Chemical Analysis Report

WQAP-2017-05-12-05

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

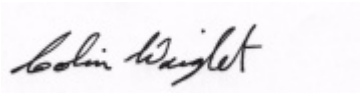
Event Description: **run 9**
Request ID: **RQ-2017-05-08-26**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Tampa, FL 33637
Attn: Judy Ashton

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

Certified by: Colin Wright, Program Administrator

Date Certified: 15-JUN-2017 17:11



Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Bellows Lake **Collection Date/Time: 05/11/2017 09:25**

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899009	EPA 180.1 Rev. 2.0	Turbidity	55		NTU	P325311	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P326707	
		Sulfate	6.5		mg SO4/L	P326708	
	SM 2120 B	Color (true)	33		PCU	P325223	
	SM 2320 B-97	Total Alkalinity	70		mg CaCO3/L	P325592	
	SM 2540 C-97	TDS	168		mg/L	P325688	
	SM 2540 D-97	TSS	33		mg/L	P325677	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P325595	RPD
1899012	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P325279	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	7.9		mg N/L	P325454	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325357	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P325337	
	SM 5310 B-00	Organic Carbon	45		mg C/L	P325582	
1899015	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325225	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Magdalene **Collection Date/Time: 05/11/2017 11:20**

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899010	EPA 180.1 Rev. 2.0	Turbidity	1.7	A	NTU	P325312	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P326707	
		Sulfate	16		mg SO4/L	P326708	
	SM 2120 B	Color (true)	24		PCU	P325222	
	SM 2320 B-97	Total Alkalinity	38		mg CaCO3/L	P325698	
	SM 2540 C-97	TDS	159		mg/L	P325688	
	SM 2540 D-97	TSS	4	I	mg/L	P325677	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P325702	RPD
1899013	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P325279	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P325454	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325357	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P325337	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P325582	
1899016	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325225	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Armistead **Collection Date/Time: 05/11/2017 12:50**

Field ID: G1SW0030 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes

Field ID: G1SW0030 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899011	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P325312	
	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P326707	
		Sulfate	6.6		mg SO4/L	P326708	
	SM 2120 B	Color (true)	77	A	PCU	P325222	
	SM 2320 B-97	Total Alkalinity	23	A	mg CaCO3/L	P325700	
	SM 2540 C-97	TDS	112		mg/L	P325688	
	SM 2540 D-97	TSS	2	U	mg/L	P325677	
	SM 4500 F-C-97	Fluoride	0.13	J	mg F/L	P325703	RPD
1899014	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P325279	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P325454	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P325357	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P325433	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P325582	
1899017	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325225	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500 F-C-97: Refer to the narrative for an explanation of QC Codes.

Sample Location: Bellows Lake **Collection Date/Time: 05/11/2017 09:25**

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899029	EPA 200.7 Rev. 4.4	Calcium	30.9		mg/L	P325446	
		Iron	59	I	ug/L	P325446	
		Magnesium	1.76		mg/L	P325446	
		Potassium	2.3		mg/L	P325446	
		Sodium	6.6		mg/L	P325446	
		Zinc	5.0	U	ug/L	P325446	
	EPA 200.8 Rev. 5.4	Arsenic	4.25		ug/L	P325446	
		Cadmium	0.020	U	ug/L	P325446	
		Chromium	0.40	U	ug/L	P325446	
		Copper	1.20		ug/L	P325446	
		Lead	0.89		ug/L	P325446	
		Nickel	0.47	I	ug/L	P325446	
		Silver	0.010	U	ug/L	P325446	

Sample Location: Magdalene **Collection Date/Time: 05/11/2017 11:20**

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899030	EPA 200.7 Rev. 4.4	Calcium	18.1		mg/L	P325446	
		Iron	30	U	ug/L	P325446	
		Magnesium	2.41		mg/L	P325446	
		Potassium	4.3		mg/L	P325446	
		Sodium	31.0		mg/L	P325446	

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899030	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P325446	
	EPA 200.8 Rev. 5.4	Arsenic	5.54		ug/L	P325446	
		Cadmium	0.020	U	ug/L	P325446	
		Chromium	0.40	U	ug/L	P325446	
		Copper	0.96		ug/L	P325446	
		Lead	0.18	I	ug/L	P325446	
		Nickel	0.22	I	ug/L	P325446	
		Silver	0.010	U	ug/L	P325446	

Sample Location: Bellows Lake **Collection Date/Time: 05/11/2017 09:25**

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899021	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P325333	
1899023		Glyphosate**	10	U	ug/L	P325349	
		Sucralose**	0.065		ug/L	P325291	
	USGS O-2060-01	2,4-D	0.064		ug/L	P325285	
		Diuron	0.0010	I	ug/L	P325285	
		Fenuron	0.080		ug/L	P325285	
		Imidacloprid	8.0E-04	U	ug/L	P325285	MS
		Bentazon	8.0E-04	U	ug/L	P325285	
		Linuron	0.0040	U	ug/L	P325285	
		Acetaminophen**	0.0080	U	ug/L	P325285	
		MCPP	0.0015	I	ug/L	P325285	
		Carbamazepine**	4.0E-04	U	ug/L	P325285	
		Triclopyr**	0.0040	U	ug/L	P325285	
		Primidone**	0.0040	U	ug/L	P325285	
		Fluridone**	0.0095		ug/L	P325285	
1899025	EPA 8270D	Aldrin	4.4	UJ	ng/L	P325290	LCS, SUR
		Alpha-BHC	2.2	UJ	ng/L	P325290	SUR
		Beta-BHC	4.4	UJ	ng/L	P325290	SUR
		Delta-BHC	4.4	UJ	ng/L	P325290	SUR
		Gamma-BHC	4.4	UJ	ng/L	P325290	SUR
		Carbophenothion	4.4	UJ	ng/L	P325290	SUR
		Chlorothalonil	2.2	UJ	ng/L	P325290	MS, SUR
		Cypermethrin	22	UJ	ng/L	P325290	LCS, SUR
		DDD-p,p'	2.2	UJ	ng/L	P325290	SUR
		DDE-p,p'	3.3	UJ	ng/L	P325290	SUR
		DDT-p,p'	3.3	UJ	ng/L	P325290	SUR
		Dieldrin	4.4	UJ	ng/L	P325290	SUR
		Endosulfan I	4.4	UJ	ng/L	P325290	SUR
		Endosulfan II	4.4	UJ	ng/L	P325290	SUR
		Endosulfan Sulfate	2.2	UJ	ng/L	P325290	SUR
		Endrin	2.2	UJ	ng/L	P325290	SUR
		Endrin Aldehyde	2.2	UJ	ng/L	P325290	SUR

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899025	EPA 8270D	Heptachlor	1.6	UJ	ng/L	P325290	SUR
		Heptachlor Epoxide	2.2	UJ	ng/L	P325290	SUR
		Methoxychlor	4.4	UJ	ng/L	P325290	SUR
		Mirex	2.2	UJ	ng/L	P325290	SUR
		Permethrin	11	UJ	ng/L	P325290	SUR
		Trifluralin	1.1	UJ	ng/L	P325290	SUR
		Alpha-Chlordane	1.1	UJ	ng/L	P325290	SUR
		Gamma-Chlordane	1.1	UJ	ng/L	P325290	SUR
		Endrin Ketone	2.2	UJ	ng/L	P325290	SUR
		Dicofol	33	UJ	ng/L	P325290	RPD, SUR
	EPA 8276	Chlordane**	2.7	UJ	ng/L	P325290	SUR
		Toxaphene**	14	UJ	ng/L	P325290	SUR
1899027	EPA 8270D	Ametryn	0.32	U	ng/L	P325177	
		Atrazine	13		ng/L	P325177	
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P325177	SUR
		Chlorpyrifos Methyl	0.098	UJ	ng/L	P325177	SUR
		Disulfoton	0.32	UJ	ng/L	P325177	SUR
		Ethion	0.15	UJ	ng/L	P325177	SUR
		Ethoprop	0.098	UJ	ng/L	P325177	SUR
		Hexazinone	1.8	I	ng/L	P325177	
		Malathion	0.34	UJ	ng/L	P325177	SUR
		Metribuzin	0.20	UJ	ng/L	P325177	CCV
		Mevinphos	0.49	UJ	ng/L	P325177	SUR
		Norflurazon	0.49	U	ng/L	P325177	
		Phorate	0.24	UJ	ng/L	P325177	SUR
		Prometryn	0.20	U	ng/L	P325177	
		Simazine	0.49	U	ng/L	P325177	
		Atrazine Desethyl	1.5	U	ng/L	P325177	
		Prometon	0.88	U	ng/L	P325177	
		Fipronil	0.24	U	ng/L	P325177	
		Molinate	0.29	U	ng/L	P325177	
		Pendimethalin	1.5	U	ng/L	P325177	
		Terbufos	0.098	UJ	ng/L	P325177	SUR
		EPTC	1.2	U	ng/L	P325177	
		Terbuthylazine	0.42	U	ng/L	P325177	
		Bromacil	0.49	U	ng/L	P325177	
		Fipronil Sulfide	0.15	U	ng/L	P325177	
		Fipronil Sulfone	0.15	U	ng/L	P325177	
		Alachlor	0.24	U	ng/L	P325177	
		Azinphos Methyl	2.2	UJ	ng/L	P325177	SUR
		Butylate	0.39	U	ng/L	P325177	
		Demeton	2.0	UJ	ng/L	P325177	SUR
		Diazinon	0.12	UJ	ng/L	P325177	SUR
		Fenamiphos	0.24	UJ	ng/L	P325177	SUR
		Fonofos	0.20	UJ	ng/L	P325177	SUR

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899027	EPA 8270D	Metalaxyl	0.20	U	ng/L	P325177	
		Metolachlor	0.24	U	ng/L	P325177	
		Acetochlor	0.24	U	ng/L	P325177	
		Cyanazine	0.49	U	ng/L	P325177	
		Parathion Ethyl	0.24	UJ	ng/L	P325177	SUR
		Parathion Methyl	0.24	UJ	ng/L	P325177	SUR

Ref. Method and Comment:
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Reported results qualified with J due to surrogate below control limits: surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed.
EPA 8276: Refer to the narrative for an explanation of QC Codes. Reported results qualified with J due to surrogate below control limits: surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed.
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Reported results qualified with J due to surrogate below control limits; surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed.

Sample Location: Magdalene **Collection Date/Time: 05/11/2017 11:20**

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899022	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P325333	
1899024		Glyphosate**	10	U	ug/L	P325349	
		Sucralose**	1.3		ug/L	P325291	
	USGS O-2060-01	2,4-D	0.063		ug/L	P325285	
		Diuron	0.0046		ug/L	P325285	
		Fenuron	0.0040	U	ug/L	P325285	
		Imidacloprid	9.6E-04	I	ug/L	P325285	MS
		Bentazon	0.017		ug/L	P325285	
		Linuron	0.0040	U	ug/L	P325285	
		Acetaminophen**	0.0080	U	ug/L	P325285	
		MCPP	8.0E-04	U	ug/L	P325285	
		Carbamazepine**	8.0E-04	I	ug/L	P325285	
		Triclopyr**	0.0040	U	ug/L	P325285	
		Primidone**	0.0050	I	ug/L	P325285	
		Fluridone**	0.030		ug/L	P325285	
1899026	EPA 8270D	Aldrin	4.2	UJ	ng/L	P325290	LCS, SUR
		Alpha-BHC	2.1	UJ	ng/L	P325290	SUR
		Beta-BHC	4.2	UJ	ng/L	P325290	SUR
		Delta-BHC	4.2	UJ	ng/L	P325290	SUR
		Gamma-BHC	4.2	UJ	ng/L	P325290	SUR
		Carbophenothion	4.2	UJ	ng/L	P325290	SUR
		Chlorothalonil	2.1	UJ	ng/L	P325290	MS, SUR
		Cypermethrin	21	UJ	ng/L	P325290	LCS, SUR
		DDD-p,p'	2.1	UJ	ng/L	P325290	SUR
		DDE-p,p'	3.1	UJ	ng/L	P325290	SUR
		DDT-p,p'	3.1	UJ	ng/L	P325290	SUR
		Dieldrin	4.2	UJ	ng/L	P325290	SUR
		Endosulfan I	4.2	UJ	ng/L	P325290	SUR
		Endosulfan II	4.2	UJ	ng/L	P325290	SUR

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899026	EPA 8270D	Endosulfan Sulfate	2.1	UJ	ng/L	P325290	SUR
		Endrin	2.1	UJ	ng/L	P325290	SUR
		Endrin Aldehyde	2.1	UJ	ng/L	P325290	SUR
		Heptachlor	1.6	UJ	ng/L	P325290	SUR
		Heptachlor Epoxide	2.1	UJ	ng/L	P325290	SUR
		Methoxychlor	4.2	UJ	ng/L	P325290	SUR
		Mirex	2.1	UJ	ng/L	P325290	SUR
		Permethrin	10	UJ	ng/L	P325290	SUR
		Trifluralin	1.0	UJ	ng/L	P325290	SUR
		Alpha-Chlordane	1.0	UJ	ng/L	P325290	SUR
		Gamma-Chlordane	1.0	UJ	ng/L	P325290	SUR
		Endrin Ketone	2.1	UJ	ng/L	P325290	SUR
		Dicofol	31	UJ	ng/L	P325290	RPD, SUR
	EPA 8276	Chlordane**	2.6	U	ng/L	P325290	
		Toxaphene**	13	U	ng/L	P325290	
1899028	EPA 8270D	Ametryn	3.3		ng/L	P325177	
		Atrazine	20		ng/L	P325177	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P325177	
		Chlorpyrifos Methyl	0.099	U	ng/L	P325177	
		Disulfoton	0.32	U	ng/L	P325177	
		Ethion	0.15	U	ng/L	P325177	
		Ethoprop	0.097	UQ	ng/L	P326082	
		Hexazinone	7.9		ng/L	P325177	
		Malathion	1.9		ng/L	P325177	
		Metribuzin	0.20	UJ	ng/L	P325177	CCV
		Mevinphos	0.49	U	ng/L	P325177	
		Norflurazon	0.49	U	ng/L	P325177	
		Phorate	0.25	U	ng/L	P325177	
		Prometryn	0.20	U	ng/L	P325177	
		Simazine	0.98	I	ng/L	P325177	
		Atrazine Desethyl	3.2	I	ng/L	P325177	
		Prometon	1.1	I	ng/L	P325177	
		Fipronil	0.25	U	ng/L	P325177	
		Molinate	0.30	U	ng/L	P325177	
		Pendimethalin	1.5	U	ng/L	P325177	
		Terbufos	0.099	U	ng/L	P325177	
		EPTC	1.2	U	ng/L	P325177	
		Terbuthylazine	0.42	U	ng/L	P325177	
		Bromacil	0.49	U	ng/L	P325177	
		Fipronil Sulfide	0.15	U	ng/L	P325177	
		Fipronil Sulfone	0.30	I	ng/L	P325177	
		Alachlor	0.25	U	ng/L	P325177	
		Azinphos Methyl	2.2	U	ng/L	P325177	
		Butylate	0.40	U	ng/L	P325177	
		Demeton	2.0	U	ng/L	P325177	

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1899028	EPA 8270D	Diazinon	0.20	I	ng/L	P325177	
		Fenamiphos	0.25	U	ng/L	P325177	
		Fonofos	0.20	U	ng/L	P325177	
		Metalaxyl	0.20	U	ng/L	P325177	
		Metolachlor	0.27	I	ng/L	P325177	
		Acetochlor	0.25	U	ng/L	P325177	
		Cyanazine	0.49	U	ng/L	P325177	
		Parathion Ethyl	0.25	U	ng/L	P325177	
		Parathion Methyl	0.25	U	ng/L	P325177	

Ref. Method and Comment:
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Reported results qualified with J due to surrogate below control limits: surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed.
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Sample expired for preparation for Ethoprop due to necessary re-extraction. The re-extraction was due to Ethoprop detection in both the sample and the method blank in the original extraction. Other results were confirmed in the re-extraction except for Diazinon 0.099 U ng/L and Malathion 0.64 I ng/L.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325311

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325312

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325446

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: P325446

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326707

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326708

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325279

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325454

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325357

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325337

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325433

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325225

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

Reference Method: EPA 8270D
Batch ID: P325177

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P325177

Component	Result	Code	Units
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	0.11	I	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P325290

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
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P325290

Component	Result	Code	Units
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: P326082

Component	Result	Code	Units
Ethoprop	0.10	U	ng/L

Reference Method: EPA 8276
Batch ID: P325290

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

Reference Method: EPA 8321B
Batch ID: P325291

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P325333

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P325349

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P325222

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2120 B
Batch ID: P325223

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P325592

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

Reference Method: SM 2320 B-97
Batch ID: P325698

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

Reference Method: SM 2320 B-97
Batch ID: P325700

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

Reference Method: SM 2540 C-97
Batch ID: P325688

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P325677

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325595

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325702

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325703

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: P325582

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

Reference Method: USGS O-2060-01
Batch ID: P325285

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
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 200.7 Rev. 4.4
Batch ID: P325446

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	105		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	101		P	85 - 115
Sodium	108		P	85 - 115
Zinc	97.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325446

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	107		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	102		P	85 - 115
Copper	103		P	85 - 115
Lead	102		P	85 - 115
Nickel	106		P	85 - 115
Silver	98.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326707

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326708

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325279

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: P325454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325357

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325337

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325225

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

Reference Method: EPA 8270D
Batch ID: P325177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	93.4	94.2	P/P	78 - 118
Alachlor	93.7	93.8	P/P	77 - 119
Ametryn	93.8	101	P/P	61 - 136
Atrazine	87.9	94.7	P/P	73 - 120
Atrazine Desethyl	88.2	80.9	P/P	16 - 122
Azinphos Methyl	108	110	P/P	69 - 186
Bromacil	93.7	94.0	P/P	40 - 125
Butylate	52.2	47.5	P/P	32 - 87.0
Chlorpyrifos Ethyl	90.5	87.9	P/P	53 - 110
Chlorpyrifos Methyl	92.7	89.7	P/P	31 - 119

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P325177

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cyanazine	128	129	P/P	36 - 224
Demeton	80.2	81.9	P/P	39 - 122
Diazinon	94.1	94.6	P/P	75 - 119
Disulfoton	92.4	89.9	P/P	42 - 139
EPTC	52.1	47.4	P/P	33 - 96.0
Ethion	95.6	96.8	P/P	63 - 127
Ethoprop	80.4	78.3	P/P	65 - 107
Fenamiphos	103	103	P/P	64 - 137
Fipronil	97.8	101	P/P	60 - 126
Fipronil Sulfide	94.4	96.3	P/P	58 - 124
Fipronil Sulfone	83.2	86.3	P/P	57 - 126
Fonofos	87.1	84.8	P/P	65 - 111
Hexazinone	84.6	86.1	P/P	46 - 151
Malathion	98.0	98.0	P/P	68 - 132
Metalaxyl	95.5	96.2	P/P	51 - 132
Metolachlor	93.3	94.3	P/P	78 - 119
Metribuzin	110	90.4	P/P	64 - 138
Mevinphos	78.1	76.9	P/P	34 - 128
Molinate	60.9	61.9	P/P	44 - 101
Norflurazon	93.0	96.0	P/P	63 - 129
Parathion Ethyl	92.8	93.4	P/P	80 - 109
Parathion Methyl	97.1	96.6	P/P	74 - 125
Pendimethalin	92.4	91.4	P/P	48 - 134
Phorate	77.2	75.1	P/P	52 - 119
Prometon	88.9	89.7	P/P	69 - 124
Prometryn	96.6	97.5	P/P	66 - 124
Simazine	101	97.5	P/P	61 - 134
Terbufos	90.9	86.7	P/P	58 - 115
Terbuthylazine	89.4	89.8	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P325290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	28.3	31.3	F/P	30 - 83.0
Alpha-BHC	83.5	81.6	P/P	62 - 119
Alpha-Chlordane	70.0	66.4	P/P	56 - 119
Beta-BHC	92.0	91.6	P/P	54 - 141
Carbophenothion	75.3	70.2	P/P	33 - 147
Chlorothalonil	102	107	P/P	25 - 175
Cypermethrin	46.6	45.7	F/F	50 - 155
DDD-p,p'	76.5	72.5	P/P	56 - 135
DDE-p,p'	68.3	63.5	P/P	48 - 120
DDT-p,p'	68.7	63.2	P/P	51 - 121
Delta-BHC	98.9	106	P/P	65 - 163
Dicofol	58.0	49.8	P/P	15 - 112
Dieldrin	80.0	69.5	P/P	59 - 134
Endosulfan I	86.0	78.3	P/P	65 - 142
Endosulfan II	89.4	87.3	P/P	65 - 154
Endosulfan Sulfate	81.1	83.3	P/P	65 - 136
Endrin	84.0	77.5	P/P	53 - 156
Endrin Aldehyde	95.5	86.9	P/P	47 - 156

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P325290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin Ketone	81.7	80.7	P/P	70 - 124
Gamma-BHC	86.9	89.6	P/P	64 - 142
Gamma-Chlordane	64.1	60.2	P/P	55 - 114
Heptachlor	56.9	50.0	P/P	42 - 105
Heptachlor Epoxide	80.3	77.5	P/P	67 - 120
Methoxychlor	78.0	76.3	P/P	63 - 134
Mirex	42.5	40.2	P/P	40 - 90.0
Permethrin	47.6	44.9	P/P	36 - 144
Trifluralin	86.0	78.7	P/P	40 - 170

Reference Method: EPA 8270D
Batch ID: P326082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethoprop	72.3	78.3	P/P	65 - 107

Reference Method: EPA 8276
Batch ID: P325290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	78.6	83.3	P/P	44 - 118
Toxaphene	76.8	80.5	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P325291

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	78.3		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P325333

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	94.3		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P325349

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	82.4		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P325592

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P325698

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P325700

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

Reference Method: SM 4500 F-C-97
Batch ID: P325595

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

Reference Method: SM 4500 F-C-97
Batch ID: P325702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	93.7		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P325703

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P325582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.4		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P325285

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	88.4		P	40 - 140
Acetaminophen	86.2		P	40 - 140
Bentazon	70.6		P	40 - 140
Carbamazepine	107		P	40 - 140
Diuron	108		P	40 - 140
Fenuron	93.2		P	40 - 140
Fluridone	103		P	40 - 140
Imidacloprid	92.0		P	40 - 160
Linuron	100		P	40 - 140
MCPP	91.4		P	40 - 140
Primidone	98.0		P	40 - 140
Triclopyr	94.8		P	40 - 140

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899030	Calcium	101		P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899030	Iron	109		P	80 - 120
1899030	Magnesium	109		P	80 - 120
1899030	Potassium	98.4		P	80 - 120
1899030	Sodium	102		P	80 - 120
1899030	Zinc	107		P	80 - 120
1899346	Calcium	100		P	80 - 120
1899346	Iron	105	106	P/P	80 - 120
1899346	Magnesium	102		P	80 - 120
1899346	Potassium	99.7	97.9	P/P	80 - 120
1899346	Sodium	103		P	80 - 120
1899346	Zinc	98.8	97.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899030	Arsenic	110		P	80 - 120
1899030	Cadmium	106		P	80 - 120
1899030	Chromium	101		P	80 - 120
1899030	Copper	103		P	80 - 120
1899030	Lead	101		P	80 - 120
1899030	Nickel	105		P	80 - 120
1899030	Silver	97.5		P	80 - 120
1899346	Arsenic	107	108	P/P	80 - 120
1899346	Cadmium	107	106	P/P	80 - 120
1899346	Chromium	99.6	98.9	P/P	80 - 120
1899346	Copper	99.1	99.7	P/P	80 - 120
1899346	Lead	99.4	99.6	P/P	80 - 120
1899346	Nickel	101	101	P/P	80 - 120
1899346	Silver	98.4	97.8	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326707

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898961	Chloride	109		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898961	Sulfate	107		P	90 - 110
1899010	Sulfate	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899013	Ammonia-N	101	102	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899374	Kjeldahl Nitrogen	100	93.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898922	NO2NO3-N	100	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898964	Total-P	101	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899438	Total-P	101	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325225

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898807	O-Phosphate-P	100	101	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P325177

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898851	Acetochlor	87.6	88.7	P/P	74 - 123
1898851	Alachlor	89.5	92.2	P/P	73 - 124
1898851	Ametryn	100	101	P/P	56 - 149
1898851	Atrazine	94.3	92.9	P/P	73 - 124
1898851	Atrazine Desethyl	62.9	63.7	P/P	12 - 103
1898851	Azinphos Methyl	98.3	87.7	P/P	60 - 202
1898851	Bromacil	96.2	93.5	P/P	42 - 133
1898851	Butylate	61.9	57.3	P/P	10 - 85.0
1898851	Chlorpyrifos Ethyl	78.0	78.7	P/P	53 - 113
1898851	Chlorpyrifos Methyl	70.3	69.4	P/P	40 - 115
1898851	Cyanazine	102	107	P/P	22 - 210
1898851	Demeton	69.1	61.3	P/P	17 - 149
1898851	Diazinon	84.2	86.1	P/P	72 - 124
1898851	Disulfoton	72.1	65.2	P/P	43 - 139
1898851	EPTC	57.8	61.7	P/P	10 - 86.0
1898851	Ethion	89.8	86.6	P/P	65 - 131
1898851	Ethoprop	66.1	67.5	P/P	59 - 110
1898851	Fenamiphos	96.9	92.0	P/P	57 - 138
1898851	Fipronil	101	99.1	P/P	40 - 130
1898851	Fipronil Sulfide	89.5	88.8	P/P	36 - 128
1898851	Fipronil Sulfone	85.9	82.8	P/P	16 - 145
1898851	Fonofos	62.7	67.2	P/P	60 - 112

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P325177

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898851	Hexazinone	91.9	88.3	P/P	69 - 142
1898851	Malathion	87.4	84.2	P/P	68 - 132
1898851	Metalaxyl	93.2	96.5	P/P	66 - 118
1898851	Metolachlor	94.3	98.0	P/P	71 - 124
1898851	Metribuzin	62.9	73.7	P/P	61 - 140
1898851	Mevinphos	63.1	60.1	P/P	38 - 130
1898851	Molinate	70.0	69.3	P/P	23 - 99.0
1898851	Norflurazon	96.8	96.4	P/P	39 - 139
1898851	Parathion Ethyl	81.8	86.2	P/P	75 - 111
1898851	Parathion Methyl	81.5	79.0	P/P	64 - 130
1898851	Pendimethalin	85.9	88.8	P/P	26 - 173
1898851	Phorate	57.9	57.1	P/P	43 - 127
1898851	Prometon	93.9	94.7	P/P	50 - 144
1898851	Prometryn	99.0	100	P/P	69 - 126
1898851	Simazine	89.0	91.9	P/P	51 - 152
1898851	Terbufos	66.7	65.4	P/P	54 - 125
1898851	Terbuthylazine	90.8	90.1	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P325290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898999	Aldrin	41.0	41.6	P/P	30 - 83.0
1898999	Alpha-BHC	81.7	77.0	P/P	62 - 119
1898999	Alpha-Chlordane	78.0	80.3	P/P	56 - 119
1898999	Beta-BHC	91.9	106	P/P	54 - 141
1898999	Carbophenothion	99.3	98.9	P/P	33 - 147
1898999	Chlorothalonil	160	190	P/F	25 - 175
1898999	Cypermethrin	78.7	86.0	P/P	50 - 155
1898999	DDD-p,p'	86.6	86.5	P/P	56 - 135
1898999	DDE-p,p'	78.4	77.1	P/P	48 - 120
1898999	DDT-p,p'	77.3	75.9	P/P	51 - 121
1898999	Delta-BHC	137	131	P/P	65 - 163
1898999	Dicofol	36.0	26.1	P/P	15 - 112
1898999	Dieldrin	85.5	86.2	P/P	59 - 134
1898999	Endosulfan I	89.4	89.3	P/P	65 - 142
1898999	Endosulfan II	104	97.9	P/P	65 - 154
1898999	Endosulfan Sulfate	84.4	90.6	P/P	65 - 136
1898999	Endrin	75.4	75.7	P/P	53 - 156
1898999	Endrin Aldehyde	87.6	71.4	P/P	47 - 156
1898999	Endrin Ketone	87.9	96.2	P/P	70 - 124
1898999	Gamma-BHC	86.0	88.9	P/P	64 - 142
1898999	Gamma-Chlordane	74.6	77.4	P/P	55 - 114
1898999	Heptachlor	54.8	62.0	P/P	42 - 105
1898999	Heptachlor Epoxide	81.6	84.8	P/P	67 - 120
1898999	Methoxychlor	82.3	81.5	P/P	63 - 134
1898999	Mirex	55.2	59.6	P/P	40 - 90.0
1898999	Permethrin	70.1	70.2	P/P	36 - 144
1898999	Trifluralin	103	125	P/P	40 - 170

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P326082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899466	Ethoprop	62.2	66.8	P/P	59 - 110

Reference Method: EPA 8276
Batch ID: P325290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899532	Chlordane	77.5	78.2	P/P	44 - 118
1899532	Toxaphene	72.8	74.3	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P325291

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898904	Sucralose	59.7	55.5	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P325333

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899022	Pyraclostrobin	99.2	104	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P325349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899024	Glyphosate	77.2	77.0	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P325595

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898380	Fluoride	95.5	99.7	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P325702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899364	Fluoride	93.4	101	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P325703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899011	Fluoride	96.5	102	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P325582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898858	Organic Carbon	106		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P325285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1898769	2,4-D	81.2	80.8	P/P	40 - 140
1898769	Acetaminophen	97.0	95.4	P/P	40 - 140
1898769	Bentazon	45.6	45.4	P/P	40 - 140
1898769	Carbamazepine	110	122	P/P	40 - 140
1898769	Diuron	111	97.2	P/P	40 - 140
1898769	Fenuron	85.0	88.2	P/P	40 - 140
1898769	Fluridone	46.0	45.0	P/P	40 - 140
1898769	Imidacloprid	156	161	P/F	40 - 160
1898769	Linuron	97.6	102	P/P	40 - 140
1898769	MCPP	82.0	75.4	P/P	40 - 140
1898769	Primidone	102	112	P/P	40 - 140
1898769	Triclopyr	83.2	82.4	P/P	40 - 140

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898928	Turbidity	1.11	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899010	Turbidity	10.1	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P325446

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899346	Calcium	0.356	Spike	P	0 - 20
1899346	Iron	0.708	Spike	P	0 - 20
1899346	Magnesium	1.30	Spike	P	0 - 20
1899346	Potassium	1.17	Spike	P	0 - 20
1899346	Sodium	0.201	Spike	P	0 - 20
1899346	Zinc	0.973	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325446

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899346	Arsenic	0.812	Spike	P	0 - 20
1899346	Cadmium	1.19	Spike	P	0 - 20
1899346	Chromium	0.653	Spike	P	0 - 20
1899346	Copper	0.660	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P325446

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899346	Lead	0.216	Spike	P	0 - 20
1899346	Nickel	0.326	Spike	P	0 - 20
1899346	Silver	0.616	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898961	Chloride	2.75	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898961	Sulfate	2.76	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899013	Ammonia-N	0.957	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899374	Kjeldahl Nitrogen	5.53	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P325357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898922	NO2NO3-N	0.922	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898964	Total-P	3.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899438	Total-P	2.73	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898807	O-Phosphate-P	0.498	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P325177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898851	Acetochlor	1.21	Spike	P	0 - 30
1898851	Alachlor	2.91	Spike	P	0 - 30
1898851	Ametryn	0.472	Spike	P	0 - 30
1898851	Atrazine	1.45	Spike	P	0 - 30
1898851	Atrazine Desethyl	1.33	Spike	P	0 - 30
1898851	Azinphos Methyl	11.3	Spike	P	0 - 30
1898851	Bromacil	2.92	Spike	P	0 - 30
1898851	Butylate	7.77	Spike	P	0 - 30
1898851	Chlorpyrifos Ethyl	0.790	Spike	P	0 - 30
1898851	Chlorpyrifos Methyl	1.27	Spike	P	0 - 30
1898851	Cyanazine	5.14	Spike	P	0 - 30
1898851	Demeton	12.0	Spike	P	0 - 30
1898851	Diazinon	2.17	Spike	P	0 - 30
1898851	Disulfoton	10.0	Spike	P	0 - 30
1898851	EPTC	6.51	Spike	P	0 - 30
1898851	Ethion	3.59	Spike	P	0 - 30
1898851	Ethoprop	2.08	Spike	P	0 - 30
1898851	Fenamiphos	5.13	Spike	P	0 - 30
1898851	Fipronil	1.94	Spike	P	0 - 30
1898851	Fipronil Sulfide	0.773	Spike	P	0 - 30
1898851	Fipronil Sulfone	3.74	Spike	P	0 - 30
1898851	Fonofos	6.87	Spike	P	0 - 30
1898851	Hexazinone	4.06	Spike	P	0 - 30
1898851	Malathion	3.72	Spike	P	0 - 30
1898851	Metalaxyl	3.44	Spike	P	0 - 30
1898851	Metolachlor	3.84	Spike	P	0 - 30
1898851	Metribuzin	15.8	Spike	P	0 - 30
1898851	Mevinphos	4.92	Spike	P	0 - 30
1898851	Molinate	0.924	Spike	P	0 - 30
1898851	Norflurazon	0.414	Spike	P	0 - 30
1898851	Parathion Ethyl	5.25	Spike	P	0 - 30
1898851	Parathion Methyl	3.15	Spike	P	0 - 30
1898851	Pendimethalin	3.31	Spike	P	0 - 30
1898851	Phorate	1.43	Spike	P	0 - 30
1898851	Prometon	0.861	Spike	P	0 - 30
1898851	Prometryn	1.48	Spike	P	0 - 30
1898851	Simazine	3.19	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P325177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898851	Terbufos	1.97	Spike	P	0 - 30
1898851	Terbuthylazine	0.746	Spike	P	0 - 30
LFB	Acetochlor	0.883	LCS	P	0 - 30
LFB	Alachlor	0.150	LCS	P	0 - 30
LFB	Ametryn	7.82	LCS	P	0 - 30
LFB	Atrazine	7.49	LCS	P	0 - 30
LFB	Atrazine Desethyl	8.65	LCS	P	0 - 30
LFB	Azinphos Methyl	1.64	LCS	P	0 - 30
LFB	Bromacil	0.266	LCS	P	0 - 30
LFB	Butylate	9.44	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.87	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.25	LCS	P	0 - 30
LFB	Cyanazine	0.803	LCS	P	0 - 30
LFB	Demeton	2.11	LCS	P	0 - 30
LFB	Diazinon	0.620	LCS	P	0 - 30
LFB	Disulfoton	2.80	LCS	P	0 - 30
LFB	EPTC	9.44	LCS	P	0 - 30
LFB	Ethion	1.32	LCS	P	0 - 30
LFB	Ethoprop	2.53	LCS	P	0 - 30
LFB	Fenamiphos	0.759	LCS	P	0 - 30
LFB	Fipronil	3.70	LCS	P	0 - 30
LFB	Fipronil Sulfide	1.98	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.69	LCS	P	0 - 30
LFB	Fonofos	2.72	LCS	P	0 - 30
LFB	Hexazinone	1.78	LCS	P	0 - 30
LFB	Malathion	0.0995	LCS	P	0 - 30
LFB	Metalaxyl	0.692	LCS	P	0 - 30
LFB	Metolachlor	1.00	LCS	P	0 - 30
LFB	Metribuzin	19.8	LCS	P	0 - 30
LFB	Mevinphos	1.56	LCS	P	0 - 30
LFB	Molinate	1.57	LCS	P	0 - 30
LFB	Norflurazon	3.17	LCS	P	0 - 30
LFB	Parathion Ethyl	0.640	LCS	P	0 - 30
LFB	Parathion Methyl	0.516	LCS	P	0 - 30
LFB	Pendimethalin	1.09	LCS	P	0 - 30
LFB	Phorate	2.72	LCS	P	0 - 30
LFB	Prometon	0.913	LCS	P	0 - 30
LFB	Prometryn	0.876	LCS	P	0 - 30
LFB	Simazine	3.29	LCS	P	0 - 30
LFB	Terbufos	4.68	LCS	P	0 - 30
LFB	Terbuthylazine	0.553	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P325290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898999	Aldrin	1.59	Spike	P	0 - 30
1898999	Alpha-BHC	5.99	Spike	P	0 - 30
1898999	Alpha-Chlordane	2.82	Spike	P	0 - 30
1898999	Beta-BHC	13.8	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P325290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898999	Carbophenothion	0.415	Spike	P	0 - 30
1898999	Chlorothalonil	17.2	Spike	P	0 - 30
1898999	Cypermethrin	8.91	Spike	P	0 - 30
1898999	DDD-p,p'	0.163	Spike	P	0 - 30
1898999	DDE-p,p'	1.71	Spike	P	0 - 30
1898999	DDT-p,p'	1.78	Spike	P	0 - 30
1898999	Delta-BHC	3.99	Spike	P	0 - 30
1898999	Dicofol	32.0	Spike	F	0 - 30
1898999	Dieldrin	0.678	Spike	P	0 - 30
1898999	Endosulfan I	0.128	Spike	P	0 - 30
1898999	Endosulfan II	6.16	Spike	P	0 - 30
1898999	Endosulfan Sulfate	7.16	Spike	P	0 - 30
1898999	Endrin	0.519	Spike	P	0 - 30
1898999	Endrin Aldehyde	20.3	Spike	P	0 - 30
1898999	Endrin Ketone	9.08	Spike	P	0 - 30
1898999	Gamma-BHC	3.26	Spike	P	0 - 30
1898999	Gamma-Chlordane	3.64	Spike	P	0 - 30
1898999	Heptachlor	12.3	Spike	P	0 - 30
1898999	Heptachlor Epoxide	3.06	Spike	P	0 - 30
1898999	Methoxychlor	1.01	Spike	P	0 - 30
1898999	Mirex	7.63	Spike	P	0 - 30
1898999	Permethrin	0.159	Spike	P	0 - 30
1898999	Trifluralin	19.4	Spike	P	0 - 30
LFB	Aldrin	10.0	LCS	P	0 - 30
LFB	Alpha-BHC	2.28	LCS	P	0 - 30
LFB	Alpha-Chlordane	5.29	LCS	P	0 - 30
LFB	Beta-BHC	0.418	LCS	P	0 - 30
LFB	Carbophenothion	6.99	LCS	P	0 - 30
LFB	Chlorothalonil	5.08	LCS	P	0 - 30
LFB	Cypermethrin	1.87	LCS	P	0 - 30
LFB	DDD-p,p'	5.40	LCS	P	0 - 30
LFB	DDE-p,p'	7.23	LCS	P	0 - 30
LFB	DDT-p,p'	8.35	LCS	P	0 - 30
LFB	Delta-BHC	6.77	LCS	P	0 - 30
LFB	Dicofol	15.2	LCS	P	0 - 30
LFB	Dieldrin	14.1	LCS	P	0 - 30
LFB	Endosulfan I	9.34	LCS	P	0 - 30
LFB	Endosulfan II	2.42	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.77	LCS	P	0 - 30
LFB	Endrin	8.05	LCS	P	0 - 30
LFB	Endrin Aldehyde	9.44	LCS	P	0 - 30
LFB	Endrin Ketone	1.17	LCS	P	0 - 30
LFB	Gamma-BHC	3.04	LCS	P	0 - 30
LFB	Gamma-Chlordane	6.21	LCS	P	0 - 30
LFB	Heptachlor	12.9	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.61	LCS	P	0 - 30
LFB	Methoxychlor	2.29	LCS	P	0 - 30
LFB	Mirex	5.52	LCS	P	0 - 30
LFB	Permethrin	6.01	LCS	P	0 - 30
LFB	Trifluralin	8.84	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P326082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899466	Ethoprop	7.11	Spike	P	0 - 30
LFB	Ethoprop	7.99	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P325290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899532	Chlordane	0.875	Spike	P	0 - 30
1899532	Toxaphene	2.08	Spike	P	0 - 30
LFB	Chlordane	5.80	LCS	P	0 - 30
LFB	Toxaphene	4.72	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P325291

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898904	Sucralose	6.94	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P325333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899022	Pyraclostrobin	4.63	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P325349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899024	Glyphosate	0.259	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P325222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899011	Color (true)	4.32	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P325223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898776	Color (true)	4.30	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-97
Batch ID: P325592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898380	Total Alkalinity	0.354	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P325698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899364	Total Alkalinity	0.593	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P325700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899011	Total Alkalinity	0.127	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P325688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898919	TDS	1.36	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P325595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898380	Fluoride	3.58	Spike	F	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899364	Fluoride	4.36	Spike	F	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899011	Fluoride	3.92	Spike	F	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P325582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898858	Organic Carbon	0.384	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: USGS O-2060-01
Batch ID: P325285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1898769	2,4-D	0.480	Spike	P	0 - 30
1898769	Acetaminophen	1.66	Spike	P	0 - 30
1898769	Bentazon	0.440	Spike	P	0 - 30
1898769	Carbamazepine	10.4	Spike	P	0 - 30
1898769	Diuron	12.9	Spike	P	0 - 30
1898769	Fenuron	3.70	Spike	P	0 - 30
1898769	Fluridone	2.20	Spike	P	0 - 30
1898769	Imidacloprid	2.81	Spike	P	0 - 30
1898769	Linuron	4.21	Spike	P	0 - 30
1898769	MCPP	8.39	Spike	P	0 - 30
1898769	Primidone	9.74	Spike	P	0 - 30
1898769	Triclopyr	0.966	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: 1899021
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	72.2	P	30 - 150

Lab Sample ID: 1899022
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	78.4	P	30 - 150

Lab Sample ID: 1899023
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	64.2	P	40 - 150
EPA 8321B	Sucralose-d6	116	P	40 - 150
USGS O-2060-01	2,4-D-d3	74.0	P	30 - 150
USGS O-2060-01	Acetaminophen-d4	70.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	62.5	P	30 - 160
USGS O-2060-01	Diuron-d6	56.5	P	30 - 150
USGS O-2060-01	Primidone-d5	64.4	P	30 - 150

Lab Sample ID: 1899024
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	57.4	P	40 - 150
EPA 8321B	Sucralose-d6	108	P	40 - 150
USGS O-2060-01	2,4-D-d3	80.9	P	30 - 150

Quality Assurance Report
Surrogates

Lab Sample ID: 1899024
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Acetaminophen-d4	91.5	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	88.8	P	30 - 160
USGS O-2060-01	Diuron-d6	77.0	P	30 - 150
USGS O-2060-01	Primidone-d5	77.9	P	30 - 150

Lab Sample ID: 1899025
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	33.1	F	51 - 123
EPA 8270D	Tetrachloro-m-xylene	35.5	P	31 - 111
EPA 8276	Decachlorobiphenyl	32.1	F	41 - 106

Lab Sample ID: 1899026
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	44.1	F	51 - 123
EPA 8270D	Tetrachloro-m-xylene	30.6	F	31 - 111
EPA 8276	Decachlorobiphenyl	42.7	P	41 - 106

Lab Sample ID: 1899027
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	42.7	F	62 - 132
EPA 8270D	Simazine-d10	89.0	P	72 - 127

Lab Sample ID: 1899028
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	68.2	P	62 - 132
EPA 8270D	Simazine-d10	93.4	P	72 - 127

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A76385
Included Lab Sample IDs: 1899009, 1899010, 1899011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.2	98.9	P/P	85 - 115
Color (true)	98.9	98.6	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A76386
Included Lab Sample IDs: 1899015, 1899016, 1899017

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A76386
Included Lab Sample IDs: 1899015, 1899016, 1899017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.7	98.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A76421
Included Lab Sample IDs: 1899012, 1899013, 1899014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	105	P/P	90 - 110
Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A76437
Included Lab Sample IDs: 1899009, 1899010, 1899011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	102	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A76449
Included Lab Sample IDs: 1899012, 1899013, 1899014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A76476
Included Lab Sample IDs: 1899023, 1899024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	73.6	98.6	P/P	70 - 130

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A76489
Included Lab Sample IDs: 1899012

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A76491
Included Lab Sample IDs: 1899013

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A76516
Included Lab Sample IDs: 1899014

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A76516
Included Lab Sample IDs: 1899014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	99.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A76547
Included Lab Sample IDs: 1899029, 1899030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.1	99.1	P/P	90 - 110
Calcium	99.1	99.5	P/P	90 - 110
Iron	100	100	P/P	90 - 110
Iron	99.8	100	P/P	90 - 110
Magnesium	100	100	P/P	90 - 110
Magnesium	99.2	100	P/P	90 - 110
Potassium	98.4	98.8	P/P	90 - 110
Potassium	98.4	98.4	P/P	90 - 110
Sodium	103	102	P/P	90 - 110
Sodium	103	103	P/P	90 - 110
Zinc	99.4	99.6	P/P	90 - 110
Zinc	99.6	101	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A76559
Included Lab Sample IDs: 1899023, 1899024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	104	80.8	P/P	60 - 150

Reference Method: SM 5310 B-00
Run ID: A76560
Included Lab Sample IDs: 1899012, 1899013, 1899014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.4	95.8	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A76561
Included Lab Sample IDs: 1899009

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

Reference Method: SM 4500 F-C-97
Run ID: A76561
Included Lab Sample IDs: 1899009

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A76563
Included Lab Sample IDs: 1899029, 1899030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	101	P/P	90 - 110
Arsenic	103	102	P/P	90 - 110
Cadmium	100	98.9	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110
Chromium	100	98.7	P/P	90 - 110
Chromium	98.7	97.9	P/P	90 - 110
Copper	101	100	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	97.8	96.9	P/P	90 - 110
Lead	98.7	97.8	P/P	90 - 110
Nickel	102	102	P/P	90 - 110
Nickel	102	102	P/P	90 - 110
Silver	99.3	99.7	P/P	90 - 110
Silver	99.7	98.6	P/P	90 - 110

Reference Method: USGS O-2060-01
Run ID: A76569
Included Lab Sample IDs: 1899023, 1899024

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.4	88.0	P/P	50 - 150
Acetaminophen	82.8	74.0	P/P	60 - 150
Bentazon	98.8	90.8	P/P	50 - 150
Carbamazepine	85.6	80.4	P/P	60 - 150
Diuron	78.4	80.0	P/P	60 - 150
Fenuron	88.0	78.0	P/P	60 - 150
Fluridone	86.8	81.6	P/P	60 - 150
Imidacloprid	81.6	71.2	P/P	60 - 150
Linuron	78.0	78.8	P/P	60 - 150
MCPP	90.8	86.0	P/P	50 - 150
Primidone	83.6	82.0	P/P	60 - 150
Triclopyr	97.2	88.0	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A76593
Included Lab Sample IDs: 1899012, 1899013, 1899014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.5	95.3	P/P	90 - 110
Kjeldahl Nitrogen	94.1	92.6	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A76617
Included Lab Sample IDs: 1899010, 1899011

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500 F-C-97
Run ID: A76617
Included Lab Sample IDs: 1899010, 1899011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.2	100	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A76647
Included Lab Sample IDs: 1899025, 1899026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.4		P	80 - 120
Alpha-BHC	95.7		P	80 - 120
Alpha-Chlordane	98.8		P	80 - 120
Beta-BHC	98.6		P	80 - 120
Carbophenothion	83.5		P	80 - 120
Chlorothalonil	100		P	80 - 120
Cypermethrin	95.6		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	97.6		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	100		P	80 - 120
Dicofol	94.7		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	93.4		P	80 - 120
Endosulfan II	90.7		P	80 - 120
Endosulfan Sulfate	104		P	80 - 120
Endrin	112		P	80 - 120
Endrin Aldehyde	95.7		P	80 - 120
Endrin Ketone	100		P	80 - 120
Gamma-BHC	98.5		P	80 - 120
Gamma-Chlordane	99.5		P	80 - 120
Heptachlor	95.3		P	80 - 120
Heptachlor Epoxide	97.7		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	102		P	80 - 120
Permethrin	93.5		P	80 - 120
Trifluralin	94.7		P	80 - 120

Reference Method: EPA 8276
Run ID: A76694
Included Lab Sample IDs: 1899025, 1899026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	107		P	80 - 120
Toxaphene	101		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76750
Included Lab Sample IDs: 1899027, 1899028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	103		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A76750
Included Lab Sample IDs: 1899027, 1899028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	100		P	80 - 120
Atrazine Desethyl	89.5		P	80 - 120
Azinphos Methyl	102		P	80 - 120
Bromacil	99.0		P	80 - 120
Butylate	104		P	80 - 120
Chlorpyrifos Ethyl	96.7		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	93.5		P	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	102		P	80 - 120
Disulfoton	96.4		P	80 - 120
EPTC	101		P	80 - 120
Ethion	98.4		P	80 - 120
Ethoprop	99.4		P	80 - 120
Fenamiphos	96.0		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Sulfide	99.1		P	80 - 120
Fipronil Sulfone	99.9		P	80 - 120
Fonofos	96.1		P	80 - 120
Hexazinone	101		P	80 - 120
Malathion	97.8		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	106		P	80 - 120
Metribuzin	76.5*		F	80 - 120
Mevinphos	101		P	80 - 120
Molinate	97.8		P	80 - 120
Norflurazon	98.7		P	80 - 120
Parathion Ethyl	95.2		P	80 - 120
Parathion Methyl	96.9		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	98.0		P	80 - 120
Prometon	99.3		P	80 - 120
Prometryn	103		P	80 - 120
Simazine	97.8		P	80 - 120
Terbufos	100		P	80 - 120
Terbuthylazine	99.0		P	80 - 120

Reference Method: EPA 8321B
Run ID: A76766
Included Lab Sample IDs: 1899021, 1899022

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

Reference Method: EPA 8270D
Run ID: A76920
Included Lab Sample IDs: 1899028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ethoprop	97.4		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A77051
Included Lab Sample IDs: 1899009, 1899010, 1899011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	103	P/P	90 - 110
Chloride	103	95.0	P/P	90 - 110
Sulfate	103	109	P/P	90 - 110
Sulfate	109	95.5	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			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.11	
	Turbidity							10.1	
EPA 200.7 Rev. 4.4	Calcium	101		101	100				0.356
	Iron	105		109	105	106			0.708
	Magnesium	103		109	102				1.30
	Potassium	101		98.4	99.7	97.9			1.17
	Sodium	108		102	103				0.201
	Zinc	97.7		107	98.8	97.8			0.973
EPA 200.8 Rev. 5.4	Arsenic	107		110	107	108			0.812
	Cadmium	105		106	107	106			1.19
	Chromium	102		101	99.6	98.9			0.653
	Copper	103		103	99.1	99.7			0.660
	Lead	102		101	99.4	99.6			0.216
	Nickel	106		105	101	101			0.326
	Silver	98.5		97.5	98.4	97.8			0.616
EPA 300.0 Rev. 2.1	Chloride	107		109				2.75	
	Sulfate	106		107	105			2.76	
EPA 350.1 Rev. 2.0	Ammonia-N	105		101	102				0.957
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.0		100	93.3				5.53
EPA 353.2 Rev. 2.0	NO2NO3-N	101		100	99.4				0.922
EPA 365.1 Rev. 2.0	Total-P	102		101	97.8				3.44
	Total-P	99.3		101	104				2.73
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		100	101				0.498
EPA 8270D	Acetochlor	93.4	94.2	87.6	88.7		0.883		1.21
	Alachlor	93.7	93.8	89.5	92.2		0.150		2.91
	Aldrin	28.3	31.3	41.0	41.6		10.0		1.59
	Alpha-BHC	83.5	81.6	81.7	77.0		2.28		5.99
	Alpha-Chlordane	70.0	66.4	78.0	80.3		5.29		2.82
	Ametryn	93.8	101	100	101		7.82		0.472
	Atrazine	87.9	94.7	94.3	92.9		7.49		1.45
	Atrazine Desethyl	88.2	80.9	62.9	63.7		8.65		1.33
	Azinphos Methyl	108	110	98.3	87.7		1.64		11.3
	Beta-BHC	92.0	91.6	91.9	106		0.418		13.8
	Bromacil	93.7	94.0	96.2	93.5		0.266		2.92
	Butylate	52.2	47.5	61.9	57.3		9.44		7.77
	Carbophenothion	75.3	70.2	99.3	98.9		6.99		0.415

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Chlorothalonil	102	107	160	190	5.08		17.2
	Chlorpyrifos Ethyl	90.5	87.9	78.0	78.7	2.87		0.790
	Chlorpyrifos Methyl	92.7	89.7	70.3	69.4	3.25		1.27
	Cyanazine	128	129	102	107	0.803		5.14
	Cypermethrin	46.6	45.7	78.7	86.0	1.87		8.91
	DDD-p,p'	76.5	72.5	86.6	86.5	5.40		0.163
	DDE-p,p'	68.3	63.5	78.4	77.1	7.23		1.71
	DDT-p,p'	68.7	63.2	77.3	75.9	8.35		1.78
	Delta-BHC	98.9	106	137	131	6.77		3.99
	Demeton	80.2	81.9	69.1	61.3	2.11		12.0
	Diazinon	94.1	94.6	84.2	86.1	0.620		2.17
	Dicofol	58.0	49.8	36.0	26.1	15.2		32.0
	Dieldrin	80.0	69.5	85.5	86.2	14.1		0.678
	Disulfoton	92.4	89.9	72.1	65.2	2.80		10.0
	Endosulfan I	86.0	78.3	89.4	89.3	9.34		0.128
	Endosulfan II	89.4	87.3	104	97.9	2.42		6.16
	Endosulfan Sulfate	81.1	83.3	84.4	90.6	2.77		7.16
	Endrin	84.0	77.5	75.4	75.7	8.05		0.519
	Endrin Aldehyde	95.5	86.9	87.6	71.4	9.44		20.3
	Endrin Ketone	81.7	80.7	87.9	96.2	1.17		9.08
	EPTC	52.1	47.4	57.8	61.7	9.44		6.51
	Ethion	95.6	96.8	89.8	86.6	1.32		3.59
	Ethoprop	80.4	78.3	66.1	67.5	2.53		2.08
	Ethoprop	78.3	72.3	62.2	66.8	7.99		7.11
	Fenamiphos	103	103	96.9	92.0	0.759		5.13
	Fipronil	97.8	101	101	99.1	3.70		1.94
	Fipronil Sulfide	94.4	96.3	89.5	88.8	1.98		0.773
	Fipronil Sulfone	83.2	86.3	85.9	82.8	3.69		3.74
	Fonofos	87.1	84.8	62.7	67.2	2.72		6.87
	Gamma-BHC	86.9	89.6	86.0	88.9	3.04		3.26
	Gamma-Chlordane	64.1	60.2	74.6	77.4	6.21		3.64
	Heptachlor	56.9	50.0	54.8	62.0	12.9		12.3
	Heptachlor Epoxide	80.3	77.5	81.6	84.8	3.61		3.06
	Hexazinone	84.6	86.1	91.9	88.3	1.78		4.06
	Malathion	98.0	98.0	87.4	84.2	0.0995		3.72
	Metalaxyl	95.5	96.2	93.2	96.5	0.692		3.44
	Methoxychlor	78.0	76.3	82.3	81.5	2.29		1.01
	Metolachlor	93.3	94.3	94.3	98.0	1.00		3.84
	Metribuzin	110	90.4	62.9	73.7	19.8		15.8
	Mevinphos	78.1	76.9	63.1	60.1	1.56		4.92
	Mirex	42.5	40.2	55.2	59.6	5.52		7.63
	Molinate	60.9	61.9	70.0	69.3	1.57		0.924
	Norflurazon	93.0	96.0	96.8	96.4	3.17		0.414
	Parathion Ethyl	92.8	93.4	81.8	86.2	0.640		5.25
	Parathion Methyl	97.1	96.6	81.5	79.0	0.516		3.15
	Pendimethalin	92.4	91.4	85.9	88.8	1.09		3.31
	Permethrin	47.6	44.9	70.1	70.2	6.01		0.159
	Phorate	77.2	75.1	57.9	57.1	2.72		1.43
	Prometon	88.9	89.7	93.9	94.7	0.913		0.861
	Prometryn	96.6	97.5	99.0	100	0.876		1.48
	Simazine	101	97.5	89.0	91.9	3.29		3.19
	Terbufos	90.9	86.7	66.7	65.4	4.68		1.97
	Terbuthylazine	89.4	89.8	90.8	90.1	0.553		0.746
	Trifluralin	86.0	78.7	103	125	8.84		19.4

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
EPA 8276	Chlordane	78.6 83.3	77.5 78.2	5.80		0.875
	Toxaphene	76.8 80.5	72.8 74.3	4.72		2.08
EPA 8321B	Glyphosate	82.4	77.2 77.0			0.259
	Pyraclostrobin	94.3	99.2 104			4.63
	Sucralose	78.3	59.7 55.5			6.94
SM 2120 B	Color (true)				4.32	
	Color (true)				4.30	
SM 2320 B-97	Total Alkalinity	104			0.354	
	Total Alkalinity	103			0.593	
	Total Alkalinity	103			0.127	
SM 2540 C-97	TDS				1.36	
SM 4500 F-C-97	Fluoride	99.1	95.5 99.7			3.58
	Fluoride	93.7	93.4 101			4.36
	Fluoride	97.1	96.5 102			3.92
SM 5310 B-00	Organic Carbon	94.4	106			0.384
USGS O-2060-01	2,4-D	88.4	81.2 80.8			0.480
	Acetaminophen	86.2	97.0 95.4			1.66
	Bentazon	70.6	45.6 45.4			0.440
	Carbamazepine	107	110 122			10.4
	Diuron	108	111 97.2			12.9
	Fenuron	93.2	85.0 88.2			3.70
	Fluridone	103	46.0 45.0			2.20
	Imidacloprid	92.0	156 161			2.81
	Linuron	100	97.6 102			4.21
	MCPP	91.4	82.0 75.4			8.39
	Primidone	98.0	102 112			9.74
	Triclopyr	94.8	83.2 82.4			0.966

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1899009, 1899010, 1899011
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1899029, 1899030
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1899029, 1899030
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1899009, 1899010, 1899011
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1899009, 1899010, 1899011
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1899012, 1899013, 1899014
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1899012, 1899013, 1899014
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1899012, 1899013, 1899014
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1899012, 1899013, 1899014
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1899015, 1899016, 1899017
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1899025, 1899026
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1899027, 1899028

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1899025, 1899026
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1899023, 1899024
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1899021, 1899022
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1899023, 1899024
SM 2120 B / E31780	True Color measured at 450 nm	1899009, 1899010, 1899011
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1899009, 1899010, 1899011
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1899009, 1899010, 1899011
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1899009, 1899010, 1899011
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1899009, 1899010, 1899011
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1899012, 1899013, 1899014
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1899023, 1899024
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1899023, 1899024

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	05/12/2017			05/12/2017 15:15	Blanca Fach	1899009, 1899010, 1899011
EPA 200.7 Rev. 4.4	05/12/2017	05/17/2017	Elliott D. Healy	05/18/2017	Martin Acosta	1899029, 1899030
EPA 200.8 Rev. 5.4	05/12/2017	05/17/2017	Elliott D. Healy	05/20/2017	Betina Topolski	1899029, 1899030
EPA 300.0 Rev. 2.1	05/12/2017			06/08/2017	Julia Storbeck	1899009, 1899010, 1899011
EPA 350.1 Rev. 2.0	05/12/2017			05/15/2017	Julia Storbeck	1899012, 1899013, 1899014
EPA 351.2 Rev. 2.0	05/12/2017	05/18/2017	Adrian Shelby	05/22/2017	Joseph Suarez	1899012, 1899013, 1899014
EPA 353.2 Rev. 2.0	05/12/2017			05/16/2017	Beverly Y. Sanders	1899012, 1899013, 1899014
EPA 365.1 Rev. 2.0	05/12/2017	05/16/2017	Adrian Shelby	05/17/2017	Christopher Armour	1899012
	05/12/2017	05/16/2017	Adrian Shelby	05/17/2017	Lipi Saha	1899013
	05/12/2017	05/17/2017	Vijayalakshmi Reddy	05/18/2017	Lipi Saha	1899014
EPA 365.1 Rev. 2.0 dissolved	05/12/2017			05/12/2017 13:40	Anthony C. Onicha	1899015
	05/12/2017			05/12/2017 13:41	Anthony C. Onicha	1899016
	05/12/2017			05/12/2017 13:42	Anthony C. Onicha	1899017
EPA 8270D	05/12/2017	05/12/2017	John Kaba	05/23/2017	Marek Topolski	1899027, 1899028
	05/12/2017	05/17/2017	Fe-Val Siddell	05/22/2017	Vandana T. Nagar	1899025, 1899026
	05/12/2017	06/01/2017	John Kaba	06/05/2017	Marek Topolski	1899028
EPA 8276	05/12/2017	05/17/2017	Fe-Val Siddell	05/22/2017	Vandana T. Nagar	1899025, 1899026
EPA 8321B	05/12/2017	05/17/2017	Mohammad Ghaffari	05/17/2017	Mohammad Ghaffari	1899023, 1899024
	05/12/2017	05/18/2017	Hoor Shaik	05/23/2017	Juyoung Kim	1899021, 1899022
	05/12/2017	05/18/2017	Mohammad Ghaffari	05/18/2017	Mohammad Ghaffari	1899023, 1899024
SM 2120 B	05/12/2017			05/12/2017 14:42	Julia Storbeck	1899010
	05/12/2017			05/12/2017 14:44	Julia Storbeck	1899011
	05/12/2017			05/12/2017 14:49	Julia Storbeck	1899009
SM 2320 B-97	05/12/2017			05/20/2017	Dale L. Simmons	1899009
	05/12/2017			05/22/2017	Dale L. Simmons	1899010
	05/12/2017			05/23/2017	Dale L. Simmons	1899011
SM 2540 C-97	05/12/2017			05/17/2017	Yijie Li	1899009, 1899010, 1899011
SM 2540 D-97	05/12/2017			05/17/2017	Yijie Li	1899009, 1899010, 1899011
SM 4500 F-C-97	05/12/2017			05/20/2017	Dale L. Simmons	1899009
	05/12/2017			05/22/2017	Dale L. Simmons	1899010
	05/12/2017			05/23/2017	Dale L. Simmons	1899011
SM 5310 B-00	05/12/2017			05/19/2017	Christopher Armour	1899012, 1899013, 1899014
USGS O-2060-01	05/12/2017	05/17/2017	Hoor Shaik	05/20/2017	Juyoung Kim	1899023, 1899024