1927869
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1927889
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1927889
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1927869
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1927869
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1927870
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1927870
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1927870
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1927870
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1927871
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1927877
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1927878

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1927877
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1927875, 1927876
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1927875
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1927875
SM 2120 B / E31780	True Color measured at 450 nm	1927869
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1927869
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1927869
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1927869
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1927869
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1927870
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1927875, 1927876
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1927875, 1927876

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	09/06/2017			09/06/2017 17:24	DeAsia Armster	1927869
EPA 200.7 Rev. 4.4	09/06/2017	09/13/2017	Elliott D. Healy	09/14/2017	Betina Topolski	1927889
EPA 200.8 Rev. 5.4	09/06/2017	09/13/2017	Elliott D. Healy	09/15/2017	Nadine Brooks	1927889
	09/06/2017	09/13/2017	Elliott D. Healy	09/19/2017	Nadine Brooks	1927889
EPA 300.0 Rev. 2.1	09/06/2017			09/15/2017	Julia Storbeck	1927869
EPA 350.1 Rev. 2.0	09/06/2017			09/13/2017	Sofia Elnemr	1927870
EPA 351.2 Rev. 2.0	09/06/2017	09/13/2017	Adrian Shelby	09/18/2017	Joseph Suarez	1927870
EPA 353.2 Rev. 2.0	09/06/2017			09/13/2017	Beverly Y. Sanders	1927870
EPA 365.1 Rev. 2.0	09/06/2017	09/13/2017	Sima Feizi	09/15/2017	Lipi Saha	1927870
EPA 365.1 Rev. 2.0 dissolved	09/06/2017			09/06/2017 14:20	Megan Treadwell	1927871
EPA 8270D	09/06/2017	09/06/2017	John Kaba	09/14/2017	Marek Topolski	1927877
	09/06/2017	09/07/2017	John Kaba	09/21/2017	Marek Topolski	1927878
EPA 8276	09/06/2017	09/06/2017	John Kaba	09/15/2017	Vandana T. Nagar	1927877
EPA 8321B	09/06/2017	09/06/2017	Hoor Shaik	09/07/2017	Julie Michelle Frank	1927875, 1927876
	09/06/2017	09/06/2017	Julie Michelle Frank	09/06/2017	Julie Michelle Frank	1927875
	09/06/2017	09/07/2017	Hoor Shaik	09/14/2017	Julie Michelle Frank	1927875
SM 2120 B	09/06/2017			09/06/2017 16:01	Tanya Welborn	1927869
SM 2320 B-97	09/06/2017			09/15/2017	Dale L. Simmons	1927869
SM 2540 C-97	09/06/2017			09/08/2017	Yijie Li	1927869
SM 2540 D-97	09/06/2017			09/08/2017	Yijie Li	1927869
SM 4500 F-C-97	09/06/2017			09/15/2017	Dale L. Simmons	1927869
SM 5310 B-00	09/06/2017			09/19/2017	Ping Hua	1927870
USGS O-2060-01	09/06/2017	09/06/2017	Hoor Shaik	09/20/2017	Julie Michelle Frank	1927875
	09/06/2017	09/06/2017	Hoor Shaik	09/27/2017	Julie Michelle Frank	1927876