

Chemical Analysis Report

WQ-ASSESS-2017-05-03-01

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

Event Description: **Big Branch, Coon, Stafford**

Request ID: **RQ-2017-04-24-13**

Customer: **WQ-ASSESS**

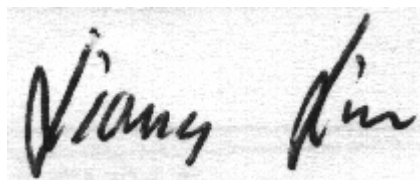
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
Division Of Water Facilities, FL DEP
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
Attn: curtis musson

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: Liang Lin, Environmental Administrator

Date Certified: 30-MAY-2017 15:21

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

Case Narrative

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

Results for the following analytical groups are included in this report: 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: STONE MILL CREEK UPSTREAM OF DIANNA ST **Collection Date/Time: 05/03/2017 09:40**

Field ID: G2WA0012_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896083	EPA 180.1 Rev. 2.0	Turbidity	1.6	A	NTU	P324686	
	EPA 300.0 Rev. 2.1	Chloride	5.8		mg Cl/L	P324966	
		Sulfate	4.6		mg SO4/L	P324969	
	SM 2120 B	Color (true)	32		PCU	P324629	
	SM 2320 B-97	Total Alkalinity	23		mg CaCO3/L	P325400	
	SM 2540 C-97	TDS	44		mg/L	P325017	
	SM 2540 D-97	TSS	2	I	mg/L	P325258	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P325596	
1896088	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P324635	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.13	I	mg N/L	P324763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P324677	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P324697	
	SM 5310 B-00	Organic Carbon	2.5		mg C/L	P324627	
1896093	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324705	

Ref. Method and Comment:

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

Sample Location: STONE MILL CREEK UPSTREAM OF ROAD 5 **Collection Date/Time: 05/03/2017 10:00**

Field ID: G2WA0013_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896084	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P324686	
	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P324966	
		Sulfate	6.5		mg SO4/L	P324969	
	SM 2120 B	Color (true)	42		PCU	P324629	
	SM 2320 B-97	Total Alkalinity	5.2		mg CaCO3/L	P325400	
	SM 2540 C-97	TDS	36		mg/L	P325017	
	SM 2540 D-97	TSS	3	I	mg/L	P325258	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P325596	
1896089	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P324635	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P324763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.40		mg N/L	P324677	
	EPA 365.1 Rev. 2.0	Total-P	0.005		mg P/L	P324697	
	SM 5310 B-00	Organic Carbon	3.2		mg C/L	P324627	
1896094	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324705	

Ref. Method and Comment:

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

Sample Location: COON CREEK 100 METER UPSTREAM OF CR 69 **Collection Date/Time: 05/03/2017 11:20**

Field ID: G2WA0005_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896085	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P324686	

Field ID: G2WA0005_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896085	EPA 300.0 Rev. 2.1	Chloride	7.9		mg Cl/L	P324966	
		Sulfate	0.71		mg SO4/L	P324969	
	SM 2120 B	Color (true)	65	A	PCU	P324629	
	SM 2320 B-97	Total Alkalinity	3.2		mg CaCO3/L	P325400	
	SM 2540 C-97	TDS	38		mg/L	P325017	
	SM 2540 D-97	TSS	2	I	mg/L	P325259	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P325739	RPD
1896090	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P324635	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P324763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.30		mg N/L	P324677	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P324697	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P324627	
1896095	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324705	

Ref. Method and Comment:

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

Sample Location: STAFFORD CREEK 100 METERS UPSTREAM OF SR 69 Collection Date/Time: 05/03/2017 12:25

Field ID: G2WA0004_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896086	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P324686	
	EPA 300.0 Rev. 2.1	Chloride	7.4		mg Cl/L	P324966	
		Sulfate	0.96		mg SO4/L	P324969	
	SM 2120 B	Color (true)	60		PCU	P324629	
	SM 2320 B-97	Total Alkalinity	25		mg CaCO3/L	P325400	
	SM 2540 C-97	TDS	49		mg/L	P325018	
	SM 2540 D-97	TSS	3	I	mg/L	P325259	
1896091	SM 4500 F-C-97	Fluoride	0.045	I	mg F/L	P325739	RPD
	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P324635	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34		mg N/L	P324763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P324677	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P324697	
1896096	SM 5310 B-00	Organic Carbon	6.0		mg C/L	P324627	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P324705	

Ref. Method and Comment:

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

Sample Location: STAFFORD CREEK 100 METERS UPSTREAM OF SR 69 Collection Date/Time: 05/03/2017 12:25

Field ID: G2WA0004_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896109	EPA 8321B	Sucralose**	0.016	I	ug/L	P324480	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P324481	
		Diuron	8.0E-04	U	ug/L	P324481	

Field ID: G2WA0004_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896109	USGS O-2060-01	Fenuron	0.0040	U	ug/L	P324481	
		Imidacloprid	8.0E-04	U	ug/L	P324481	MS
		Bentazon	8.0E-04	U	ug/L	P324481	
		Linuron	0.0040	U	ug/L	P324481	
		Acetaminophen**	0.0080	U	ug/L	P324481	
		MCP	8.0E-04	U	ug/L	P324481	
		Carbamazepine**	4.0E-04	U	ug/L	P324481	
		Tricopyr**	0.0040	U	ug/L	P324481	
		Primidone**	0.0040	U	ug/L	P324481	
		Fluridone**	4.0E-04	U	ug/L	P324481	MS

Ref. Method and Comment:

USGS O-2060-01: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: STAFFORD CREEK 100 METERS UPSTREAM Collection Date/Time: 05/03/2017 12:25
OF SR 69

Field ID: G2WA0004_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896111	EPA 8321B	Glyphosate**	10	U	ug/L	P324511	
1896112		Pyraclostrobin**	0.0020	U	ug/L	P324509	
1896113	EPA 8270D	Aldrin	4.3	UJ	ng/L	P324658	LCS, MS, RPD
		Alpha-BHC	2.2	U	ng/L	P324658	MS
		Beta-BHC	4.3	U	ng/L	P324658	
		Delta-BHC	4.3	U	ng/L	P324658	
		Gamma-BHC	4.3	U	ng/L	P324658	
		Carbophenothion	4.3	U	ng/L	P324658	
		Chlorothalonil	2.2	UJ	ng/L	P324658	CCV
		Cypermethrin	22	U	ng/L	P324658	
		DDD-p,p'	2.2	U	ng/L	P324658	
		DDE-p,p'	3.2	U	ng/L	P324658	
		DDT-p,p'	3.2	U	ng/L	P324658	
		Dieldrin	4.3	U	ng/L	P324658	
		Endosulfan I	4.3	U	ng/L	P324658	
		Endosulfan II	4.3	U	ng/L	P324658	MS
		Endosulfan Sulfate	2.2	U	ng/L	P324658	
		Endrin	2.2	U	ng/L	P324658	
		Endrin Aldehyde	2.2	U	ng/L	P324658	MS, RPD
		Heptachlor	1.6	U	ng/L	P324658	
		Heptachlor Epoxide	2.2	U	ng/L	P324658	MS
		Methoxychlor	4.3	U	ng/L	P324658	
		Mirex	2.2	U	ng/L	P324658	
		Permethrin	11	U	ng/L	P324658	
		Trifluralin	1.1	UJ	ng/L	P324658	LCS, MS
		Alpha-Chlordane	1.1	U	ng/L	P324658	
		Gamma-Chlordane	1.1	U	ng/L	P324658	
		Endrin Ketone	2.2	U	ng/L	P324658	MS

Field ID: G2WA0004_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896113	EPA 8270D	Dicofol	32	UJ	ng/L	P324658	CCV
	EPA 8276	Chlordane**	2.7	U	ng/L	P324658	
		Toxaphene**	14	U	ng/L	P324658	
1896114	EPA 8270D	Ametryn	0.32	U	ng/L	P324670	
		Atrazine	0.38	I	ng/L	P324670	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P324670	
		Chlorpyrifos Methyl	0.098	U	ng/L	P324670	
		Disulfoton	0.32	U	ng/L	P324670	
		Ethion	0.15	U	ng/L	P324670	
		Ethoprop	0.098	UJ	ng/L	P324670	MS
		Hexazinone	0.49	UJ	ng/L	P324670	MS
		Malathion	0.34	U	ng/L	P324670	
		Metribuzin	0.20	U	ng/L	P324670	
		Mevinphos	0.49	U	ng/L	P324670	
		Norflurazon	0.49	U	ng/L	P324670	
		Phorate	0.24	U	ng/L	P324670	
		Prometryn	0.20	U	ng/L	P324670	
		Simazine	0.49	U	ng/L	P324670	
		Atrazine Desethyl	1.5	U	ng/L	P324670	
		Prometon	0.88	U	ng/L	P324670	
		Fipronil	0.24	U	ng/L	P324670	
		Molinate	0.29	U	ng/L	P324670	
		Pendimethalin	1.5	U	ng/L	P324670	
		Terbufos	0.098	U	ng/L	P324670	
		EPTC	1.2	U	ng/L	P324670	
		Terbutylazine	0.41	U	ng/L	P324670	
		Bromacil	0.49	U	ng/L	P324670	
		Fipronil Sulfide	0.15	U	ng/L	P324670	
		Fipronil Sulfone	0.15	U	ng/L	P324670	
		Alachlor	0.24	U	ng/L	P324670	
		Azinphos Methyl	2.2	U	ng/L	P324670	
		Butylate	0.39	U	ng/L	P324670	
		Demeton	2.0	U	ng/L	P324670	
		Diazinon	0.12	U	ng/L	P324670	
		Fenamiphos	0.24	U	ng/L	P324670	
		Fonofos	0.20	U	ng/L	P324670	
		Metalaxyl	0.20	U	ng/L	P324670	
		Metolachlor	1.2		ng/L	P324670	
		Acetochlor	0.24	U	ng/L	P324670	
		Cyanazine	0.49	U	ng/L	P324670	
		Parathion Ethyl	0.24	U	ng/L	P324670	
		Parathion Methyl	0.24	U	ng/L	P324670	

Ref. Method and Comment:
EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Sample Location: BIG BRANCH 50 METERS UPSTREAM OF CR 67 **Collection Date/Time: 05/03/2017 13:55**

Field ID: G1WA0001_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896087	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P324686	
	EPA 300.0 Rev. 2.1	Chloride	2.8		mg Cl/L	P324966	
		Sulfate	0.64		mg SO4/L	P324969	
	SM 2120 B	Color (true)	110		PCU	P324629	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P325401	
	SM 2540 C-97	TDS	38		mg/L	P325018	
	SM 2540 D-97	TSS	3	I	mg/L	P325259	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P325404	RPD
1896092	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P324635	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P324763	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P324677	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P324697	
	SM 5310 B-00	Organic Carbon	7.2		mg C/L	P324627	
1896097	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324705	

Ref. Method and Comment:

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

Sample Location: BIG BRANCH 50 METERS UPSTREAM OF CR 67 **Collection Date/Time: 05/03/2017 13:55**

Field ID: G1WA0001_05032017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1896110	EPA 8321B	Sucralose**	0.010	U	ug/L	P324480	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P324481	
		Diuron	8.0E-04	U	ug/L	P324481	
		Fenuron	0.0040	U	ug/L	P324481	
		Imidacloprid	8.0E-04	U	ug/L	P324481	MS
		Bentazon	8.0E-04	U	ug/L	P324481	
		Linuron	0.0040	U	ug/L	P324481	
		Acetaminophen**	0.0080	U	ug/L	P324481	
		MCP	8.0E-04	U	ug/L	P324481	
		Carbamazepine**	4.0E-04	U	ug/L	P324481	
		Triclopyr**	0.0040	U	ug/L	P324481	
		Primidone**	0.0040	U	ug/L	P324481	
		Fluridone**	4.0E-04	U	ug/L	P324481	MS

Ref. Method and Comment:

USGS O-2060-01: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P324686

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324966

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P324969

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P324635

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P324763

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P324677

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P324697

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P324705

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

Reference Method: EPA 8270D
 Batch ID: P324658

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'	2.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D**Batch ID: P324658**

Component	Result	Code	Units
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D**Batch ID: P324670**

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P324670

Component	Result	Code	Units
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P324658

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

Reference Method: EPA 8321B
Batch ID: P324480

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P324509

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P324511

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P324629

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P325400

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

Reference Method: SM 2320 B-97
Batch ID: P325401

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P325017

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P325018

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P325258

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P325259

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325404

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325596

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325739

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P324627

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

Reference Method: USGS O-2060-01
Batch ID: P324481

Component	Result	Code	Units
2,4-D	8.0E-04	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P324481

Component	Result	Code	Units
Diuron	8.0E-04	U	ug/L
Fenuron	0.0040	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	8.0E-04	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 300.0 Rev. 2.1
Batch ID: P324966

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324969

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	94.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324763

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324677

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324697

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P324705

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

Reference Method: EPA 8270D

Batch ID: P324658

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	20.7	11.9	F/F	30 - 83.0
Alpha-BHC	89.7	83.0	P/P	62 - 119
Alpha-Chlordane	81.9	83.4	P/P	56 - 119
Beta-BHC	93.8	121	P/P	54 - 141
Carbophenothion	66.4	75.8	P/P	33 - 147
Chlorothalonil	67.7	89.5	P/P	25 - 175
Cypermethrin	83.0	87.9	P/P	50 - 155
DDD-p,p'	93.1	94.9	P/P	56 - 135
DDE-p,p'	86.0	84.9	P/P	48 - 120
DDT-p,p'	83.3	84.4	P/P	51 - 121
Delta-BHC	124	118	P/P	65 - 163
Dicofol	90.3	68.7	P/P	15 - 112
Dieldrin	86.6	88.1	P/P	59 - 134
Endosulfan I	85.8	86.3	P/P	65 - 142
Endosulfan II	76.4	93.6	P/P	65 - 154
Endosulfan Sulfate	86.5	84.6	P/P	65 - 136
Endrin	86.3	87.0	P/P	53 - 156
Endrin Aldehyde	91.3	87.6	P/P	47 - 156
Endrin Ketone	90.4	88.8	P/P	70 - 124
Gamma-BHC	95.4	95.1	P/P	64 - 142
Gamma-Chlordane	81.9	83.7	P/P	55 - 114
Heptachlor	69.1	59.7	P/P	42 - 105
Heptachlor Epoxide	82.6	83.5	P/P	67 - 120
Methoxychlor	97.8	103	P/P	63 - 134
Mirex	76.2	71.3	P/P	40 - 90.0
Permethrin	84.0	85.2	P/P	36 - 144
Trifluralin	170	214	P/F	40 - 170

Reference Method: EPA 8270D

Batch ID: P324670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	90.2	95.6	P/P	78 - 118
Alachlor	91.1	95.1	P/P	77 - 119
Ametryn	101	102	P/P	61 - 136
Atrazine	97.2	99.7	P/P	73 - 120
Atrazine Desethyl	88.6	84.9	P/P	16 - 122
Azinphos Methyl	94.5	95.5	P/P	69 - 186
Bromacil	93.5	101	P/P	40 - 125
Butylate	48.9	47.2	P/P	32 - 87.0
Chlorpyrifos Ethyl	89.4	79.4	P/P	53 - 110
Chlorpyrifos Methyl	80.5	82.7	P/P	31 - 119
Cyanazine	178	203	P/P	36 - 224
Demeton	87.8	85.2	P/P	39 - 122
Diazinon	98.3	105	P/P	75 - 119
Disulfoton	89.4	87.0	P/P	42 - 139

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P324670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
EPTC	44.7	45.8	P/P	33 - 96.0
Ethion	85.8	83.7	P/P	63 - 127
Ethoprop	83.0	79.6	P/P	65 - 107
Fenamiphos	87.2	85.1	P/P	64 - 137
Fipronil	93.9	98.6	P/P	60 - 126
Fipronil Sulfide	76.3	75.3	P/P	58 - 124
Fipronil Sulfone	73.1	70.7	P/P	57 - 126
Fonofos	91.2	94.7	P/P	65 - 111
Hexazinone	84.3	87.6	P/P	46 - 151
Malathion	82.5	92.3	P/P	68 - 132
Metalaxyl	92.8	93.9	P/P	51 - 132
Metolachlor	87.9	91.4	P/P	78 - 119
Metribuzin	74.1	66.3	P/P	64 - 138
Mevinphos	66.4	70.9	P/P	34 - 128
Molinate	55.9	52.0	P/P	44 - 101
Norflurazon	85.6	90.0	P/P	63 - 129
Parathion Ethyl	91.2	91.2	P/P	80 - 109
Parathion Methyl	97.9	101	P/P	74 - 125
Pendimethalin	90.0	92.9	P/P	48 - 134
Phorate	83.0	93.1	P/P	52 - 119
Prometon	93.9	95.1	P/P	69 - 124
Prometryn	85.3	84.6	P/P	66 - 124
Simazine	87.5	92.6	P/P	61 - 134
Terbufos	91.6	93.4	P/P	58 - 115
Terbutylazine	87.0	92.3	P/P	77 - 113

Reference Method: EPA 8276

Batch ID: P324658

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	102	112	P/P	44 - 118
Toxaphene	111	117	P/P	36 - 136

Reference Method: EPA 8321B

Batch ID: P324480

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	107		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P324509

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	92.8		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P324511

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	122		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
 Batch ID: P325400

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

Reference Method: SM 2320 B-97
 Batch ID: P325401

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

Reference Method: SM 4500 F-C-97
 Batch ID: P325404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.3		P	92 - 103

Reference Method: SM 4500 F-C-97
 Batch ID: P325596

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.6		P	92 - 103

Reference Method: SM 4500 F-C-97
 Batch ID: P325739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P324627

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P324481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	72.6		P	40 - 140
Acetaminophen	97.6		P	40 - 140
Bentazon	73.0		P	40 - 140
Carbamazepine	99.2		P	40 - 140
Diuron	105		P	40 - 140
Fenuron	105		P	40 - 140
Fluridone	90.9		P	40 - 140
Imidacloprid	109		P	40 - 160
Linuron	89.8		P	40 - 140
MCP	70.0		P	40 - 140
Primidone	110		P	40 - 140
Triclopyr	63.2		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324966

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895773	Chloride	96.6		P	90 - 110
1896086	Chloride	97.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324969

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895773	Sulfate	93.3		P	90 - 110
1896086	Sulfate	92.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896079	Ammonia-N	103	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896089	Kjeldahl Nitrogen	94.8	93.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896092	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896088	Total-P	102	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896093	O-Phosphate-P	98.9	99.3	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P324658

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895802	Aldrin	24.7	25.1	F/F	30 - 83.0
1895802	Alpha-BHC	63.5	52.4	P/F	62 - 119
1895802	Alpha-Chlordane	65.6	68.4	P/P	56 - 119
1895802	Beta-BHC	82.8	77.3	P/P	54 - 141
1895802	Carbophenothion	64.5	69.6	P/P	33 - 147
1895802	Chlorothalonil	74.7	81.8	P/P	25 - 175
1895802	Cypermethrin	73.8	74.7	P/P	50 - 155
1895802	DDD-p,p'	74.8	76.1	P/P	56 - 135

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P324658

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895802	DDE-p,p'	67.4	71.4	P/P	48 - 120
1895802	DDT-p,p'	66.4	69.2	P/P	51 - 121
1895802	Delta-BHC	123	133	P/P	65 - 163
1895802	Dicofol	50.8	52.2	P/P	15 - 112
1895802	Dieldrin	68.6	70.6	P/P	59 - 134
1895802	Endosulfan I	68.1	70.1	P/P	65 - 142
1895802	Endosulfan II	62.8	68.2	F/P	65 - 154
1895802	Endosulfan Sulfate	68.9	69.7	P/P	65 - 136
1895802	Endrin	69.8	73.1	P/P	53 - 156
1895802	Endrin Aldehyde	25.9	67.5	F/P	47 - 156
1895802	Endrin Ketone	68.2	69.2	F/F	70 - 124
1895802	Gamma-BHC	76.7	74.4	P/P	64 - 142
1895802	Gamma-Chlordane	66.3	69.3	P/P	55 - 114
1895802	Heptachlor	49.9	53.8	P/P	42 - 105
1895802	Heptachlor Epoxide	64.9	67.9	F/P	67 - 120
1895802	Methoxychlor	86.2	89.1	P/P	63 - 134
1895802	Mirex	62.3	64.3	P/P	40 - 90.0
1895802	Permethrin	72.9	73.4	P/P	36 - 144
1895802	Trifluralin	188	202	F/F	40 - 170

Reference Method: EPA 8270D

Batch ID: P324670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896114	Acetochlor	89.6	92.8	P/P	74 - 123
1896114	Alachlor	90.6	94.5	P/P	73 - 124
1896114	Ametryn	94.2	94.3	P/P	56 - 149
1896114	Atrazine	86.4	85.1	P/P	73 - 124
1896114	Atrazine Desethyl	71.1	62.6	P/P	12 - 103
1896114	Azinphos Methyl	87.5	76.7	P/P	60 - 202
1896114	Bromacil	83.2	82.5	P/P	42 - 133
1896114	Butylate	27.1	24.5	P/P	10 - 85.0
1896114	Chlorpyrifos Ethyl	74.6	73.9	P/P	53 - 113
1896114	Chlorpyrifos Methyl	71.5	71.0	P/P	40 - 115
1896114	Cyanazine	134	126	P/P	22 - 210
1896114	Demeton	60.2	60.9	P/P	17 - 149
1896114	Diazinon	90.7	96.8	P/P	72 - 124
1896114	Disulfoton	86.0	82.1	P/P	43 - 139
1896114	EPTC	21.8	22.8	P/P	10 - 86.0
1896114	Ethion	86.2	86.1	P/P	65 - 131
1896114	Ethoprop	58.6	63.2	F/P	59 - 110
1896114	Fenamiphos	82.9	77.2	P/P	57 - 138
1896114	Fipronil	76.4	65.7	P/P	40 - 130
1896114	Fipronil Sulfide	61.1	48.7	P/P	36 - 128
1896114	Fipronil Sulfone	47.6	35.8	P/P	16 - 145
1896114	Fonofos	66.8	67.0	P/P	60 - 112
1896114	Hexazinone	73.3	65.5	P/F	69 - 142
1896114	Malathion	88.8	84.6	P/P	68 - 132
1896114	Metalaxyl	88.5	88.4	P/P	66 - 118
1896114	Metolachlor	87.8	91.8	P/P	71 - 124
1896114	Metribuzin	94.3	77.0	P/P	61 - 140
1896114	Mevinphos	44.3	39.8	P/P	38 - 130

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P324670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896114	Molinate	28.4	35.6	P/P	23 - 99.0
1896114	Norflurazon	67.8	52.6	P/P	39 - 139
1896114	Parathion Ethyl	85.7	79.3	P/P	75 - 111
1896114	Parathion Methyl	85.7	78.9	P/P	64 - 130
1896114	Pendimethalin	91.4	92.0	P/P	26 - 173
1896114	Phorate	56.4	53.3	P/P	43 - 127
1896114	Prometon	88.8	91.8	P/P	50 - 144
1896114	Prometryn	91.1	92.0	P/P	69 - 126
1896114	Simazine	84.1	80.4	P/P	51 - 152
1896114	Terbufos	67.7	70.8	P/P	54 - 125
1896114	Terbutylazine	85.2	86.1	P/P	76 - 113

Reference Method: EPA 8276

Batch ID: P324658

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896162	Chlordane	88.9	74.3	P/P	44 - 118
1896162	Toxaphene	95.8	78.0	P/P	36 - 136

Reference Method: EPA 8321B

Batch ID: P324480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896109	Sucralose	118	95.0	P/P	40 - 140

Reference Method: EPA 8321B

Batch ID: P324509

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896161	Pyraclostrobin	126	105	P/P	40 - 140

Reference Method: EPA 8321B

Batch ID: P324511

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896111	Glyphosate	123	117	P/P	40 - 140

Reference Method: SM 4500 F-C-97

Batch ID: P325404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896397	Fluoride	97.0	101	P/P	91 - 105

Reference Method: SM 4500 F-C-97

Batch ID: P325596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893434	Fluoride	96.5	95.8	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P325739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1896078	Fluoride	99.7	104	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P324627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895743	Organic Carbon	98.8	97.0	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P324481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895708	2,4-D	67.9	68.7	P/P	40 - 140
1895708	Acetaminophen	92.2	101	P/P	40 - 140
1895708	Carbamazepine	85.4	79.5	P/P	40 - 140
1895708	Diuron	73.5	70.2	P/P	40 - 140
1895708	Fenuron	64.6	69.4	P/P	40 - 140
1895708	Fluridone	38.4	27.6	F/F	40 - 140
1895708	Imidacloprid	151	162	P/F	40 - 160
1895708	Linuron	75.5	67.2	P/P	40 - 140
1895708	MCPP	56.3	58.6	P/P	40 - 140
1895708	Primidone	84.5	90.3	P/P	40 - 140
1895708	Triclopyr	52.1	53.3	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896083	Turbidity	8.59	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895773	Chloride	0.195	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895773	Sulfate	0.320	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896079	Ammonia-N	1.51	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896089	Kjeldahl Nitrogen	1.28	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896092	NO2NO3-N	0.943	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896088	Total-P	3.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896093	O-Phosphate-P	0.404	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P324658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895802	Aldrin	1.86	Spike	P	0 - 30
1895802	Alpha-BHC	19.2	Spike	P	0 - 30
1895802	Alpha-Chlordane	4.21	Spike	P	0 - 30
1895802	Beta-BHC	6.81	Spike	P	0 - 30
1895802	Carbophenothion	7.57	Spike	P	0 - 30
1895802	Chlorothalonil	9.09	Spike	P	0 - 30
1895802	Cypermethrin	1.26	Spike	P	0 - 30
1895802	DDD-p,p'	1.75	Spike	P	0 - 30
1895802	DDE-p,p'	5.84	Spike	P	0 - 30
1895802	DDT-p,p'	4.06	Spike	P	0 - 30
1895802	Delta-BHC	7.98	Spike	P	0 - 30
1895802	Dicofol	2.72	Spike	P	0 - 30
1895802	Dieldrin	2.80	Spike	P	0 - 30
1895802	Endosulfan I	2.79	Spike	P	0 - 30
1895802	Endosulfan II	8.36	Spike	P	0 - 30
1895802	Endosulfan Sulfate	1.20	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P324658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895802	Endrin	4.53	Spike	P	0 - 30
1895802	Endrin Aldehyde	88.9	Spike	F	0 - 30
1895802	Endrin Ketone	1.39	Spike	P	0 - 30
1895802	Gamma-BHC	3.05	Spike	P	0 - 30
1895802	Gamma-Chlordane	4.48	Spike	P	0 - 30
1895802	Heptachlor	7.66	Spike	P	0 - 30
1895802	Heptachlor Epoxide	4.62	Spike	P	0 - 30
1895802	Methoxychlor	3.29	Spike	P	0 - 30
1895802	Mirex	3.20	Spike	P	0 - 30
1895802	Permethrin	0.675	Spike	P	0 - 30
1895802	Trifluralin	7.37	Spike	P	0 - 30
LFB	Aldrin	54.0	LCS	F	0 - 30
LFB	Alpha-BHC	7.82	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.87	LCS	P	0 - 30
LFB	Beta-BHC	25.6	LCS	P	0 - 30
LFB	Carbophenothion	13.3	LCS	P	0 - 30
LFB	Chlorothalonil	27.7	LCS	P	0 - 30
LFB	Cypermethrin	5.78	LCS	P	0 - 30
LFB	DDD-p,p'	1.94	LCS	P	0 - 30
LFB	DDE-p,p'	1.32	LCS	P	0 - 30
LFB	DDT-p,p'	1.34	LCS	P	0 - 30
LFB	Delta-BHC	5.00	LCS	P	0 - 30
LFB	Dicofol	27.2	LCS	P	0 - 30
LFB	Dieldrin	1.67	LCS	P	0 - 30
LFB	Endosulfan I	0.637	LCS	P	0 - 30
LFB	Endosulfan II	20.2	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.14	LCS	P	0 - 30
LFB	Endrin	0.784	LCS	P	0 - 30
LFB	Endrin Aldehyde	4.07	LCS	P	0 - 30
LFB	Endrin Ketone	1.83	LCS	P	0 - 30
LFB	Gamma-BHC	0.314	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.24	LCS	P	0 - 30
LFB	Heptachlor	14.6	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.08	LCS	P	0 - 30
LFB	Methoxychlor	5.33	LCS	P	0 - 30
LFB	Mirex	6.58	LCS	P	0 - 30
LFB	Permethrin	1.45	LCS	P	0 - 30
LFB	Trifluralin	23.1	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P324670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896114	Acetochlor	3.50	Spike	P	0 - 30
1896114	Alachlor	4.18	Spike	P	0 - 30
1896114	Ametryn	0.160	Spike	P	0 - 30
1896114	Atrazine	1.38	Spike	P	0 - 30
1896114	Atrazine Desethyl	12.8	Spike	P	0 - 30
1896114	Azinphos Methyl	13.1	Spike	P	0 - 30
1896114	Bromacil	0.916	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P324670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896114	Butylate	10.2	Spike	P	0 - 30
1896114	Chlorpyrifos Ethyl	0.902	Spike	P	0 - 30
1896114	Chlorpyrifos Methyl	0.746	Spike	P	0 - 30
1896114	Cyanazine	6.43	Spike	P	0 - 30
1896114	Demeton	1.14	Spike	P	0 - 30
1896114	Diazinon	6.54	Spike	P	0 - 30
1896114	Disulfoton	4.66	Spike	P	0 - 30
1896114	EPTC	4.77	Spike	P	0 - 30
1896114	Ethion	0.202	Spike	P	0 - 30
1896114	Ethoprop	7.41	Spike	P	0 - 30
1896114	Fenamiphos	7.13	Spike	P	0 - 30
1896114	Fipronil	15.0	Spike	P	0 - 30
1896114	Fipronil Sulfide	22.5	Spike	P	0 - 30
1896114	Fipronil Sulfone	28.4	Spike	P	0 - 30
1896114	Fonofos	0.306	Spike	P	0 - 30
1896114	Hexazinone	11.4	Spike	P	0 - 30
1896114	Malathion	4.88	Spike	P	0 - 30
1896114	Metalaxyl	0.0625	Spike	P	0 - 30
1896114	Metolachlor	3.97	Spike	P	0 - 30
1896114	Metribuzin	20.3	Spike	P	0 - 30
1896114	Mevinphos	10.7	Spike	P	0 - 30
1896114	Molinate	22.3	Spike	P	0 - 30
1896114	Norflurazon	25.2	Spike	P	0 - 30
1896114	Parathion Ethyl	7.75	Spike	P	0 - 30
1896114	Parathion Methyl	8.27	Spike	P	0 - 30
1896114	Pendimethalin	0.741	Spike	P	0 - 30
1896114	Phorate	5.74	Spike	P	0 - 30
1896114	Prometon	3.33	Spike	P	0 - 30
1896114	Prometryn	0.935	Spike	P	0 - 30
1896114	Simazine	4.49	Spike	P	0 - 30
1896114	Terbufos	4.53	Spike	P	0 - 30
1896114	Terbutylazine	1.12	Spike	P	0 - 30
LFB	Acetochlor	5.88	LCS	P	0 - 30
LFB	Alachlor	4.34	LCS	P	0 - 30
LFB	Ametryn	0.888	LCS	P	0 - 30
LFB	Atrazine	2.56	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.22	LCS	P	0 - 30
LFB	Azinphos Methyl	0.994	LCS	P	0 - 30
LFB	Bromacil	7.89	LCS	P	0 - 30
LFB	Butylate	3.57	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	11.9	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	2.64	LCS	P	0 - 30
LFB	Cyanazine	13.3	LCS	P	0 - 30
LFB	Demeton	3.09	LCS	P	0 - 30
LFB	Diazinon	6.41	LCS	P	0 - 30
LFB	Disulfoton	2.80	LCS	P	0 - 30
LFB	EPTC	2.35	LCS	P	0 - 30
LFB	Ethion	2.46	LCS	P	0 - 30
LFB	Ethoprop	4.20	LCS	P	0 - 30
LFB	Fenamiphos	2.43	LCS	P	0 - 30
LFB	Fipronil	4.90	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P324670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil Sulfide	1.29	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.33	LCS	P	0 - 30
LFB	Fonofos	3.85	LCS	P	0 - 30
LFB	Hexazinone	3.83	LCS	P	0 - 30
LFB	Malathion	11.2	LCS	P	0 - 30
LFB	Metalaxyl	1.23	LCS	P	0 - 30
LFB	Metolachlor	3.92	LCS	P	0 - 30
LFB	Metribuzin	11.2	LCS	P	0 - 30
LFB	Mevinphos	6.45	LCS	P	0 - 30
LFB	Molinate	7.39	LCS	P	0 - 30
LFB	Norflurazon	5.06	LCS	P	0 - 30
LFB	Parathion Ethyl	0.0727	LCS	P	0 - 30
LFB	Parathion Methyl	3.22	LCS	P	0 - 30
LFB	Pendimethalin	3.18	LCS	P	0 - 30
LFB	Phorate	11.4	LCS	P	0 - 30
LFB	Prometon	1.30	LCS	P	0 - 30
LFB	Prometryn	0.815	LCS	P	0 - 30
LFB	Simazine	5.66	LCS	P	0 - 30
LFB	Terbufos	1.98	LCS	P	0 - 30
LFB	Terbutylazine	5.91	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P324658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896162	Chlordane	17.9	Spike	P	0 - 30
1896162	Toxaphene	20.6	Spike	P	0 - 30
LFB	Chlordane	9.05	LCS	P	0 - 30
LFB	Toxaphene	4.86	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P324480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896109	Sucralose	21.0	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P324509

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896161	Pyraclostrobin	18.5	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P324511

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896111	Glyphosate	5.02	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P324629

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896085	Color (true)	4.78	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P325400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896144	Total Alkalinity	0.0829	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P325401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896397	Total Alkalinity	0.451	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P325017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895742	TDS	2.85	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P325018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896131	TDS	4.10	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P325404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896397	Fluoride	3.56	Spike	F	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893434	Fluoride	0.480	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1896078	Fluoride	3.49	Spike	F	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00

Batch ID: P324627

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895743	Organic Carbon	0.997	Spike	P	0 - 20

Reference Method: USGS O-2060-01

Batch ID: P324481

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895708	2,4-D	0.954	Spike	P	0 - 30
1895708	Acetaminophen	9.39	Spike	P	0 - 30
1895708	Carbamazepine	7.18	Spike	P	0 - 30
1895708	Diuron	4.45	Spike	P	0 - 30
1895708	Fenuron	7.28	Spike	P	0 - 30
1895708	Fluridone	29.6	Spike	P	0 - 30
1895708	Imidacloprid	5.93	Spike	P	0 - 30
1895708	Linuron	11.6	Spike	P	0 - 30
1895708	MCPP	3.78	Spike	P	0 - 30
1895708	Primidone	6.68	Spike	P	0 - 30
1895708	Triclopyr	2.35	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: 1896109

Field Sample ID: G2WA0004_05032017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	136	P	40 - 150
USGS O-2060-01	2,4-D-d3	71.5	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	109	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	91.7	P	30 - 160
USGS O-2060-01	Diuron-d6	78.9	P	30 - 150
USGS O-2060-01	Primidone-d5	105	P	30 - 150

Lab Sample ID: 1896110

Field Sample ID: G1WA0001_05032017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	140	P	40 - 150
USGS O-2060-01	2,4-D-d3	103	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	116	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	117	P	30 - 160
USGS O-2060-01	Diuron-d6	105	P	30 - 150
USGS O-2060-01	Primidone-d5	123	P	30 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1896111

Field Sample ID: G2WA0004_05032017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	107	P	40 - 150

Lab Sample ID: 1896112

Field Sample ID: G2WA0004_05032017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	95.8	P	30 - 150

Lab Sample ID: 1896113

Field Sample ID: G2WA0004_05032017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	58.0	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	36.4	P	31 - 111
EPA 8276	Decachlorobiphenyl	52.8	P	41 - 106

Lab Sample ID: 1896114

Field Sample ID: G2WA0004_05032017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	68.0	P	62 - 132
EPA 8270D	Simazine-d10	91.7	P	72 - 127

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A76189

Included Lab Sample IDs: 1896088, 1896089, 1896090, 1896091, 1896092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	94.4	P/P	90 - 110
Organic Carbon	94.4	99.0	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A76192

Included Lab Sample IDs: 1896083, 1896084, 1896085, 1896086, 1896087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.7	102	P/P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76193

Included Lab Sample IDs: 1896088, 1896089, 1896090, 1896091, 1896092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	103	P/P	90 - 110
Ammonia-N	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76200

Included Lab Sample IDs: 1896088, 1896089, 1896090, 1896091, 1896092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A76202

Included Lab Sample IDs: 1896083, 1896084, 1896085, 1896086, 1896087

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A76210

Included Lab Sample IDs: 1896093, 1896094, 1896095, 1896096, 1896097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	98.7	P/P	90 - 110
O-Phosphate-P	99.5	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76247

Included Lab Sample IDs: 1896088, 1896089, 1896090, 1896091, 1896092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A76269

Included Lab Sample IDs: 1896083, 1896084, 1896085, 1896086, 1896087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	102	P/P	90 - 110
Chloride	101	104	P/P	90 - 110
Sulfate	97.4	96.9	P/P	90 - 110
Sulfate	97.8	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A76296

Included Lab Sample IDs: 1896111

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	87.6	103	P/P	70 - 130

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76342

Included Lab Sample IDs: 1896088, 1896089, 1896090, 1896091, 1896092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	102	P/P	90 - 110
Kjeldahl Nitrogen	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A76405

Included Lab Sample IDs: 1896113

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Toxaphene	98.6		P	80 - 120

Reference Method: EPA 8321B

Run ID: A76435

Included Lab Sample IDs: 1896112

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	122	111	P/P	60 - 150

Reference Method: EPA 8270D

Run ID: A76453

Included Lab Sample IDs: 1896113

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	90.2		P	80 - 120
Alpha-BHC	96.1		P	80 - 120
Alpha-Chlordane	95.3		P	80 - 120
Beta-BHC	99.6		P	80 - 120
Carbophenothion	93.2		P	80 - 120
Chlorothalonil	79.3*		F	80 - 120
Cypermethrin	97.6		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	97.3		P	80 - 120
DDT-p,p'	103		P	80 - 120
Delta-BHC	95.4		P	80 - 120
Dicofol	141*		F	80 - 120
Dieldrin	95.7		P	80 - 120
Endosulfan I	92.7		P	80 - 120
Endosulfan II	80.1		P	80 - 120
Endosulfan Sulfate	99.7		P	80 - 120
Endrin	95.9		P	80 - 120
Endrin Aldehyde	93.1		P	80 - 120
Endrin Ketone	100		P	80 - 120
Gamma-BHC	96.0		P	80 - 120
Gamma-Chlordane	98.1		P	80 - 120
Heptachlor	91.5		P	80 - 120
Heptachlor Epoxide	96.2		P	80 - 120
Methoxychlor	100		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	98.5		P	80 - 120
Trifluralin	92.8		P	80 - 120

Reference Method: SM 2320 B-97

Run ID: A76469

Included Lab Sample IDs: 1896083, 1896084, 1896085, 1896086, 1896087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	102	P/P	90 - 110
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	102	101	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A76469

Included Lab Sample IDs: 1896087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	95.3	98.4	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A76477

Included Lab Sample IDs: 1896109, 1896110

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	89.6	P/P	50 - 150
2,4-D	99.0	105	P/P	50 - 150
Acetaminophen	114	110	P/P	60 - 150
Acetaminophen	122	116	P/P	60 - 150
Bentazon	91.0	108	P/P	50 - 150
Bentazon	91.0	91.0	P/P	50 - 150
Carbamazepine	105	107	P/P	60 - 150
Carbamazepine	107	118	P/P	60 - 150
Diuron	116	129	P/P	60 - 150
Diuron	118	114	P/P	60 - 150
Fenuron	101	105	P/P	60 - 150
Fenuron	113	101	P/P	60 - 150
Fluridone	116	105	P/P	60 - 150
Fluridone	119	116	P/P	60 - 150
Imidacloprid	117	115	P/P	60 - 150
Imidacloprid	96.0	116	P/P	60 - 150
Linuron	112	110	P/P	60 - 150
Linuron	112	109	P/P	60 - 150
MCPP	98.0	93.2	P/P	50 - 150
MCPP	98.0	98.0	P/P	50 - 150
Primidone	87.6	100	P/P	60 - 150
Primidone	92.0	87.6	P/P	60 - 150
Triclopyr	103	97.6	P/P	50 - 150
Triclopyr	93.0	103	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A76559

Included Lab Sample IDs: 1896109, 1896110

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	148	88.4	P/P	60 - 150

Reference Method: SM 4500 F-C-97

Run ID: A76561

Included Lab Sample IDs: 1896083, 1896084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	100	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A76619

Included Lab Sample IDs: 1896114

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

Reference Method: EPA 8270D

Run ID: A76619

Included Lab Sample IDs: 1896114

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.2		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine	100		P	80 - 120
Atrazine Desethyl	98.3		P	80 - 120
Azinphos Methyl	98.1		P	80 - 120
Bromacil	97.9		P	80 - 120
Butylate	99.3		P	80 - 120
Chlorpyrifos Ethyl	99.5		P	80 - 120
Chlorpyrifos Methyl	99.6		P	80 - 120
Cyanazine	98.7		P	80 - 120
Demeton	100		P	80 - 120
Diazinon	100		P	80 - 120
Disulfoton	95.7		P	80 - 120
EPTC	99.8		P	80 - 120
Ethion	96.5		P	80 - 120
Ethoprop	97.8		P	80 - 120
Fenamiphos	95.2		P	80 - 120
Fipronil	97.0		P	80 - 120
Fipronil Sulfide	95.9		P	80 - 120
Fipronil Sulfone	98.6		P	80 - 120
Fonofos	98.2		P	80 - 120
Hexazinone	98.7		P	80 - 120
Malathion	96.6		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	97.6		P	80 - 120
Mevinphos	99.3		P	80 - 120
Molinate	97.1		P	80 - 120
Norflurazon	97.3		P	80 - 120
Parathion Ethyl	94.7		P	80 - 120
Parathion Methyl	96.2		P	80 - 120
Pendimethalin	97.1		P	80 - 120
Phorate	97.2		P	80 - 120
Prometon	98.3		P	80 - 120
Prometryn	98.5		P	80 - 120
Simazine	96.6		P	80 - 120
Terbufos	95.0		P	80 - 120
Terbutylazine	100		P	80 - 120

Reference Method: SM 4500 F-C-97

Run ID: A76633

Included Lab Sample IDs: 1896085, 1896086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.0	104	P/P	90 - 110
Fluoride	99.1	98.0	P/P	90 - 110

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						8.59	
EPA 300.0 Rev. 2.1	Chloride	99.5		96.6	97.3		0.195	
	Sulfate	94.8		93.3	92.4		0.320	
EPA 350.1 Rev. 2.0	Ammonia-N	99.9		103	101			1.51
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.5		94.8	93.4			1.28
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104		102	103			0.943
EPA 365.1 Rev. 2.0	Total-P	99.5		102	98.4			3.13
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.8		98.9	99.3			0.404
EPA 8270D	Acetochlor	90.2	95.6	89.6	92.8	5.88		3.50
	Alachlor	91.1	95.1	90.6	94.5	4.34		4.18
	Aldrin	20.7	11.9	24.7	25.1	54.0		1.86
	Alpha-BHC	89.7	83.0	52.4	63.5	7.82		19.2
	Alpha-Chlordane	81.9	83.4	68.4	65.6	1.87		4.21
	Ametryn	101	102	94.2	94.3	0.888		0.160
	Atrazine	97.2	99.7	86.4	85.1	2.56		1.38
	Atrazine Desethyl	88.6	84.9	71.1	62.6	4.22		12.8
	Azinphos Methyl	94.5	95.5	87.5	76.7	0.994		13.1
	Beta-BHC	93.8	121	77.3	82.8	25.6		6.81
	Bromacil	93.5	101	83.2	82.5	7.89		0.916
	Butylate	48.9	47.2	27.1	24.5	3.57		10.2
	Carbophenothion	66.4	75.8	69.6	64.5	13.3		7.57
	Chlorothalonil	67.7	89.5	81.8	74.7	27.7		9.09
	Chlorpyrifos Ethyl	89.4	79.4	74.6	73.9	11.9		0.902
	Chlorpyrifos Methyl	80.5	82.7	71.5	71.0	2.64		0.746
	Cyanazine	178	203	134	126	13.3		6.43
	Cypermethrin	83.0	87.9	74.7	73.8	5.78		1.26
	DDD-p,p'	93.1	94.9	76.1	74.8	1.94		1.75
	DDE-p,p'	86.0	84.9	71.4	67.4	1.32		5.84
	DDT-p,p'	83.3	84.4	69.2	66.4	1.34		4.06
	Delta-BHC	124	118	133	123	5.00		7.98
	Demeton	87.8	85.2	60.2	60.9	3.09		1.14
	Diazinon	98.3	105	90.7	96.8	6.41		6.54
	Dicofol	90.3	68.7	52.2	50.8	27.2		2.72
	Dieldrin	86.6	88.1	70.6	68.6	1.67		2.80
	Disulfoton	89.4	87.0	86.0	82.1	2.80		4.66
	Endosulfan I	85.8	86.3	70.1	68.1	0.637		2.79
	Endosulfan II	76.4	93.6	68.2	62.8	20.2		8.36
	Endosulfan Sulfate	86.5	84.6	69.7	68.9	2.14		1.20
	Endrin	86.3	87.0	73.1	69.8	0.784		4.53
	Endrin Aldehyde	91.3	87.6	67.5	25.9	4.07		88.9
	Endrin Ketone	90.4	88.8	69.2	68.2	1.83		1.39
	EPTC	44.7	45.8	21.8	22.8	2.35		4.77
	Ethion	85.8	83.7	86.2	86.1	2.46		0.202
	Ethoprop	83.0	79.6	58.6	63.2	4.20		7.41
	Fenamiphos	87.2	85.1	82.9	77.2	2.43		7.13
	Fipronil	93.9	98.6	76.4	65.7	4.90		15.0
	Fipronil Sulfide	76.3	75.3	61.1	48.7	1.29		22.5
	Fipronil Sulfone	73.1	70.7	47.6	35.8	3.33		28.4
	Fonofos	91.2	94.7	66.8	67.0	3.85		0.306
	Gamma-BHC	95.4	95.1	74.4	76.7	0.314		3.05
	Gamma-Chlordane	81.9	83.7	69.3	66.3	2.24		4.48
	Heptachlor	69.1	59.7	53.8	49.9	14.6		7.66
	Heptachlor Epoxide	82.6	83.5	67.9	64.9	1.08		4.62
	Hexazinone	84.3	87.6	73.3	65.5	3.83		11.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 8270D	Malathion	82.5	92.3	88.8	84.6	11.2		4.88
	Metalaxyl	92.8	93.9	88.5	88.4	1.23		0.0625
	Methoxychlor	97.8	103	89.1	86.2	5.33		3.29
	Metolachlor	87.9	91.4	87.8	91.8	3.92		3.97
	Metribuzin	74.1	66.3	94.3	77.0	11.2		20.3
	Mevinphos	66.4	70.9	44.3	39.8	6.45		10.7
	Mirex	76.2	71.3	64.3	62.3	6.58		3.20
	Molinate	55.9	52.0	28.4	35.6	7.39		22.3
	Norflurazon	85.6	90.0	67.8	52.6	5.06		25.2
	Parathion Ethyl	91.2	91.2	85.7	79.3	0.0727		7.75
	Parathion Methyl	97.9	101	85.7	78.9	3.22		8.27
	Pendimethalin	90.0	92.9	91.4	92.0	3.18		0.741
	Permethrin	84.0	85.2	73.4	72.9	1.45		0.675
	Phorate	83.0	93.1	56.4	53.3	11.4		5.74
	Prometon	93.9	95.1	88.8	91.8	1.30		3.33
	Prometryn	85.3	84.6	91.1	92.0	0.815		0.935
	Simazine	87.5	92.6	84.1	80.4	5.66		4.49
	Terbufos	91.6	93.4	67.7	70.8	1.98		4.53
	Terbutylazine	87.0	92.3	85.2	86.1	5.91		1.12
	Trifluralin	170	214	188	202	23.1		7.37
EPA 8276	Chlordane	102	112	88.9	74.3	9.05		17.9
	Toxaphene	111	117	95.8	78.0	4.86		20.6
EPA 8321B	Glyphosate	122		123	117			5.02
	Pyraclostrobin	92.8		126	105			18.5
	Sucralose	107		118	95.0			21.0
SM 2120 B	Color (true)						4.78	
SM 2320 B-97	Total Alkalinity	103					0.0829	
	Total Alkalinity	103					0.451	
SM 2540 C-97	TDS						2.85	
	TDS						4.10	
SM 4500 F-C-97	Fluoride	94.3		97.0	101			3.56
	Fluoride	98.6		96.5	95.8			0.480
	Fluoride	101		99.7	104			3.49
SM 5310 B-00	Organic Carbon	98.0		98.8	97.0			0.997
USGS O-2060-01	2,4-D	72.6		67.9	68.7			0.954
	Acetaminophen	97.6		92.2	101			9.39
	Bentazon	73.0						
	Carbamazepine	99.2		85.4	79.5			7.18
	Diuron	105		73.5	70.2			4.45
	Fenuron	105		64.6	69.4			7.28
	Fluridone	90.9		38.4	27.6			29.6
	Imidacloprid	109		151	162			5.93
	Linuron	89.8		75.5	67.2			11.6
	MCPP	70.0		56.3	58.6			3.78
	Primidone	110		84.5	90.3			6.68
	Triclopyr	63.2		52.1	53.3			2.35

Reference Method Descriptions

Method / DoH Cert

EPA 180.1 Rev. 2.0 /
E31780

Description

Turbidity in aqueous matrices

Associated Samples

1896083, 1896084, 1896085, 1896086,
1896087

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1896083, 1896084, 1896085, 1896086, 1896087
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1896083, 1896084, 1896085, 1896086, 1896087
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1896088, 1896089, 1896090, 1896091, 1896092
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1896088, 1896089, 1896090, 1896091, 1896092
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1896088, 1896089, 1896090, 1896091, 1896092
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1896088, 1896089, 1896090, 1896091, 1896092
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1896093, 1896094, 1896095, 1896096, 1896097
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1896113
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1896114
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1896113
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1896111
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1896112
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1896109, 1896110
SM 2120 B / E31780	True Color measured at 450 nm	1896083, 1896084, 1896085, 1896086, 1896087
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1896083, 1896084, 1896085, 1896086, 1896087
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1896083, 1896084, 1896085, 1896086, 1896087
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1896083, 1896084, 1896085, 1896086, 1896087
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1896083, 1896084, 1896085, 1896086, 1896087
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1896088, 1896089, 1896090, 1896091, 1896092
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1896109, 1896110
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1896109, 1896110

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	05/03/2017			05/04/2017 17:05	Sima Feizi	1896083, 1896084, 1896085, 1896086, 1896087
EPA 300.0 Rev. 2.1	05/03/2017			05/10/2017	Ping Hua	1896083, 1896084, 1896085, 1896086, 1896087
EPA 350.1 Rev. 2.0	05/03/2017			05/04/2017	Julie Michelle Frank	1896088, 1896089, 1896090, 1896091, 1896092
EPA 351.2 Rev. 2.0	05/03/2017	05/08/2017	Adrian Shelby	05/11/2017	Joseph Suarez	1896088, 1896089, 1896090, 1896091, 1896092
EPA 353.2 Rev. 2.0	05/03/2017			05/05/2017	Beverly Y. Sanders	1896088, 1896089, 1896090, 1896091, 1896092
EPA 365.1 Rev. 2.0	05/03/2017	05/05/2017	Vijayalakshmi Reddy	05/08/2017	Lipi Saha	1896088, 1896089, 1896090, 1896091, 1896092
EPA 365.1 Rev. 2.0 dissolved	05/03/2017			05/04/2017 14:46	Anthony C. Onicha	1896093
	05/03/2017			05/04/2017 15:36	Anthony C. Onicha	1896094
	05/03/2017			05/04/2017 15:37	Anthony C. Onicha	1896095
	05/03/2017			05/04/2017 15:38	Anthony C. Onicha	1896096
	05/03/2017			05/04/2017 15:39	Anthony C. Onicha	1896097
EPA 8270D	05/03/2017	05/05/2017	Fe-Val Siddell	05/09/2017	Marek Topolski	1896113
	05/03/2017	05/05/2017	John Kaba	05/17/2017	Irina Carbone	1896114
EPA 8276	05/03/2017	05/05/2017	Fe-Val Siddell	05/11/2017	Vandana T. Nagar	1896113
EPA 8321B	05/03/2017	05/09/2017	Mohammad Ghaffari	05/09/2017	Mohammad Ghaffari	1896111
	05/03/2017	05/10/2017	Hoor Shaik	05/15/2017	Juyoung Kim	1896112
	05/03/2017	05/17/2017	Mohammad Ghaffari	05/19/2017	Mohammad Ghaffari	1896109, 1896110
SM 2120 B	05/03/2017			05/04/2017 15:12	Julia Storbeck	1896083, 1896084
	05/03/2017			05/04/2017 15:14	Julia Storbeck	1896085
	05/03/2017			05/04/2017 15:15	Julia Storbeck	1896086, 1896087
SM 2320 B-97	05/03/2017			05/15/2017	Dale L. Simmons	1896083, 1896084
	05/03/2017			05/16/2017	Dale L. Simmons	1896085, 1896086, 1896087
SM 2540 C-97	05/03/2017			05/05/2017	Yijie Li	1896083, 1896084, 1896085, 1896086, 1896087
SM 2540 D-97	05/03/2017			05/05/2017	Yijie Li	1896083, 1896084, 1896085, 1896086, 1896087
SM 4500 F-C-97	05/03/2017			05/16/2017	Dale L. Simmons	1896087
	05/03/2017			05/20/2017	Dale L. Simmons	1896083, 1896084
	05/03/2017			05/23/2017	Dale L. Simmons	1896085
	05/03/2017			05/24/2017	Dale L. Simmons	1896086
SM 5310 B-00	05/03/2017			05/04/2017	Julie Michelle Frank	1896088, 1896089, 1896090, 1896091, 1896092
USGS O-2060-01	05/03/2017	05/08/2017	Fe-Val Siddell	05/16/2017	Juyoung Kim	1896109, 1896110