Chemical Analysis Report

WQAP-2017-06-30-04

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-2017-06-26-20**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 04-AUG-2017 17:09

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: Armistead **Collection Date/Time: 06/29/2017 09:25**

Field ID: G1SW0030 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910686	EPA 180.1 Rev. 2.0	Turbidity	1.4	A	NTU	P327819	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P328248	
		Sulfate	9.3		mg SO4/L	P328249	
	SM 2120 B	Color (true)	56		PCU	P327810	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P328172	
	SM 2540 C-97	TDS	106		mg/L	P328290	
	SM 2540 D-97	TSS	3	I	mg/L	P328296	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P328180	
1910690	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P328046	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P328188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P327986	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P328054	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P328072	
1910694	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327814	

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: Magdalene **Collection Date/Time: 06/29/2017 10:30**

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910687	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P327819	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P328248	
		Sulfate	14		mg SO4/L	P328249	
	SM 2120 B	Color (true)	25	A	PCU	P327810	
	SM 2320 B-97	Total Alkalinity	35	A	mg CaCO3/L	P328172	
	SM 2540 C-97	TDS	142		mg/L	P328290	
	SM 2540 D-97	TSS	3	I	mg/L	P328296	
	SM 4500 F-C-97	Fluoride	0.098	I	mg F/L	P328180	
1910691	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P328046	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P328188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P327986	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P328054	
	SM 5310 B-00	Organic Carbon	9.6		mg C/L	P328072	
1910695	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327814	

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: Bellows Lake **Collection Date/Time: 06/29/2017 11:25**

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910688	EPA 180.1 Rev. 2.0	Turbidity	36		NTU	P327819	
	EPA 300.0 Rev. 2.1	Chloride	8.7		mg Cl/L	P328248	
		Sulfate	7.5		mg SO4/L	P328249	

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910688	SM 2120 B	Color (true)	29		PCU	P327811	
	SM 2320 B-97	Total Alkalinity	57		mg CaCO3/L	P328172	
	SM 2540 C-97	TDS	134		mg/L	P328290	
	SM 2540 D-97	TSS	23		mg/L	P328296	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P328180	
1910692	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P328046	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	5.5		mg N/L	P328188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P327986	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P328054	
	SM 5310 B-00	Organic Carbon	29		mg C/L	P328072	
1910696	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327814	

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: Bellows Outlet **Collection Date/Time: 06/29/2017 12:30**

Field ID: G1SW0060 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910689	EPA 180.1 Rev. 2.0	Turbidity	36		NTU	P327819	
	EPA 300.0 Rev. 2.1	Chloride	8.7		mg Cl/L	P328248	
		Sulfate	7.5		mg SO4/L	P328249	
	SM 2120 B	Color (true)	30	A	PCU	P327811	
	SM 2320 B-97	Total Alkalinity	64		mg CaCO3/L	P328172	
	SM 2540 C-97	TDS	135		mg/L	P328290	
	SM 2540 D-97	TSS	22		mg/L	P328296	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P328180	
1910693	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P328046	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	6.1		mg N/L	P328188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P327986	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P328054	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P328072	
1910697	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327814	

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: Bellows Outlet **Collection Date/Time: 06/29/2017 12:30**

Field ID: G1SW0060 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910706	EPA 8321B	Sucralose**	0.055		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.12		ug/L	P327782	
		Diuron	0.0058		ug/L	P327782	
		Fenuron	0.0080	U	ug/L	P327782	
		Imidacloprid	0.0040		ug/L	P327782	
		Bentazon	0.0023	I	ug/L	P327782	
		Linuron	0.0040	U	ug/L	P327782	

Field ID: G1SW0060 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910706	USGS O-2060-01	Acetaminophen**	0.15		ug/L	P327782	
		MCPP	0.0025	I	ug/L	P327782	
		Carbamazepine**	4.0E-04	U	ug/L	P327782	
		Triclopyr**	0.0040	U	ug/L	P327782	
		Primidone**	0.0040	U	ug/L	P327782	
		Fluridone**	0.010		ug/L	P327782	

Sample Location: Rocky Crk **Collection Date/Time: 06/29/2017 10:10**

Field ID: G1SW0053 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910707	EPA 8321B	Sucralose**	1.5		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.095		ug/L	P327782	
		Diuron	0.021		ug/L	P327782	
		Fenuron	0.0080	U	ug/L	P327782	
		Imidacloprid	0.076		ug/L	P327782	
		Bentazon	0.037		ug/L	P327782	
		Linuron	0.0040	U	ug/L	P327782	
		Acetaminophen**	0.11		ug/L	P327782	
		MCPP	0.0045	I	ug/L	P327782	
		Carbamazepine**	0.0047		ug/L	P327782	
		Triclopyr**	0.0040	U	ug/L	P327782	
		Primidone**	0.0040	U	ug/L	P327782	
		Fluridone**	0.055		ug/L	P327782	

Sample Location: Magdalene **Collection Date/Time: 06/29/2017 10:30**

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910709	EPA 8321B	Glyphosate**	10	U	ug/L	P327603	
		Pyraclostrobin**	0.0020	U	ug/L	P327601	
		Sucralose**	1.1		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.029		ug/L	P327927	
		Diuron	0.0070		ug/L	P327927	
		Fenuron	0.0080	U	ug/L	P327927	
		Imidacloprid	0.0057	J	ug/L	P327927	MS
		Bentazon	0.020		ug/L	P327927	
		Linuron	0.0040	U	ug/L	P327927	
		Acetaminophen**	0.0080	U	ug/L	P327927	
		MCPP	0.0020	U	ug/L	P327927	
		Carbamazepine**	8.8E-04	I	ug/L	P327927	
		Triclopyr**	0.0040	U	ug/L	P327927	
		Primidone**	0.0040	U	ug/L	P327927	
		Fluridone**	0.028		ug/L	P327927	
1910711	EPA 8270D	Aldrin	4.1	UJ	ng/L	P327948	SUR

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910711	EPA 8270D	Alpha-BHC	2.1	UJ	ng/L	P327948	SUR
		Beta-BHC	4.1	UJ	ng/L	P327948	SUR
		Delta-BHC	4.1	UJ	ng/L	P327948	SUR
		Gamma-BHC	4.1	UJ	ng/L	P327948	SUR
		Carbophenothion	4.1	UJ	ng/L	P327948	SUR
		Chlorothalonil	2.1	UJ	ng/L	P327948	RPD, SUR
		Cypermethrin	21	UJ	ng/L	P327948	RPD, SUR
		DDD-p,p'	2.1	UJ	ng/L	P327948	SUR
		DDE-p,p'	3.1	UJ	ng/L	P327948	SUR
		DDT-p,p'	3.1	UJ	ng/L	P327948	SUR
		Dieldrin	4.1	UJ	ng/L	P327948	SUR
		Endosulfan I	4.1	UJ	ng/L	P327948	SUR
		Endosulfan II	4.1	UJ	ng/L	P327948	SUR
		Endosulfan Sulfate	2.1	UJ	ng/L	P327948	SUR
		Endrin	2.1	UJ	ng/L	P327948	SUR
		Endrin Aldehyde	2.1	UJ	ng/L	P327948	SUR
		Heptachlor	1.5	UJ	ng/L	P327948	SUR
		Heptachlor Epoxide	2.1	UJ	ng/L	P327948	SUR
		Methoxychlor	4.1	UJ	ng/L	P327948	SUR
		Mirex	2.1	UJ	ng/L	P327948	SUR
		Permethrin	10	UJ	ng/L	P327948	RPD, SUR
		Trifluralin	1.0	UJ	ng/L	P327948	SUR
		Alpha-Chlordane	1.0	UJ	ng/L	P327948	SUR
		Gamma-Chlordane	1.0	UJ	ng/L	P327948	SUR
		Endrin Ketone	2.1	UJ	ng/L	P327948	SUR
		Dicofol	31	UJ	ng/L	P327948	RPD, SUR
	EPA 8276	Chlordane**	2.6	U	ng/L	P327948	
		Toxaphene**	13	U	ng/L	P327948	
1910713	EPA 8270D	Alachlor	0.24	U	ng/L	P327768	
		Ametryn	2.0		ng/L	P327768	
		Atrazine	18		ng/L	P327768	
		Atrazine Desethyl	5.8		ng/L	P327768	
		Azinphos Methyl	2.2	U	ng/L	P327768	
		Bromacil	0.48	U	ng/L	P327768	
		Butylate	0.39	U	ng/L	P327768	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P327768	
		Chlorpyrifos Methyl	0.097	U	ng/L	P327768	
		Demeton	1.9	U	ng/L	P327768	
		Diazinon	0.12	U	ng/L	P327768	
		Disulfoton	0.31	U	ng/L	P327768	
		EPTC	1.2	U	ng/L	P327768	
		Ethion	0.14	U	ng/L	P327768	
		Ethoprop	0.097	U	ng/L	P327768	
		Fenamiphos	0.24	U	ng/L	P327768	
		Fipronil	0.24	U	ng/L	P327768	

Field ID: G1SW0059 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910713	EPA 8270D	Fipronil Sulfide	0.14	U	ng/L	P327768	
		Fipronil Sulfone	0.23	I	ng/L	P327768	
		Hexazinone	6.3		ng/L	P327768	
		Malathion	0.34	U	ng/L	P327768	
		Metribuzin	0.19	UJ	ng/L	P327768	LCS, MS
		Mevinphos	0.48	U	ng/L	P327768	
		Molinate	0.29	U	ng/L	P327768	
		Norflurazon	0.48	U	ng/L	P327768	
		Pendimethalin	1.4	U	ng/L	P327768	
		Phorate	0.24	U	ng/L	P327768	
		Prometon	0.87	UJ	ng/L	P327768	LCS
		Prometryn	0.19	U	ng/L	P327768	
		Simazine	1.2	I	ng/L	P327768	
		Terbufos	0.097	U	ng/L	P327768	
		Terbuthylazine	0.41	U	ng/L	P327768	
		Fonofos	0.19	U	ng/L	P327768	
		Metalaxyl	0.19	U	ng/L	P327768	
		Metolachlor	0.24	UJ	ng/L	P327768	LCS
		Acetochlor	0.24	U	ng/L	P327768	
		Cyanazine	0.48	UJ	ng/L	P327768	
		Parathion Ethyl	0.24	U	ng/L	P327768	
		Parathion Methyl	0.24	U	ng/L	P327768	
1910715	EPA 200.7 Rev. 4.4	Calcium	16.9		mg/L	P327925	
		Iron	30	U	ug/L	P327925	
		Magnesium	2.14		mg/L	P327925	
		Potassium	3.9		mg/L	P327925	
		Sodium	26.2		mg/L	P327925	
		Zinc	5.0	U	ug/L	P327925	
	EPA 200.8 Rev. 5.4	Arsenic	5.00		ug/L	P327925	
		Cadmium	0.020	U	ug/L	P327925	
		Chromium	0.40	U	ug/L	P327925	
		Copper	0.77	I	ug/L	P327925	
		Lead	0.11	I	ug/L	P327925	
		Nickel	0.20	U	ug/L	P327925	
		Silver	0.010	U	ug/L	P327925	

Ref. Method and Comment:
USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Reported results qualified with J due to surrogate below control limits: the sample was subsequently re-extracted and re-analyzed after expiration with acceptable surrogate recovery and the same analytical results were obtained.
EPA 8270D: MS accuracy for Atrazine, Atrazine Desethyl, Ametryn, and Fipronil Sulfone not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Bellows Lake **Collection Date/Time: 06/29/2017 11:25**

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910710	EPA 8321B	Glyphosate**	10	U	ug/L	P327603	

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910710	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P327601	
		Sucralose**	0.050		ug/L	P327821	
	USGS O-2060-01	2,4-D	0.12		ug/L	P327927	
		Diuron	0.0043		ug/L	P327927	
		Fenuron	0.0080	U	ug/L	P327927	
		Imidacloprid	0.0045		ug/L	P327927	MS
		Bentazon	8.8E-04	I	ug/L	P327927	
		Linuron	0.0040	U	ug/L	P327927	
		Acetaminophen**	0.011	I	ug/L	P327927	
		MCPP	0.0020	U	ug/L	P327927	
		Carbamazepine**	4.0E-04	U	ug/L	P327927	
		Triclopyr**	0.0040	U	ug/L	P327927	
		Primidone**	0.0040	U	ug/L	P327927	
		Fluridone**	0.0088		ug/L	P327927	
1910712	EPA 8270D	Aldrin	4.2	UJ	ng/L	P327948	SUR
		Alpha-BHC	2.1	UJ	ng/L	P327948	SUR
		Beta-BHC	4.2	UJ	ng/L	P327948	SUR
		Delta-BHC	4.2	UJ	ng/L	P327948	SUR
		Gamma-BHC	4.2	UJ	ng/L	P327948	SUR
		Carbophenothion	4.2	UJ	ng/L	P327948	SUR
		Chlorothalonil	2.1	UJ	ng/L	P327948	RPD, SUR
		Cypermethrin	21	UJ	ng/L	P327948	RPD, SUR
		DDD-p,p'	3.1	IJ	ng/L	P327948	SUR
		DDE-p,p'	3.2	UJ	ng/L	P327948	SUR
		DDT-p,p'	3.2	UJ	ng/L	P327948	SUR
		Dieldrin	4.2	UJ	ng/L	P327948	SUR
		Endosulfan I	4.2	UJ	ng/L	P327948	SUR
		Endosulfan II	4.2	UJ	ng/L	P327948	SUR
		Endosulfan Sulfate	2.1	UJ	ng/L	P327948	SUR
		Endrin	2.1	UJ	ng/L	P327948	SUR
		Endrin Aldehyde	2.1	UJ	ng/L	P327948	SUR
		Heptachlor	1.6	UJ	ng/L	P327948	SUR
		Heptachlor Epoxide	2.1	UJ	ng/L	P327948	SUR
		Methoxychlor	4.2	UJ	ng/L	P327948	SUR
		Mirex	2.1	UJ	ng/L	P327948	SUR
		Permethrin	11	UJ	ng/L	P327948	RPD, SUR
		Trifluralin	1.1	UJ	ng/L	P327948	SUR
		Alpha-Chlordane	1.1	UJ	ng/L	P327948	SUR
		Gamma-Chlordane	1.1	UJ	ng/L	P327948	SUR
		Endrin Ketone	2.1	UJ	ng/L	P327948	SUR
		Dicofol	32	UJ	ng/L	P327948	RPD, SUR
	EPA 8276	Chlordane**	2.6	U	ng/L	P327948	
		Toxaphene**	13	U	ng/L	P327948	
1910714	EPA 8270D	Alachlor	0.25	U	ng/L	P327768	
		Ametryn	0.32	U	ng/L	P327768	

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910714	EPA 8270D	Atrazine	25		ng/L	P327768	
		Atrazine Desethyl	6.9		ng/L	P327768	
		Azinphos Methyl	2.2	UJ	ng/L	P327768	SUR
		Bromacil	0.49	U	ng/L	P327768	
		Butylate	0.40	U	ng/L	P327768	
		Chlorpyrifos Ethyl	0.25	UJ	ng/L	P327768	SUR
		Chlorpyrifos Methyl	0.099	UJ	ng/L	P327768	SUR
		Demeton	2.0	UJ	ng/L	P327768	SUR
		Diazinon	0.12	UJ	ng/L	P327768	SUR
		Disulfoton	0.32	UJ	ng/L	P327768	SUR
		EPTC	1.2	U	ng/L	P327768	
		Ethion	0.15	UJ	ng/L	P327768	SUR
		Ethoprop	0.099	UJ	ng/L	P327768	SUR
		Fenamiphos	0.25	UJ	ng/L	P327768	SUR
		Fipronil	0.25	U	ng/L	P327768	
		Fipronil Sulfide	0.15	U	ng/L	P327768	
		Fipronil Sulfone	0.15	U	ng/L	P327768	
		Hexazinone	1.2	I	ng/L	P327768	
		Malathion	0.35	UJ	ng/L	P327768	SUR
		Metribuzin	0.20	UJ	ng/L	P327768	LCS, MS
		Mevinphos	0.49	UJ	ng/L	P327768	SUR
		Molinate	0.30	U	ng/L	P327768	
		Norflurazon	0.49	U	ng/L	P327768	
		Pendimethalin	1.5	U	ng/L	P327768	
		Phorate	0.25	UJ	ng/L	P327768	SUR
		Prometon	0.89	UJ	ng/L	P327768	LCS
		Prometryn	0.20	U	ng/L	P327768	
		Simazine	2.0	I	ng/L	P327768	
		Terbufos	0.099	UJ	ng/L	P327768	SUR
		Terbuthylazine	0.42	U	ng/L	P327768	
		Fonofos	0.20	UJ	ng/L	P327768	SUR
		Metalaxyl	0.20	U	ng/L	P327768	
		Metolachlor	0.25	UJ	ng/L	P327768	LCS
		Acetochlor	0.25	U	ng/L	P327768	
		Cyanazine	0.49	UJ	ng/L	P327768	
		Parathion Ethyl	0.25	UJ	ng/L	P327768	SUR
		Parathion Methyl	0.25	UJ	ng/L	P327768	SUR
1910716	EPA 200.7 Rev. 4.4	Calcium	27.1		mg/L	P327925	
		Iron	64	I	ug/L	P327925	
		Magnesium	1.55		mg/L	P327925	
		Potassium	2.1		mg/L	P327925	
		Sodium	5.4		mg/L	P327925	
		Zinc	5.0	U	ug/L	P327925	
	EPA 200.8 Rev. 5.4	Arsenic	3.30		ug/L	P327925	
		Cadmium	0.020	U	ug/L	P327925	

Field ID: G1SW0044 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910716	EPA 200.8 Rev. 5.4	Chromium	0.40	U	ug/L	P327925	
		Copper	0.96		ug/L	P327925	
		Lead	0.31		ug/L	P327925	
		Nickel	0.32	I	ug/L	P327925	
		Silver	0.010	U	ug/L	P327925	

Ref. Method and Comment:
USGS O-2060-01: Results confirmed in re-extraction.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.Reported results qualified with J due to surrogate below control limits: the sample was subsequently re-extracted and re-analyzed after expiration with acceptable surrogate recovery and the same analytical results were obtained.
EPA 8270D: MS accuracy for Atrazine, Atrazine Desethyl, Ametryn, and Fipronil Sulfone not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes. Surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed.

Sample Location: Field Blank **Collection Date/Time: 06/29/2017 10:20**

Field ID: Field Blank Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1910708	EPA 8321B	Sucralose**	0.010	U	ug/L	P327821	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P327927	
		Diuron	8.0E-04	U	ug/L	P327927	
		Fenuron	0.0080	U	ug/L	P327927	
		Imidacloprid	8.0E-04	U	ug/L	P327927	MS
		Bentazon	8.0E-04	U	ug/L	P327927	
		Linuron	0.0040	U	ug/L	P327927	
		Acetaminophen**	0.0080	U	ug/L	P327927	
		MCPP	0.0020	U	ug/L	P327927	
		Carbamazepine**	4.0E-04	U	ug/L	P327927	
		Triclopyr**	0.0040	U	ug/L	P327927	
		Primidone**	0.0040	U	ug/L	P327927	
		Fluridone**	4.0E-04	U	ug/L	P327927	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P327819

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327925

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327925

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328248

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328249

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328188

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327986

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327814

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P327768

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
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: P327948

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P327948

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

Reference Method: EPA 8276
Batch ID: P327948

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

Reference Method: EPA 8321B
Batch ID: P327601

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P327603

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P327821

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P327811

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P328172

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

Reference Method: SM 2540 C-97
Batch ID: P328290

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P328296

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P328180

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P328072

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

Reference Method: USGS O-2060-01
Batch ID: P327782

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	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P327927

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

Quality Assurance Report
Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P327927

Component	Result	Code	Units
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327925

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	105		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	104		P	85 - 115
Sodium	104		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327925

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	97.3		P	85 - 115
Cadmium	98.4		P	85 - 115
Chromium	96.0		P	85 - 115
Copper	93.3		P	85 - 115
Lead	95.1		P	85 - 115
Nickel	96.4		P	85 - 115
Silver	95.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328248

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328249

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327986

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: P328054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327814

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

Reference Method: EPA 8270D
Batch ID: P327768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	86.1	91.3	P/P	78 - 118
Alachlor	84.9	89.0	P/P	77 - 119
Ametryn	71.5	84.1	P/P	61 - 136
Atrazine	83.1	90.5	P/P	73 - 120
Atrazine Desethyl	114	121	P/P	16 - 122
Azinphos Methyl	104	114	P/P	69 - 186
Bromacil	78.7	81.6	P/P	40 - 125
Butylate	41.8	42.6	P/P	32 - 87.0
Chlorpyrifos Ethyl	78.6	84.9	P/P	53 - 110
Chlorpyrifos Methyl	81.3	89.7	P/P	31 - 119
Cyanazine	181	188	P/P	36 - 224
Demeton	59.1	56.5	P/P	39 - 122
Diazinon	88.2	91.0	P/P	75 - 119
Disulfoton	71.1	72.1	P/P	42 - 139
EPTC	44.0	47.8	P/P	33 - 96.0
Ethion	70.1	81.2	P/P	63 - 127
Ethoprop	82.0	84.5	P/P	65 - 107
Fenamiphos	76.4	79.8	P/P	64 - 137
Fipronil	80.8	89.7	P/P	60 - 126
Fipronil Sulfide	58.1	59.4	P/P	58 - 124
Fipronil Sulfone	69.5	76.0	P/P	57 - 126
Fonofos	80.3	89.1	P/P	65 - 111
Hexazinone	81.6	86.0	P/P	46 - 151
Malathion	76.7	82.1	P/P	68 - 132
Metalaxyl	75.7	81.3	P/P	51 - 132
Metolachlor	76.4	83.7	F/P	78 - 119
Metribuzin	145	139	F/F	64 - 138
Mevinphos	72.2	72.4	P/P	34 - 128

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P327768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molinate	46.7	47.1	P/P	44 - 101
Norflurazon	80.3	84.1	P/P	63 - 129
Parathion Ethyl	88.2	88.6	P/P	80 - 109
Parathion Methyl	88.4	89.5	P/P	74 - 125
Pendimethalin	77.8	89.1	P/P	48 - 134
Phorate	80.0	84.9	P/P	52 - 119
Prometon	67.7	81.0	F/P	69 - 124
Prometryn	75.9	81.9	P/P	66 - 124
Simazine	90.0	87.9	P/P	61 - 134
Terbufos	80.1	78.9	P/P	58 - 115
Terbuthylazine	83.4	87.9	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P327948

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.1	55.5	P/P	26 - 88.0
Alpha-BHC	76.2	69.5	P/P	63 - 114
Alpha-Chlordane	73.2	73.6	P/P	56 - 117
Beta-BHC	74.2	75.7	P/P	57 - 138
Carbophenothion	67.1	64.5	P/P	36 - 148
Chlorothalonil	66.6	47.1	P/P	26 - 173
Cypermethrin	70.6	80.6	P/P	42 - 159
DDD-p,p'	82.9	82.8	P/P	62 - 126
DDE-p,p'	75.2	75.5	P/P	53 - 115
DDT-p,p'	75.3	77.1	P/P	54 - 117
Delta-BHC	85.1	85.9	P/P	68 - 158
Dicofol	45.2	51.4	P/P	25 - 114
Dieldrin	78.9	76.2	P/P	59 - 126
Endosulfan I	79.3	75.7	P/P	62 - 138
Endosulfan II	84.3	80.9	P/P	61 - 150
Endosulfan Sulfate	71.4	75.5	P/P	63 - 132
Endrin	76.4	82.5	P/P	49 - 148
Endrin Aldehyde	74.7	83.2	P/P	50 - 144
Endrin Ketone	76.2	75.8	P/P	66 - 122
Gamma-BHC	81.6	76.8	P/P	60 - 137
Gamma-Chlordane	71.9	73.0	P/P	54 - 113
Heptachlor	58.5	60.7	P/P	43 - 104
Heptachlor Epoxide	74.1	72.7	P/P	64 - 118
Methoxychlor	83.3	86.6	P/P	63 - 129
Mirex	62.3	66.4	P/P	39 - 93.0
Permethrin	71.9	78.3	P/P	51 - 123
Trifluralin	87.8	94.7	P/P	35 - 187

Reference Method: EPA 8276
Batch ID: P327948

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	101	106	P/P	48 - 121
Toxaphene	132	133	P/P	43 - 135

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P327601

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	140		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P327603

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	95.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P327821

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	85.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P328172

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

Reference Method: SM 4500 F-C-97
Batch ID: P328180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P328072

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.9		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P327782

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.8		P	40 - 150
Acetaminophen	103		P	30 - 150
Bentazon	60.8		P	40 - 150
Carbamazepine	77.3		P	40 - 150
Diuron	65.3		P	40 - 150
Fenuron	87.6		P	40 - 150
Fluridone	78.3		P	40 - 150
Imidacloprid	78.7		P	40 - 160
Linuron	77.0		P	40 - 150
MCPP	69.4		P	40 - 150
Primidone	76.0		P	40 - 150
Triclopyr	72.7		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P327927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.6		P	40 - 150
Acetaminophen	92.6		P	30 - 150
Bentazon	84.2		P	40 - 150
Carbamazepine	96.0		P	40 - 150
Diuron	108		P	40 - 150
Fenuron	89.6		P	40 - 150
Fluridone	98.8		P	40 - 150
Imidacloprid	77.6		P	40 - 160
Linuron	99.8		P	40 - 150
MCPP	78.4		P	40 - 150
Primidone	85.0		P	40 - 150
Triclopyr	84.8		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327925

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910466	Calcium	107		P	80 - 120
1910466	Iron	107		P	80 - 120
1910466	Magnesium	106		P	80 - 120
1910466	Potassium	104		P	80 - 120
1910466	Sodium	104		P	80 - 120
1910466	Zinc	105		P	80 - 120
1910715	Calcium	102		P	80 - 120
1910715	Iron	109	109	P/P	80 - 120
1910715	Magnesium	110	109	P/P	80 - 120
1910715	Potassium	101	102	P/P	80 - 120
1910715	Sodium	101		P	80 - 120
1910715	Zinc	103	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327925

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910466	Arsenic	93.1		P	80 - 120
1910466	Cadmium	93.3		P	80 - 120
1910466	Chromium	89.5		P	80 - 120
1910466	Copper	88.7		P	80 - 120
1910466	Lead	90.1		P	80 - 120
1910466	Nickel	89.8		P	80 - 120
1910466	Silver	89.1		P	80 - 120
1910715	Arsenic	99.3	103	P/P	80 - 120
1910715	Cadmium	98.2	102	P/P	80 - 120
1910715	Chromium	93.8	98.6	P/P	80 - 120
1910715	Copper	93.7	97.4	P/P	80 - 120
1910715	Lead	95.8	99.0	P/P	80 - 120
1910715	Nickel	95.6	99.0	P/P	80 - 120
1910715	Silver	94.4	96.2	P/P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328248

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910623	Chloride	96.0		P	90 - 110
1910625	Chloride	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910623	Sulfate	96.0		P	90 - 110
1910625	Sulfate	96.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910629	Ammonia-N	97.1	97.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910691	Kjeldahl Nitrogen	99.4	97.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910691	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328054

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910630	Total-P	97.5	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910614	O-Phosphate-P	91.5	92.0	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P327768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910249	Acetochlor	78.7	80.4	P/P	74 - 123
1910249	Alachlor	80.7	82.7	P/P	73 - 124
1910249	Azinphos Methyl	84.2	85.6	P/P	60 - 202
1910249	Bromacil	90.0	87.8	P/P	42 - 133
1910249	Butylate	20.6	21.5	P/P	10 - 85.0
1910249	Chlorpyrifos Ethyl	74.0	84.1	P/P	53 - 113
1910249	Chlorpyrifos Methyl	78.2	79.7	P/P	40 - 115
1910249	Cyanazine	143	129	P/P	22 - 210

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P327768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910249	Demeton	84.2	81.2	P/P	17 - 149
1910249	Diazinon	87.9	96.5	P/P	72 - 124
1910249	Disulfoton	91.3	94.9	P/P	43 - 139
1910249	EPTC	23.4	22.7	P/P	10 - 86.0
1910249	Ethion	77.6	80.4	P/P	65 - 131
1910249	Ethoprop	68.9	74.6	P/P	59 - 110
1910249	Fenamiphos	86.2	76.9	P/P	57 - 138
1910249	Fipronil	96.3	101	P/P	40 - 130
1910249	Fipronil Sulfide	62.6	71.1	P/P	36 - 128
1910249	Fonofos	73.0	86.7	P/P	60 - 112
1910249	Hexazinone	83.7	84.6	P/P	69 - 142
1910249	Malathion	76.8	79.6	P/P	68 - 132
1910249	Metalaxyl	81.6	79.4	P/P	66 - 118
1910249	Metolachlor	78.8	80.5	P/P	71 - 124
1910249	Metribuzin	185	190	F/F	61 - 140
1910249	Mevinphos	63.3	70.5	P/P	38 - 130
1910249	Molinate	30.5	37.2	P/P	23 - 99.0
1910249	Norflurazon	86.3	90.9	P/P	39 - 139
1910249	Parathion Ethyl	78.8	86.0	P/P	75 - 111
1910249	Parathion Methyl	83.0	81.8	P/P	64 - 130
1910249	Pendimethalin	88.0	92.5	P/P	26 - 173
1910249	Phorate	62.8	70.1	P/P	43 - 127
1910249	Prometon	98.3	101	P/P	50 - 144
1910249	Prometryn	85.1	87.9	P/P	69 - 126
1910249	Simazine	87.5	92.8	P/P	51 - 152
1910249	Terbufos	71.9	83.5	P/P	54 - 125
1910249	Terbuthylazine	80.6	80.8	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P327948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910768	Aldrin	73.1	66.7	P/P	22 - 97.0
1910768	Alpha-BHC	87.4	82.0	P/P	43 - 132
1910768	Alpha-Chlordane	91.5	77.8	P/P	36 - 126
1910768	Beta-BHC	105	86.4	P/P	41 - 150
1910768	Carbophenothion	123	92.5	P/P	13 - 196
1910768	Chlorothalonil	143	93.9	P/P	10 - 266
1910768	Cypermethrin	142	91.0	P/P	37 - 161
1910768	DDD-p,p'	104	89.5	P/P	44 - 131
1910768	DDE-p,p'	93.5	81.8	P/P	32 - 127
1910768	DDT-p,p'	102	84.9	P/P	45 - 116
1910768	Delta-BHC	115	94.6	P/P	50 - 201
1910768	Dicofol	28.5	52.0	P/P	10 - 100
1910768	Dieldrin	94.2	84.3	P/P	39 - 142
1910768	Endosulfan I	98.9	81.5	P/P	51 - 139
1910768	Endosulfan II	105	90.4	P/P	49 - 155
1910768	Endosulfan Sulfate	117	87.7	P/P	54 - 136
1910768	Endrin	93.1	78.4	P/P	38 - 141
1910768	Endrin Aldehyde	107	86.1	P/P	14 - 152
1910768	Endrin Ketone	112	85.7	P/P	60 - 128
1910768	Gamma-BHC	98.0	85.1	P/P	48 - 157

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P327948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910768	Gamma-Chlordane	93.6	78.6	P/P	35 - 123
1910768	Heptachlor	77.4	66.5	P/P	25 - 112
1910768	Heptachlor Epoxide	94.2	78.0	P/P	48 - 125
1910768	Methoxychlor	111	94.8	P/P	52 - 127
1910768	Mirex	92.7	76.1	P/P	25 - 108
1910768	Permethrin	121	84.4	P/P	46 - 133
1910768	Trifluralin	167	134	P/P	29 - 254

Reference Method: EPA 8276
Batch ID: P327948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910464	Chlordane	99.1	94.5	P/P	44 - 134
1910464	Toxaphene	122	125	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P327601

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908898	Pyraclostrobin	130	130	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P327603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1908898	Glyphosate	98.4	112	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P327821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910706	Sucralose	75.8	87.2	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P328180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910687	Fluoride	100	101	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P328072

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910536	Organic Carbon	96.2	91.0	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P327782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910586	Bentazon	58.8	51.2	P/P	40 - 150
1910586	Carbamazepine	113	99.1	P/P	40 - 150
1910586	Diuron	71.3	58.5	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P327782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910586	Fenuron	91.1	90.6	P/P	40 - 150
1910586	Fluridone	48.1	40.3	P/P	40 - 150
1910586	Imidacloprid	156	151	P/P	40 - 160
1910586	Linuron	85.2	74.0	P/P	40 - 150
1910586	MCPP	108	99.4	P/P	40 - 150
1910586	Primidone	85.1	87.0	P/P	40 - 150
1910586	Triclopyr	94.5	86.4	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P327927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1910709	2,4-D	88.6	130	P/P	40 - 150
1910709	Acetaminophen	103	139	P/P	30 - 150
1910709	Bentazon	57.8	56.8	P/P	40 - 150
1910709	Carbamazepine	108	117	P/P	40 - 150
1910709	Diuron	96.0	102	P/P	40 - 150
1910709	Fenuron	75.2	81.6	P/P	40 - 150
1910709	Fluridone	62.6	62.8	P/P	40 - 150
1910709	Imidacloprid	182	197	F/F	40 - 160
1910709	Linuron	82.8	85.2	P/P	40 - 150
1910709	MCPP	71.8	83.4	P/P	40 - 150
1910709	Primidone	114	97.6	P/P	40 - 150
1910709	Triclopyr	78.2	80.2	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P327819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910686	Turbidity	4.20	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910715	Calcium	0.469	Spike	P	0 - 20
1910715	Iron	0.212	Spike	P	0 - 20
1910715	Magnesium	0.558	Spike	P	0 - 20
1910715	Potassium	0.499	Spike	P	0 - 20
1910715	Sodium	2.29	Spike	P	0 - 20
1910715	Zinc	1.60	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910715	Arsenic	3.64	Spike	P	0 - 20
1910715	Cadmium	3.57	Spike	P	0 - 20
1910715	Chromium	5.05	Spike	P	0 - 20
1910715	Copper	3.69	Spike	P	0 - 20
1910715	Lead	3.20	Spike	P	0 - 20
1910715	Nickel	3.42	Spike	P	0 - 20
1910715	Silver	1.93	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910623	Chloride	0.0532	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910623	Sulfate	0.457	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328046

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910629	Ammonia-N	0.0200	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910691	Kjeldahl Nitrogen	1.33	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910691	NO2NO3-N	0.482	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328054

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910630	Total-P	1.66	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910614	O-Phosphate-P	0.545	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P327768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910249	Acetochlor	2.05	Spike	P	0 - 30
1910249	Alachlor	2.39	Spike	P	0 - 30
1910249	Ametryn	3.27	Spike	P	0 - 30
1910249	Atrazine	12.5	Spike	P	0 - 30
1910249	Atrazine Desethyl	4.09	Spike	P	0 - 30
1910249	Azinphos Methyl	1.69	Spike	P	0 - 30
1910249	Bromacil	2.54	Spike	P	0 - 30
1910249	Butylate	4.52	Spike	P	0 - 30
1910249	Chlorpyrifos Ethyl	12.8	Spike	P	0 - 30
1910249	Chlorpyrifos Methyl	1.86	Spike	P	0 - 30
1910249	Cyanazine	10.5	Spike	P	0 - 30
1910249	Demeton	3.65	Spike	P	0 - 30
1910249	Diazinon	9.28	Spike	P	0 - 30
1910249	Disulfoton	3.91	Spike	P	0 - 30
1910249	EPTC	3.24	Spike	P	0 - 30
1910249	Ethion	3.51	Spike	P	0 - 30
1910249	Ethoprop	8.02	Spike	P	0 - 30
1910249	Fenamiphos	11.5	Spike	P	0 - 30
1910249	Fipronil	4.39	Spike	P	0 - 30
1910249	Fipronil Sulfide	7.38	Spike	P	0 - 30
1910249	Fipronil Sulfone	5.78	Spike	P	0 - 30
1910249	Fonofos	17.1	Spike	P	0 - 30
1910249	Hexazinone	0.864	Spike	P	0 - 30
1910249	Malathion	3.65	Spike	P	0 - 30
1910249	Metalaxyl	2.59	Spike	P	0 - 30
1910249	Metolachlor	2.12	Spike	P	0 - 30
1910249	Metribuzin	2.73	Spike	P	0 - 30
1910249	Mevinphos	10.8	Spike	P	0 - 30
1910249	Molinate	19.9	Spike	P	0 - 30
1910249	Norflurazon	5.21	Spike	P	0 - 30
1910249	Parathion Ethyl	8.74	Spike	P	0 - 30
1910249	Parathion Methyl	1.56	Spike	P	0 - 30
1910249	Pendimethalin	4.98	Spike	P	0 - 30
1910249	Phorate	10.9	Spike	P	0 - 30
1910249	Prometon	2.51	Spike	P	0 - 30
1910249	Prometryn	3.27	Spike	P	0 - 30
1910249	Simazine	3.82	Spike	P	0 - 30
1910249	Terbufos	14.9	Spike	P	0 - 30
1910249	Terbuthylazine	0.337	Spike	P	0 - 30
LFB	Acetochlor	5.85	LCS	P	0 - 30
LFB	Alachlor	4.70	LCS	P	0 - 30
LFB	Ametryn	16.2	LCS	P	0 - 30
LFB	Atrazine	8.53	LCS	P	0 - 30
LFB	Atrazine Desethyl	6.34	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P327768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Azinphos Methyl	9.70	LCS	P	0 - 30
LFB	Bromacil	3.62	LCS	P	0 - 30
LFB	Butylate	1.82	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	7.71	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	9.72	LCS	P	0 - 30
LFB	Cyanazine	3.98	LCS	P	0 - 30
LFB	Demeton	4.43	LCS	P	0 - 30
LFB	Diazinon	3.10	LCS	P	0 - 30
LFB	Disulfoton	1.49	LCS	P	0 - 30
LFB	EPTC	8.28	LCS	P	0 - 30
LFB	Ethion	14.6	LCS	P	0 - 30
LFB	Ethoprop	3.06	LCS	P	0 - 30
LFB	Fenamiphos	4.39	LCS	P	0 - 30
LFB	Fipronil	10.4	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.18	LCS	P	0 - 30
LFB	Fipronil Sulfone	8.96	LCS	P	0 - 30
LFB	Fonofos	10.4	LCS	P	0 - 30
LFB	Hexazinone	5.31	LCS	P	0 - 30
LFB	Malathion	6.86	LCS	P	0 - 30
LFB	Metalaxyl	7.14	LCS	P	0 - 30
LFB	Metolachlor	9.14	LCS	P	0 - 30
LFB	Metribuzin	4.33	LCS	P	0 - 30
LFB	Mevinphos	0.324	LCS	P	0 - 30
LFB	Molinate	0.851	LCS	P	0 - 30
LFB	Norflurazon	4.71	LCS	P	0 - 30
LFB	Parathion Ethyl	0.515	LCS	P	0 - 30
LFB	Parathion Methyl	1.23	LCS	P	0 - 30
LFB	Pendimethalin	13.6	LCS	P	0 - 30
LFB	Phorate	6.04	LCS	P	0 - 30
LFB	Prometon	17.8	LCS	P	0 - 30
LFB	Prometryn	7.55	LCS	P	0 - 30
LFB	Simazine	2.35	LCS	P	0 - 30
LFB	Terbufos	1.46	LCS	P	0 - 30
LFB	Terbuthylazine	5.23	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P327948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910768	Aldrin	9.13	Spike	P	0 - 30
1910768	Alpha-BHC	6.28	Spike	P	0 - 30
1910768	Alpha-Chlordane	16.3	Spike	P	0 - 30
1910768	Beta-BHC	19.6	Spike	P	0 - 30
1910768	Carbophenothion	28.2	Spike	P	0 - 30
1910768	Chlorothalonil	41.4	Spike	F	0 - 30
1910768	Cypermethrin	43.8	Spike	F	0 - 30
1910768	DDD-p,p'	14.8	Spike	P	0 - 30
1910768	DDE-p,p'	13.3	Spike	P	0 - 30
1910768	DDT-p,p'	18.7	Spike	P	0 - 30
1910768	Delta-BHC	19.3	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P327948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910768	Dicofol	58.5	Spike	F	0 - 30
1910768	Dieldrin	11.1	Spike	P	0 - 30
1910768	Endosulfan I	19.3	Spike	P	0 - 30
1910768	Endosulfan II	14.6	Spike	P	0 - 30
1910768	Endosulfan Sulfate	28.7	Spike	P	0 - 30
1910768	Endrin	17.2	Spike	P	0 - 30
1910768	Endrin Aldehyde	21.8	Spike	P	0 - 30
1910768	Endrin Ketone	26.6	Spike	P	0 - 30
1910768	Gamma-BHC	14.1	Spike	P	0 - 30
1910768	Gamma-Chlordane	17.5	Spike	P	0 - 30
1910768	Heptachlor	15.1	Spike	P	0 - 30
1910768	Heptachlor Epoxide	18.8	Spike	P	0 - 30
1910768	Methoxychlor	15.5	Spike	P	0 - 30
1910768	Mirex	19.7	Spike	P	0 - 30
1910768	Permethrin	35.5	Spike	F	0 - 30
1910768	Trifluralin	21.9	Spike	P	0 - 30
LFB	Aldrin	2.98	LCS	P	0 - 30
LFB	Alpha-BHC	9.17	LCS	P	0 - 30
LFB	Alpha-Chlordane	0.552	LCS	P	0 - 30
LFB	Beta-BHC	1.92	LCS	P	0 - 30
LFB	Carbophenothion	3.94	LCS	P	0 - 30
LFB	Chlorothalonil	34.2	LCS	F	0 - 30
LFB	Cypermethrin	13.1	LCS	P	0 - 30
LFB	DDD-p,p'	0.170	LCS	P	0 - 30
LFB	DDE-p,p'	0.418	LCS	P	0 - 30
LFB	DDT-p,p'	2.30	LCS	P	0 - 30
LFB	Delta-BHC	0.958	LCS	P	0 - 30
LFB	Dicofol	13.0	LCS	P	0 - 30
LFB	Dieldrin	3.43	LCS	P	0 - 30
LFB	Endosulfan I	4.67	LCS	P	0 - 30
LFB	Endosulfan II	4.11	LCS	P	0 - 30
LFB	Endosulfan Sulfate	5.50	LCS	P	0 - 30
LFB	Endrin	7.79	LCS	P	0 - 30
LFB	Endrin Aldehyde	10.7	LCS	P	0 - 30
LFB	Endrin Ketone	0.627	LCS	P	0 - 30
LFB	Gamma-BHC	6.04	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.53	LCS	P	0 - 30
LFB	Heptachlor	3.60	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.90	LCS	P	0 - 30
LFB	Methoxychlor	3.89	LCS	P	0 - 30
LFB	Mirex	6.30	LCS	P	0 - 30
LFB	Permethrin	8.47	LCS	P	0 - 30
LFB	Trifluralin	7.53	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P327948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910464	Chlordane	4.79	Spike	P	0 - 30
1910464	Toxaphene	2.51	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8276
Batch ID: P327948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	5.48	LCS	P	0 - 30
LFB	Toxaphene	0.988	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P327601

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908898	Pyraclostrobin	0.0	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P327603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1908898	Glyphosate	13.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P327821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910706	Sucralose	13.6	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P327810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910687	Color (true)	6.81	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P327811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910689	Color (true)	2.32	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P328172

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910687	Total Alkalinity	0.0984	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P328290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910873	TDS	4.14	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-97
Batch ID: P328180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910687	Fluoride	0.464	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P328072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910536	Organic Carbon	2.99	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P327782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910586	2,4-D	15.2	Spike	P	0 - 30
1910586	Acetaminophen	15.6	Spike	P	0 - 30
1910586	Bentazon	8.08	Spike	P	0 - 30
1910586	Carbamazepine	13.1	Spike	P	0 - 30
1910586	Diuron	17.5	Spike	P	0 - 30
1910586	Fenuron	0.572	Spike	P	0 - 30
1910586	Fluridone	10.9	Spike	P	0 - 30
1910586	Imidacloprid	2.56	Spike	P	0 - 30
1910586	Linuron	14.0	Spike	P	0 - 30
1910586	MCPP	8.57	Spike	P	0 - 30
1910586	Primidone	2.19	Spike	P	0 - 30
1910586	Triclopyr	8.89	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P327927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1910709	2,4-D	22.8	Spike	P	0 - 30
1910709	Acetaminophen	29.8	Spike	P	0 - 30
1910709	Bentazon	0.922	Spike	P	0 - 30
1910709	Carbamazepine	8.01	Spike	P	0 - 30
1910709	Diuron	4.81	Spike	P	0 - 30
1910709	Fenuron	8.16	Spike	P	0 - 30
1910709	Fluridone	0.151	Spike	P	0 - 30
1910709	Imidacloprid	7.66	Spike	P	0 - 30
1910709	Linuron	2.86	Spike	P	0 - 30
1910709	MCPP	14.9	Spike	P	0 - 30
1910709	Primidone	15.7	Spike	P	0 - 30
1910709	Triclopyr	2.53	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

Quality Assurance Report
Surrogates

Lab Sample ID: 1910706
Field Sample ID: G1SW0060

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	92.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	112	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	81.4	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	96.2	P	30 - 160
USGS O-2060-01	Diuron-d6	64.4	P	30 - 160
USGS O-2060-01	Primidone-d5	133	P	30 - 160

Lab Sample ID: 1910707
Field Sample ID: G1SW0053

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	112	P	40 - 160
USGS O-2060-01	2,4-D-d3	117	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	94.6	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	119	P	30 - 160
USGS O-2060-01	Diuron-d6	90.4	P	30 - 160
USGS O-2060-01	Primidone-d5	107	P	30 - 160

Lab Sample ID: 1910708
Field Sample ID: Field Blank

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	84.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	90.1	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	132	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	136	P	30 - 165
USGS O-2060-01	Diuron-d6	118	P	30 - 160
USGS O-2060-01	Primidone-d5	100	P	30 - 150

Lab Sample ID: 1910709
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	103	P	30 - 150
EPA 8321B	Carbamazepine-d10	165	P	30 - 165
EPA 8321B	Diuron-d6	115	P	30 - 160
EPA 8321B	Diuron-d6	98.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	40 - 150
EPA 8321B	Primidone-d5	120	P	30 - 150
EPA 8321B	Sucralose-d6	96.0	P	40 - 160
USGS O-2060-01	2,4-D-d3	106	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	103	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	165	P	30 - 165
USGS O-2060-01	Diuron-d6	115	P	30 - 160
USGS O-2060-01	Diuron-d6	98.4	P	30 - 160
USGS O-2060-01	Primidone-d5	120	P	30 - 150

Lab Sample ID: 1910710
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	93.4	P	30 - 150

Quality Assurance Report
Surrogates

Lab Sample ID: 1910710
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	115	P	30 - 160
EPA 8321B	Diuron-d6	110	P	30 - 160
EPA 8321B	Diuron-d6	79.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	126	P	40 - 150
EPA 8321B	Primidone-d5	118	P	30 - 150
EPA 8321B	Sucralose-d6	95.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	107	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	93.4	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	115	P	30 - 160
USGS O-2060-01	Diuron-d6	110	P	30 - 160
USGS O-2060-01	Diuron-d6	79.3	P	30 - 160
USGS O-2060-01	Primidone-d5	118	P	30 - 150

Lab Sample ID: 1910711
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	37.5	F	39 - 118
EPA 8270D	Tetrachloro-m-xylene	27.2	F	32 - 103
EPA 8276	Decachlorobiphenyl	33.6	P	31 - 100

Lab Sample ID: 1910712
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	36.9	F	39 - 118
EPA 8270D	Tetrachloro-m-xylene	29.0	F	32 - 103
EPA 8276	Decachlorobiphenyl	32.1	P	31 - 100

Lab Sample ID: 1910713
Field Sample ID: G1SW0059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	64.2	P	53 - 135
EPA 8270D	Simazine-d10	91.8	P	71 - 126

Lab Sample ID: 1910714
Field Sample ID: G1SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	37.7	F	53 - 135
EPA 8270D	Simazine-d10	73.6	P	71 - 126

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A77468
Included Lab Sample IDs: 1910686, 1910687, 1910688, 1910689

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A77468
Included Lab Sample IDs: 1910686, 1910687, 1910688, 1910689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	98.1	P/P	85 - 115
Color (true)	96.7	100	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A77469
Included Lab Sample IDs: 1910694, 1910695, 1910696, 1910697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.4	P/P	90 - 110
O-Phosphate-P	99.4	98.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A77471
Included Lab Sample IDs: 1910686, 1910687, 1910688, 1910689

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

Reference Method: EPA 8321B
Run ID: A77479
Included Lab Sample IDs: 1910709, 1910710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	90.0	100	P/P	60 - 150

Reference Method: EPA 8321B
Run ID: A77505
Included Lab Sample IDs: 1910709, 1910710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	121	118	P/P	70 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A77534
Included Lab Sample IDs: 1910690, 1910691, 1910692, 1910693

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A77550
Included Lab Sample IDs: 1910715, 1910716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	99.2	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	100	99.3	P/P	90 - 110
Zinc	99.7	101	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A77552
Included Lab Sample IDs: 1910690, 1910691, 1910692, 1910693

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	101	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A77560
Included Lab Sample IDs: 1910690, 1910691, 1910692, 1910693

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A77563
Included Lab Sample IDs: 1910715, 1910716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	98.8	98.0	P/P	95 - 105

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A77564
Included Lab Sample IDs: 1910715, 1910716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	99.3	P/P	90 - 110
Arsenic	99.3	99.7	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Chromium	98.4	99.6	P/P	90 - 110
Chromium	99.6	98.4	P/P	90 - 110
Copper	97.6	98.8	P/P	90 - 110
Copper	98.2	97.6	P/P	90 - 110
Lead	97.3	97.6	P/P	90 - 110
Lead	97.6	97.6	P/P	90 - 110
Nickel	98.7	99.2	P/P	90 - 110
Nickel	99.3	98.7	P/P	90 - 110
Silver	96.1	96.3	P/P	90 - 110
Silver	96.3	96.9	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A77604
Included Lab Sample IDs: 1910711, 1910712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	110		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A77605
Included Lab Sample IDs: 1910692, 1910693

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 2320 B-97
Run ID: A77607
Included Lab Sample IDs: 1910686, 1910687, 1910688, 1910689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	105	P/P	90 - 110
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A77607
Included Lab Sample IDs: 1910686, 1910687, 1910688, 1910689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.5	P/P	90 - 110
Fluoride	98.9	98.6	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A77610
Included Lab Sample IDs: 1910711, 1910712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.3		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	95.1		P	80 - 120
Beta-BHC	104		P	80 - 120
Carbophenothion	94.8		P	80 - 120
Chlorothalonil	101		P	80 - 120
Cypermethrin	89.4		P	80 - 120
DDD-p,p'	96.9		P	80 - 120
DDE-p,p'	98.9		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	98.6		P	80 - 120
Dicofol	102		P	80 - 120
Dieldrin	96.6		P	80 - 120
Endosulfan I	96.0		P	80 - 120
Endosulfan II	93.8		P	80 - 120
Endosulfan Sulfate	95.8		P	80 - 120
Endrin	92.0		P	80 - 120
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	95.8		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	99.0		P	80 - 120
Heptachlor	94.8		P	80 - 120
Heptachlor Epoxide	97.4		P	80 - 120
Methoxychlor	105		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	93.9		P	80 - 120
Trifluralin	102		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A77615
Included Lab Sample IDs: 1910690, 1910691

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A77638
Included Lab Sample IDs: 1910686, 1910687, 1910688, 1910689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	102	P/P	90 - 110
Sulfate	95.8	99.4	P/P	90 - 110
Sulfate	99.9	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A77654
Included Lab Sample IDs: 1910690, 1910691, 1910692, 1910693

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.5	91.2	P/P	90 - 110
Kjeldahl Nitrogen	98.3	96.2	P/P	90 - 110

Reference Method: USGS O-2060-01
Run ID: A77687
Included Lab Sample IDs: 1910708, 1910709, 1910710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.4	90.0	P/P	50 - 150
2,4-D	98.4	92.4	P/P	50 - 150
Acetaminophen	84.4	83.6	P/P	60 - 150
Acetaminophen	84.4	84.4	P/P	60 - 150
Bentazon	112	118	P/P	50 - 150
Bentazon	118	99.6	P/P	50 - 150
Carbamazepine	100	89.6	P/P	60 - 150
Carbamazepine	99.2	100	P/P	60 - 150
Diuron	104	104	P/P	60 - 150
Diuron	105	104	P/P	60 - 150
Fenuron	94.4	98.0	P/P	60 - 150
Fenuron	98.0	91.6	P/P	60 - 150
Fluridone	111	128	P/P	60 - 160
Fluridone	128	122	P/P	60 - 160
Imidacloprid	90.0	91.2	P/P	60 - 150
Imidacloprid	99.6	90.0	P/P	60 - 150
Linuron	86.4	95.6	P/P	60 - 150
Linuron	92.4	86.4	P/P	60 - 150
MCPP	91.6	91.2	P/P	50 - 150
MCPP	92.4	91.6	P/P	50 - 150
Primidone	108	91.2	P/P	60 - 150
Primidone	96.8	108	P/P	60 - 150
Triclopyr	83.2	73.2	P/P	50 - 150
Triclopyr	96.0	83.2	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A77777
Included Lab Sample IDs: 1910706, 1910707, 1910708, 1910709, 1910710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	118	121	P/P	60 - 160
Sucralose	69.4	118	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A77809
Included Lab Sample IDs: 1910713, 1910714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	90.2		P	80 - 120
Alachlor	92.0		P	80 - 120
Ametryn	97.4		P	80 - 120
Atrazine	94.2		P	80 - 120
Atrazine Desethyl	110		P	80 - 120
Azinphos Methyl	95.3		P	80 - 120
Bromacil	97.5		P	80 - 120
Butylate	87.6		P	80 - 120
Chlorpyrifos Ethyl	94.7		P	80 - 120
Chlorpyrifos Methyl	103		P	80 - 120
Cyanazine	104		P	80 - 120
Demeton	98.9		P	80 - 120
Diazinon	95.2		P	80 - 120
Disulfoton	94.0		P	80 - 120
EPTC	92.8		P	80 - 120
Ethion	94.3		P	80 - 120
Ethoprop	97.5		P	80 - 120
Fenamiphos	99.8		P	80 - 120
Fipronil	91.1		P	80 - 120
Fipronil Sulfide	97.6		P	80 - 120
Fipronil Sulfone	97.4		P	80 - 120
Fonofos	101		P	80 - 120
Hexazinone	97.0		P	80 - 120
Malathion	102		P	80 - 120
Metalaxyl	94.0		P	80 - 120
Metolachlor	99.4		P	80 - 120
Metribuzin	91.9		P	80 - 120
Mevinphos	95.2		P	80 - 120
Molinate	103		P	80 - 120
Norflurazon	93.5		P	80 - 120
Parathion Ethyl	88.1		P	80 - 120
Parathion Methyl	95.0		P	80 - 120
Pendimethalin	92.5		P	80 - 120
Phorate	94.7		P	80 - 120
Prometon	93.3		P	80 - 120
Prometryn	103		P	80 - 120
Simazine	95.0		P	80 - 120
Terbufos	96.9		P	80 - 120
Terbuthylazine	96.1		P	80 - 120

Reference Method: USGS O-2060-01
Run ID: A78009
Included Lab Sample IDs: 1910706, 1910707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.3	86.0	P/P	50 - 150
Acetaminophen	99.8	101	P/P	60 - 150
Bentazon	95.2	96.3	P/P	50 - 150
Carbamazepine	118	105	P/P	60 - 150
Diuron	95.0	93.5	P/P	60 - 150
Fenuron	111	101	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: USGS O-2060-01
Run ID: A78009
Included Lab Sample IDs: 1910706, 1910707

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	106	120	P/P	60 - 160
Imidacloprid	95.7	94.4	P/P	60 - 150
Linuron	98.0	95.2	P/P	60 - 150
MCPP	98.4	105	P/P	50 - 150
Primidone	98.0	133	P/P	60 - 150
Triclopyr	107	104	P/P	50 - 150

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							4.20	
EPA 200.7 Rev. 4.4	Calcium	102		107	102				0.469
	Iron	105		107	109	109			0.212
	Magnesium	106		106	110	109			0.558
	Potassium	104		104	101	102			0.499
	Sodium	104		104	101				2.29
	Zinc	103		105	103	104			1.60
EPA 200.8 Rev. 5.4	Arsenic	97.3		93.1	99.3	103			3.64
	Cadmium	98.4		93.3	98.2	102			3.57
	Chromium	96.0		89.5	93.8	98.6			5.05
	Copper	93.3		88.7	93.7	97.4			3.69
	Lead	95.1		90.1	95.8	99.0			3.20
	Nickel	96.4		89.8	95.6	99.0			3.42
	Silver	95.5		89.1	94.4	96.2			1.93
EPA 300.0 Rev. 2.1	Chloride	95.5		96.0	95.8			0.0532	
	Sulfate	96.4		96.0	96.1			0.457	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6		97.1	97.1				0.0200
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.7		99.4	97.1				1.33
EPA 353.2 Rev. 2.0	NO2NO3-N	104		104	104				0.482
EPA 365.1 Rev. 2.0	Total-P	102		97.5	95.8				1.66
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103		91.5	92.0				0.545
EPA 8270D	Acetochlor	86.1	91.3	78.7	80.4		5.85		2.05
	Alachlor	84.9	89.0	80.7	82.7		4.70		2.39
	Aldrin	57.1	55.5	73.1	66.7		2.98		9.13
	Alpha-BHC	76.2	69.5	87.4	82.0		9.17		6.28
	Alpha-Chlordane	73.2	73.6	91.5	77.8		0.552		16.3
	Ametryn	71.5	84.1				16.2		3.27
	Atrazine	83.1	90.5				8.53		12.5
	Atrazine Desethyl	114	121				6.34		4.09
	Azinphos Methyl	104	114	84.2	85.6		9.70		1.69
	Beta-BHC	74.2	75.7	105	86.4		1.92		19.6
	Bromacil	78.7	81.6	90.0	87.8		3.62		2.54
	Butylate	41.8	42.6	20.6	21.5		1.82		4.52
	Carbophenothion	67.1	64.5	123	92.5		3.94		28.2

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Chlorothalonil	66.6	47.1	143	93.9	34.2		41.4
	Chlorpyrifos Ethyl	78.6	84.9	74.0	84.1	7.71		12.8
	Chlorpyrifos Methyl	81.3	89.7	78.2	79.7	9.72		1.86
	Cyanazine	181	188	143	129	3.98		10.5
	Cypermethrin	70.6	80.6	142	91.0	13.1		43.8
	DDD-p,p'	82.9	82.8	104	89.5	0.170		14.8
	DDE-p,p'	75.2	75.5	93.5	81.8	0.418		13.3
	DDT-p,p'	75.3	77.1	102	84.9	2.30		18.7
	Delta-BHC	85.1	85.9	115	94.6	0.958		19.3
	Demeton	59.1	56.5	84.2	81.2	4.43		3.65
	Diazinon	88.2	91.0	87.9	96.5	3.10		9.28
	Dicofol	45.2	51.4	28.5	52.0	13.0		58.5
	Dieldrin	78.9	76.2	94.2	84.3	3.43		11.1
	Disulfoton	71.1	72.1	91.3	94.9	1.49		3.91
	Endosulfan I	79.3	75.7	98.9	81.5	4.67		19.3
	Endosulfan II	84.3	80.9	105	90.4	4.11		14.6
	Endosulfan Sulfate	71.4	75.5	117	87.7	5.50		28.7
	Endrin	76.4	82.5	93.1	78.4	7.79		17.2
	Endrin Aldehyde	74.7	83.2	107	86.1	10.7		21.8
	Endrin Ketone	76.2	75.8	112	85.7	0.627		26.6
	EPTC	44.0	47.8	23.4	22.7	8.28		3.24
	Ethion	70.1	81.2	77.6	80.4	14.6		3.51
	Ethoprop	82.0	84.5	68.9	74.6	3.06		8.02
	Fenamiphos	76.4	79.8	86.2	76.9	4.39		11.5
	Fipronil	80.8	89.7	96.3	101	10.4		4.39
	Fipronil Sulfide	58.1	59.4	62.6	71.1	2.18		7.38
	Fipronil Sulfone	69.5	76.0			8.96		5.78
	Fonofos	80.3	89.1	73.0	86.7	10.4		17.1
	Gamma-BHC	81.6	76.8	98.0	85.1	6.04		14.1
	Gamma-Chlordane	71.9	73.0	93.6	78.6	1.53		17.5
	Heptachlor	58.5	60.7	77.4	66.5	3.60		15.1
	Heptachlor Epoxide	74.1	72.7	78.0	94.2	1.90		18.8
	Hexazinone	81.6	86.0	83.7	84.6	5.31		0.864
	Malathion	76.7	82.1	76.8	79.6	6.86		3.65
	Metalaxyl	75.7	81.3	81.6	79.4	7.14		2.59
	Methoxychlor	83.3	86.6	94.8	111	3.89		15.5
	Metolachlor	76.4	83.7	78.8	80.5	9.14		2.12
	Metribuzin	145	139	185	190	4.33		2.73
	Mevinphos	72.2	72.4	63.3	70.5	0.324		10.8
	Mirex	62.3	66.4	76.1	92.7	6.30		19.7
	Molinate	46.7	47.1	30.5	37.2	0.851		19.9
	Norflurazon	80.3	84.1	86.3	90.9	4.71		5.21
	Parathion Ethyl	88.2	88.6	78.8	86.0	0.515		8.74
	Parathion Methyl	88.4	89.5	83.0	81.8	1.23		1.56
	Pendimethalin	77.8	89.1	88.0	92.5	13.6		4.98
	Permethrin	71.9	78.3	84.4	121	8.47		35.5
	Phorate	80.0	84.9	62.8	70.1	6.04		10.9
	Prometon	67.7	81.0	98.3	101	17.8		2.51
	Prometryn	75.9	81.9	85.1	87.9	7.55		3.27
	Simazine	90.0	87.9	87.5	92.8	2.35		3.82
	Terbufos	80.1	78.9	71.9	83.5	1.46		14.9
	Terbuthylazine	83.4	87.9	80.6	80.8	5.23		0.337
	Trifluralin	87.8	94.7	134	167	7.53		21.9
EPA 8276	Chlordane	101	106	99.1	94.5	5.48		4.79

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
EPA 8276	Toxaphene	132 133	122 125	0.988		2.51
EPA 8321B	Glyphosate	95.3	98.4 112			13.2
	Pyraclostrobin	140	130 130			0.0
	Sucralose	85.2	75.8 87.2			13.6
SM 2120 B	Color (true)				6.81	
	Color (true)				2.32	
SM 2320 B-97	Total Alkalinity	103			0.0984	
SM 2540 C-97	TDS				4.14	
SM 4500 F-C-97	Fluoride	98.4	100 101			0.464
SM 5310 B-00	Organic Carbon	97.9	96.2 91.0			2.99
USGS O-2060-01	2,4-D	77.8				15.2
	2,4-D	86.6	88.6 130			22.8
	Acetaminophen	103				15.6
	Acetaminophen	92.6	103 139			29.8
	Bentazon	60.8	58.8 51.2			8.08
	Bentazon	84.2	57.8 56.8			0.922
	Carbamazepine	77.3	113 99.1			13.1
	Carbamazepine	96.0	108 117			8.01
	Diuron	65.3	71.3 58.5			17.5
	Diuron	108	96.0 102			4.81
	Fenuron	87.6	91.1 90.6			0.572
	Fenuron	89.6	75.2 81.6			8.16
	Fluridone	78.3	48.1 40.3			10.9
	Fluridone	98.8	62.6 62.8			0.151
	Imidacloprid	78.7	156 151			2.56
	Imidacloprid	77.6	182 197			7.66
	Linuron	77.0	85.2 74.0			14.0
	Linuron	99.8	82.8 85.2			2.86
	MCPP	69.4	108 99.4			8.57
	MCPP	78.4	71.8 83.4			14.9
	Primidone	76.0	85.1 87.0			2.19
	Primidone	85.0	114 97.6			15.7
	Triclopyr	72.7	94.5 86.4			8.89
	Triclopyr	84.8	78.2 80.2			2.53

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1910686, 1910687, 1910688, 1910689
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1910715, 1910716
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1910715, 1910716
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1910686, 1910687, 1910688, 1910689
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1910686, 1910687, 1910688, 1910689
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1910690, 1910691, 1910692, 1910693
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1910690, 1910691, 1910692, 1910693
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1910690, 1910691, 1910692, 1910693

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1910690, 1910691, 1910692, 1910693
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1910694, 1910695, 1910696, 1910697
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1910711, 1910712
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1910713, 1910714
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1910711, 1910712
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1910709, 1910710
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1910709, 1910710
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1910706, 1910707, 1910708, 1910709, 1910710
SM 2120 B / E31780	True Color measured at 450 nm	1910686, 1910687, 1910688, 1910689
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1910686, 1910687, 1910688, 1910689
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1910686, 1910687, 1910688, 1910689
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1910686, 1910687, 1910688, 1910689
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1910686, 1910687, 1910688, 1910689
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1910690, 1910691, 1910692, 1910693
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1910706, 1910707, 1910708, 1910709, 1910710
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1910706, 1910707, 1910708, 1910709, 1910710

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	06/30/2017			06/30/2017 16:05	Sima Feizi	1910686, 1910687, 1910688, 1910689
EPA 200.7 Rev. 4.4	06/30/2017	07/05/2017	Elliott D. Healy	07/06/2017	Betina Topolski	1910715, 1910716
	06/30/2017	07/05/2017	Elliott D. Healy	07/07/2017	Betina Topolski	1910715, 1910716
EPA 200.8 Rev. 5.4	06/30/2017	07/05/2017	Elliott D. Healy	07/06/2017	Nadine Brooks	1910715
	06/30/2017	07/05/2017	Elliott D. Healy	07/07/2017	Nadine Brooks	1910716
EPA 300.0 Rev. 2.1	06/30/2017			07/10/2017	Ping Hua	1910686, 1910687, 1910688, 1910689
EPA 350.1 Rev. 2.0	06/30/2017			07/06/2017	Sofia Elnemr	1910690, 1910691, 1910692, 1910693
EPA 351.2 Rev. 2.0	06/30/2017	07/10/2017	Adrian Shelby	07/12/2017	Joseph Suarez	1910690, 1910691, 1910692, 1910693
EPA 353.2 Rev. 2.0	06/30/2017			07/06/2017	Beverly Y. Sanders	1910690, 1910691, 1910692, 1910693
EPA 365.1 Rev. 2.0	06/30/2017	07/07/2017	Adrian Shelby	07/10/2017	Lipi Saha	1910690, 1910691, 1910692, 1910693
EPA 365.1 Rev. 2.0 dissolved	06/30/2017			06/30/2017 15:27	Anthony C. Onicha	1910694
	06/30/2017			06/30/2017 15:32	Anthony C. Onicha	1910695
	06/30/2017			06/30/2017 15:33	Anthony C. Onicha	1910696
	06/30/2017			06/30/2017 15:34	Anthony C. Onicha	1910697
EPA 8270D	06/30/2017	06/30/2017	John Kaba	07/12/2017	Irina Carbone	1910713, 1910714
	06/30/2017	07/03/2017	Rasheda Ghaffari	07/06/2017	Vandana T. Nagar	1910711, 1910712
EPA 8276	06/30/2017	07/03/2017	Rasheda Ghaffari	07/07/2017	Vandana T. Nagar	1910711, 1910712
EPA 8321B	06/30/2017	06/30/2017	Julie Michelle Frank	06/30/2017	Julie Michelle Frank	1910709, 1910710
	06/30/2017	06/30/2017	Julie Michelle Frank	07/01/2017	Julie Michelle Frank	1910709, 1910710
	06/30/2017	07/13/2017	Mohammad Ghaffari	07/14/2017	Mohammad Ghaffari	1910706, 1910707, 1910708, 1910709, 1910710
SM 2120 B	06/30/2017			06/30/2017 15:07	Tanya Welborn	1910686
	06/30/2017			06/30/2017 15:09	Tanya Welborn	1910687
	06/30/2017			06/30/2017 15:23	Tanya Welborn	1910688
	06/30/2017			06/30/2017 15:25	Tanya Welborn	1910689
SM 2320 B-97	06/30/2017			07/08/2017	Dale L. Simmons	1910686, 1910687, 1910688, 1910689
SM 2540 C-97	06/30/2017			07/05/2017	Yijie Li	1910686, 1910687, 1910688, 1910689
SM 2540 D-97	06/30/2017			07/05/2017	Yijie Li	1910686, 1910687, 1910688, 1910689
SM 4500 F-C-97	06/30/2017			07/08/2017	Dale L. Simmons	1910686, 1910687, 1910688, 1910689
SM 5310 B-00	06/30/2017			07/06/2017	Ping Hua	1910690, 1910691, 1910692, 1910693
USGS O-2060-01	06/30/2017	07/03/2017	Hoor Shaik	07/26/2017	Juyoung Kim	1910706, 1910707
	06/30/2017	07/06/2017	Hoor Shaik	07/08/2017	Juyoung Kim	1910708, 1910709, 1910710