

Chemical Analysis Report

TLH-ROC-2017-12-20-01

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

Event Description: **kit C_pesticides**
Request ID: **RQ-2017-12-04-50**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

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: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 16-JAN-2018 10:22



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: ALLEN MILL POND SPRING

Collection Date/Time: 12/20/2017 12:00

Field ID: G1TLHR0006-2017-05

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955486	EPA 180.1 Rev. 2.0	Turbidity	0.35		NTU	P337306	
	EPA 300.0 Rev. 2.1	Chloride	6.0		mg Cl/L	P337392	
		Sulfate	6.9		mg SO4/L	P337396	
	SM 2120 B	Color (true)	3.8	I	PCU	P337300	
	SM 2320 B-97	Total Alkalinity	206		mg CaCO3/L	P337489	
	SM 2540 C-97	TDS	211		mg/L	P337670	
	SM 2540 D-97	TSS	2	I	mg/L	P337674	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P337492	
1955489	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P337700	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P337593	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P337408	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P337417	
	SM 5310 B-00	Organic Carbon	1.5		mg C/L	P337473	
1955492	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.045		mg P/L	P337369	
1955499	EPA 200.7 Rev. 4.4	Calcium	66.2		mg/L	P337447	
		Iron	30	U	ug/L	P337711	
		Magnesium	16.7		mg/L	P337447	
		Potassium	1.1	I	mg/L	P337447	
		Sodium	3.4		mg/L	P337447	
		Zinc	5.0	U	ug/L	P337447	
	EPA 200.8 Rev. 5.4	Arsenic	0.94		ug/L	P337447	
		Cadmium	0.023	I	ug/L	P337447	
		Chromium	0.48	I	ug/L	P337447	
		Copper	0.20	U	ug/L	P337447	
		Lead	0.050	U	ug/L	P337447	
		Nickel	0.31	I	ug/L	P337447	
		Silver	0.010	U	ug/L	P337447	
		Glyphosate**	0.10	U	ug/L	P337210	
		AMPA**	0.10	U	ug/L	P337210	
		Pyraclostrobin**	0.0020	U	ug/L	P337204	
		Sucralose**	0.010	U	ug/L	P337442	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P337256	
		Diuron	8.0E-04	U	ug/L	P337256	
		Fenuron	0.0080	U	ug/L	P337256	
		Imidacloprid	8.0E-04	U	ug/L	P337256	MS
		Bentazon	8.0E-04	U	ug/L	P337256	
		Linuron	0.0040	U	ug/L	P337256	
		Acetaminophen**	0.0080	U	ug/L	P337256	
		MCP	0.0020	U	ug/L	P337256	
		Carbamazepine**	4.0E-04	U	ug/L	P337256	
		Triclopyr**	0.0040	U	ug/L	P337256	
		Primidone**	0.0040	U	ug/L	P337256	
		Fluridone**	4.0E-04	U	ug/L	P337256	

Field ID: G1TLHR0006-2017-05

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955510	EPA 8270D	Aldrin	4.1	U	ng/L	P337315	
		Alpha-BHC	2.1	U	ng/L	P337315	
		Beta-BHC	4.1	U	ng/L	P337315	
		Delta-BHC	4.1	U	ng/L	P337315	
		Gamma-BHC	4.1	U	ng/L	P337315	
		Carbophenothion	4.1	U	ng/L	P337315	
		Chlorothalonil	2.1	U	ng/L	P337315	
		Cypermethrin	21	U	ng/L	P337315	
		DDD-p,p'	3.1	U	ng/L	P337315	
		DDE-p,p'	3.1	U	ng/L	P337315	
		DDT-p,p'	3.1	U	ng/L	P337315	
		Dieldrin	4.1	U	ng/L	P337315	
		Endosulfan I	4.1	U	ng/L	P337315	
		Endosulfan II	4.1	U	ng/L	P337315	
		Endosulfan Sulfate	2.1	U	ng/L	P337315	
		Endrin	2.1	U	ng/L	P337315	
		Endrin Aldehyde	2.1	U	ng/L	P337315	
		Heptachlor	1.6	U	ng/L	P337315	
		Heptachlor Epoxide	2.1	U	ng/L	P337315	
		Methoxychlor	4.1	U	ng/L	P337315	
		Mirex	2.1	U	ng/L	P337315	
		Permethrin	10	U	ng/L	P337315	
		Trifluralin	1.0	U	ng/L	P337315	
		Alpha-Chlordane	1.0	U	ng/L	P337315	
		Gamma-Chlordane	1.0	U	ng/L	P337315	
		Endrin Ketone	2.1	U	ng/L	P337315	
		Dicofol	31	U	ng/L	P337315	
	EPA 8276	Chlordane**	2.6	U	ng/L	P337315	
		Toxaphene**	13	U	ng/L	P337315	
1955513	EPA 8270D	Alachlor	0.24	U	ng/L	P337230	
		Ametryn	0.31	UJ	ng/L	P337230	LCS, RPD
		Atrazine	0.24	U	ng/L	P337230	
		Atrazine Desethyl	1.4	U	ng/L	P337230	MS, RPD
		Azinphos Methyl	2.2	U	ng/L	P337230	
		Bromacil	9.3		ng/L	P337230	
		Butylate	0.39	U	ng/L	P337230	
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P337230	LCS
		Chlorpyrifos Methyl	0.096	U	ng/L	P337230	
		Demeton	1.9	U	ng/L	P337230	
		Diazinon	0.12	U	ng/L	P337230	
		Disulfoton	0.48	UJ	ng/L	P337230	RPD
		EPTC	1.2	U	ng/L	P337230	
		Ethion	0.14	U	ng/L	P337230	
		Ethoprop	0.096	UJ	ng/L	P337230	LCS
		Fenamiphos	0.24	UJ	ng/L	P337230	RPD

Field ID: G1TLHR0006-2017-05

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955513	EPA 8270D	Fipronil	0.24	U	ng/L	P337230	
		Fipronil Sulfide	0.14	UJ	ng/L	P337230	RPD
		Fipronil Sulfone	0.14	U	ng/L	P337230	
		Hexazinone	1.1	I	ng/L	P337230	
		Malathion	0.34	U	ng/L	P337230	
		Metribuzin	0.19	UJ	ng/L	P337230	LCS, MS, RPD
		Mevinphos	0.48	U	ng/L	P337230	
		Molinate	0.29	UJ	ng/L	P337230	RPD
		Norflurazon	0.48	UJ	ng/L	P337230	LCS
		Pendimethalin	0.96	U	ng/L	P337230	
		Phorate	0.24	UJ	ng/L	P337230	RPD
		Prometon	0.87	U	ng/L	P337230	
		Prometryn	0.19	U	ng/L	P337230	
		Simazine	0.48	U	ng/L	P337230	
		Terbufos	0.096	U	ng/L	P337230	
		Terbuthylazine	0.41	U	ng/L	P337230	
		Fonofos	0.19	UJ	ng/L	P337230	LCS, RPD
		Metalaxyl	0.24	U	ng/L	P337230	
		Metolachlor	0.41	I	ng/L	P337230	
		Acetochlor	0.24	U	ng/L	P337230	
		Cyanazine	0.48	UJ	ng/L	P337230	LCS, MS, RPD
		Parathion Ethyl	0.24	UJ	ng/L	P337230	LCS
		Parathion Methyl	0.24	U	ng/L	P337230	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable because of high analyte concentration in the QC sample. Batch matrix spike recoveries for magnesium and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for copper are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

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

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

Sample Location: ALLEN MILL POND SPRING

Collection Date/Time: 12/20/2017 12:00

Field ID: G1TLHR0006-2017-05_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955487	EPA 180.1 Rev. 2.0	Turbidity	0.40		NTU	P337306	
	EPA 300.0 Rev. 2.1	Chloride	5.9		mg Cl/L	P337392	
		Sulfate	6.8		mg SO4/L	P337396	
	SM 2120 B	Color (true)	5.3	IA	PCU	P337301	
	SM 2320 B-97	Total Alkalinity	206	A	mg CaCO3/L	P337489	
	SM 2540 C-97	TDS	223		mg/L	P337670	
	SM 2540 D-97	TSS	2	U	mg/L	P337674	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P337492	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P337691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P337593	
1955490	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P337408	

Field ID: G1TLHR0006-2017-05_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955490	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P337417	
	SM 5310 B-00	Organic Carbon	1.5		mg C/L	P337473	
1955493	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P337369	
1955500	EPA 200.7 Rev. 4.4	Calcium	69.7		mg/L	P337447	
		Iron	30	U	ug/L	P337711	
		Magnesium	17.3		mg/L	P337447	
		Potassium	1.2		mg/L	P337447	
		Sodium	3.6		mg/L	P337447	
		Zinc	5.0	U	ug/L	P337447	
	EPA 200.8 Rev. 5.4	Arsenic	0.90		ug/L	P337447	
		Cadmium	0.022	I	ug/L	P337447	
		Chromium	0.40	U	ug/L	P337447	
		Copper	0.20	U	ug/L	P337447	
		Lead	0.050	U	ug/L	P337447	
		Nickel	0.20	I	ug/L	P337447	
		Silver	0.010	U	ug/L	P337447	
		Glyphosate**	0.10	U	ug/L	P337210	
		AMPA**	0.10	U	ug/L	P337210	
		Pyraclostrobin**	0.0020	U	ug/L	P337204	
		Sucralose**	0.010	U	ug/L	P337442	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P337256	
		Diuron	8.0E-04	U	ug/L	P337256	
		Fenuron	0.0080	U	ug/L	P337256	
		Imidacloprid	8.0E-04	U	ug/L	P337256	MS
		Bentazon	8.0E-04	U	ug/L	P337256	
		Linuron	0.0040	U	ug/L	P337256	
		Acetaminophen**	0.0080	U	ug/L	P337256	
		MCP	0.0020	U	ug/L	P337256	
		Carbamazepine**	4.0E-04	U	ug/L	P337256	
		Triclopyr**	0.0040	U	ug/L	P337256	
		Primidone**	0.0040	U	ug/L	P337256	
		Fluridone**	4.0E-04	U	ug/L	P337256	
1955511	EPA 8270D	Aldrin	4.1	U	ng/L	P337315	
		Alpha-BHC	2.1	U	ng/L	P337315	
		Beta-BHC	4.1	U	ng/L	P337315	
		Delta-BHC	4.1	U	ng/L	P337315	
		Gamma-BHC	4.1	U	ng/L	P337315	
		Carbophenothion	4.1	U	ng/L	P337315	
		Chlorothalonil	2.1	U	ng/L	P337315	
		Cypermethrin	21	U	ng/L	P337315	
		DDD-p,p'	3.1	U	ng/L	P337315	
		DDE-p,p'	3.1	U	ng/L	P337315	
		DDT-p,p'	3.1	U	ng/L	P337315	
		Dieldrin	4.1	U	ng/L	P337315	

Field ID: G1TLHR0006-2017-05_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955511	EPA 8270D	Endosulfan I	4.1	U	ng/L	P337315	
		Endosulfan II	4.1	U	ng/L	P337315	
		Endosulfan Sulfate	2.1	U	ng/L	P337315	
		Endrin	2.1	U	ng/L	P337315	
		Endrin Aldehyde	2.1	U	ng/L	P337315	
		Heptachlor	1.6	U	ng/L	P337315	
		Heptachlor Epoxide	2.1	U	ng/L	P337315	
		Methoxychlor	4.1	U	ng/L	P337315	
		Mirex	2.1	U	ng/L	P337315	
		Permethrin	10	U	ng/L	P337315	
		Trifluralin	1.0	U	ng/L	P337315	
		Alpha-Chlordane	1.0	U	ng/L	P337315	
		Gamma-Chlordane	1.0	U	ng/L	P337315	
		Endrin Ketone	2.1	U	ng/L	P337315	
		Dicofol	31	U	ng/L	P337315	
	EPA 8276	Chlordane**	2.6	U	ng/L	P337315	
		Toxaphene**	13	U	ng/L	P337315	
1955514	EPA 8270D	Alachlor	0.24	U	ng/L	P337230	
		Ametryn	0.31	UJ	ng/L	P337230	LCS, RPD
		Atrazine	0.24	U	ng/L	P337230	
		Atrazine Desethyl	1.4	U	ng/L	P337230	MS, RPD
		Azinphos Methyl	2.1	U	ng/L	P337230	
		Bromacil	6.9		ng/L	P337230	
		Butylate	0.38	U	ng/L	P337230	
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P337230	LCS
		Chlorpyrifos Methyl	0.095	U	ng/L	P337230	
		Demeton	1.9	U	ng/L	P337230	
		Diazinon	0.12	U	ng/L	P337230	
		Disulfoton	0.48	UJ	ng/L	P337230	RPD
		EPTC	1.2	U	ng/L	P337230	
		Ethion	0.14	U	ng/L	P337230	
		Ethoprop	0.095	UJ	ng/L	P337230	LCS
		Fenamiphos	0.24	UJ	ng/L	P337230	RPD
		Fipronil	0.24	U	ng/L	P337230	
		Fipronil Sulfide	0.14	UJ	ng/L	P337230	RPD
		Fipronil Sulfone	0.14	U	ng/L	P337230	
		Hexazinone	1.1	I	ng/L	P337230	
		Malathion	0.33	U	ng/L	P337230	
		Metribuzin	0.19	UJ	ng/L	P337230	LCS, MS, RPD
		Mevinphos	0.48	U	ng/L	P337230	
		Molinate	0.29	UJ	ng/L	P337230	RPD
		Norflurazon	0.48	UJ	ng/L	P337230	LCS
		Pendimethalin	0.95	U	ng/L	P337230	
		Phorate	0.24	UJ	ng/L	P337230	RPD

Field ID: G1TLHR0006-2017-05_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955514	EPA 8270D	Prometon	0.86	U	ng/L	P337230	
		Prometryn	0.19	U	ng/L	P337230	
		Simazine	0.48	U	ng/L	P337230	
		Terbufos	0.095	U	ng/L	P337230	
		Terbutylazine	0.41	U	ng/L	P337230	
		Fonofos	0.19	UJ	ng/L	P337230	LCS, RPD
		Metalaxyl	0.24	U	ng/L	P337230	
		Metolachlor	0.38	I	ng/L	P337230	
		Acetochlor	0.24	U	ng/L	P337230	
		Cyanazine	0.48	UJ	ng/L	P337230	LCS, MS, RPD
		Parathion Ethyl	0.24	UJ	ng/L	P337230	LCS
		Parathion Methyl	0.24	U	ng/L	P337230	

Ref. Method and Comment:

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable because of high analyte concentration in the QC sample. Batch matrix spike recoveries for magnesium and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for copper are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

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

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

Sample Location: FIELD BLANK

Collection Date/Time: 12/20/2017 12:30

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955488	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P337306	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P337392	
		Sulfate	0.20	U	mg SO4/L	P337396	
		Color (true)	2.5	U	PCU	P337301	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P337489	
	SM 2540 C-97	TDS	15	U	mg/L	P337669	
	SM 2540 D-97	TSS	2	U	mg/L	P337673	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P337492	
1955491	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P337691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P337404	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P337407	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P337479	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P337473	
1955494	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P337369	
1955501	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P337447	
		Iron	30	U	ug/L	P337690	
		Magnesium	0.040	U	mg/L	P337447	
		Potassium	0.30	U	mg/L	P337447	
		Sodium	0.50	U	mg/L	P337447	
		Zinc	5.0	U	ug/L	P337447	
		Arsenic	0.050	U	ug/L	P337447	
	EPA 200.8 Rev. 5.4						

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955501	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P337447	
		Chromium	0.40	U	ug/L	P337690	
		Copper	0.20	U	ug/L	P337447	
		Lead	0.050	U	ug/L	P337447	
		Nickel	0.20	U	ug/L	P337447	
		Silver	0.010	U	ug/L	P337447	

Ref. Method and Comment:

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable because of high analyte concentration in the QC sample. Batch matrix spike recoveries for magnesium and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for copper are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: FIELD BLANK

Collection Date/Time: 12/20/2017 12:30

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955509	EPA 8321B	Glyphosate**	0.10	U	ug/L	P337210	
		AMPA**	0.10	U	ug/L	P337210	
		Pyraclostrobin**	0.0020	U	ug/L	P337204	
		Sucralose**	0.010	U	ug/L	P337442	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P337256	
		Diuron	8.0E-04	U	ug/L	P337256	
		Fenuron	0.0080	U	ug/L	P337256	
		Imidacloprid	8.0E-04	U	ug/L	P337256	MS
		Bentazon	8.0E-04	U	ug/L	P337256	
		Linuron	0.0040	U	ug/L	P337256	
		Acetaminophen**	0.0080	U	ug/L	P337256	
		MCP	0.0020	U	ug/L	P337256	
		Carbamazepine**	4.0E-04	U	ug/L	P337256	
		Triclopyr**	0.0040	U	ug/L	P337256	
		Primidone**	0.0040	U	ug/L	P337256	
		Fluridone**	4.0E-04	U	ug/L	P337256	
1955512	EPA 8270D	Aldrin	4.1	U	ng/L	P337315	
		Alpha-BHC	2.1	U	ng/L	P337315	
		Beta-BHC	4.1	U	ng/L	P337315	
		Delta-BHC	4.1	U	ng/L	P337315	
		Gamma-BHC	4.1	U	ng/L	P337315	
		Carbophenothion	4.1	U	ng/L	P337315	
		Chlorothalonil	2.1	U	ng/L	P337315	
		Cypermethrin	21	U	ng/L	P337315	
		DDD-p,p'	3.1	U	ng/L	P337315	
		DDE-p,p'	3.1	U	ng/L	P337315	
		DDT-p,p'	3.1	U	ng/L	P337315	
		Dieldrin	4.1	U	ng/L	P337315	
		Endosulfan I	4.1	U	ng/L	P337315	

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955512	EPA 8270D	Endosulfan II	4.1	U	ng/L	P337315	
		Endosulfan Sulfate	2.1	U	ng/L	P337315	
		Endrin	2.1	U	ng/L	P337315	
		Endrin Aldehyde	2.1	U	ng/L	P337315	
		Heptachlor	1.5	U	ng/L	P337315	
		Heptachlor Epoxide	2.1	U	ng/L	P337315	
		Methoxychlor	4.1	U	ng/L	P337315	
		Mirex	2.1	U	ng/L	P337315	
		Permethrin	10	U	ng/L	P337315	
		Trifluralin	1.0	U	ng/L	P337315	
		Alpha-Chlordane	1.0	U	ng/L	P337315	
		Gamma-Chlordane	1.0	U	ng/L	P337315	
		Endrin Ketone	2.1	U	ng/L	P337315	
		Dicofol	31	U	ng/L	P337315	
		Chlordane**	2.6	U	ng/L	P337315	
		Toxaphene**	13	U	ng/L	P337315	
		Alachlor	0.24	U	ng/L	P337230	
		Ametryn	0.31	UJ	ng/L	P337230	LCS, RPD
1955515	EPA 8270D	Atrazine	0.24	U	ng/L	P337230	
		Atrazine Desethyl	1.4	U	ng/L	P337230	MS, RPD
		Azinphos Methyl	2.2	U	ng/L	P337230	
		Bromacil	0.48	U	ng/L	P337230	
		Butylate	0.38	U	ng/L	P337230	
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P337230	LCS
		Chlorpyrifos Methyl	0.096	U	ng/L	P337230	
		Demeton	1.9	U	ng/L	P337230	
		Diazinon	0.12	U	ng/L	P337230	
		Disulfoton	0.48	UJ	ng/L	P337230	RPD
		EPTC	1.2	U	ng/L	P337230	
		Ethion	0.14	U	ng/L	P337230	
		Ethoprop	0.096	UJ	ng/L	P337230	LCS
		Fenamiphos	0.24	UJ	ng/L	P337230	RPD
		Fipronil	0.24	U	ng/L	P337230	
		Fipronil Sulfide	0.14	UJ	ng/L	P337230	RPD
		Fipronil Sulfone	0.14	U	ng/L	P337230	
		Hexazinone	0.48	U	ng/L	P337230	
		Malathion	0.33	U	ng/L	P337230	
		Metribuzin	0.19	UJ	ng/L	P337230	LCS, MS, RPD
		Mevinphos	0.48	U	ng/L	P337230	
		Molinate	0.29	UJ	ng/L	P337230	RPD
		Norflurazon	0.48	UJ	ng/L	P337230	LCS
		Pendimethalin	0.96	U	ng/L	P337230	
		Phorate	0.24	UJ	ng/L	P337230	RPD
		Prometon	0.86	U	ng/L	P337230	

Field ID: FIELD BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955515	EPA 8270D	Prometryn	0.19	U	ng/L	P337230	
		Simazine	0.48	U	ng/L	P337230	
		Terbufos	0.096	U	ng/L	P337230	
		Terbutylazine	0.41	U	ng/L	P337230	
		Fonofos	0.19	UJ	ng/L	P337230	LCS, RPD
		Metalaxyl	0.24	U	ng/L	P337230	
		Metolachlor	0.24	U	ng/L	P337230	
		Acetochlor	0.24	U	ng/L	P337230	
		Cyanazine	0.48	UJ	ng/L	P337230	LCS, MS, RPD
		Parathion Ethyl	0.24	UJ	ng/L	P337230	LCS
		Parathion Methyl	0.24	U	ng/L	P337230	

Ref. Method and Comment:
 USGS O-2060-01: MS accuracy and precision for bentazon could not be assessed due to high concentration of parameter in the spiked sample.
 EPA 8270D: Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P337306

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P337447

Component	Result	Code	Units
Calcium	0.075	U	mg/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 200.7 Rev. 4.4
 Batch ID: P337690

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P337711

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P337447

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Component	Result	Code	Units
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 200.8 Rev. 5.4
Batch ID: P337690

Component	Result	Code	Units
Chromium	0.40	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337392

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337396

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337700

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337593

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337407

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P337408

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P337417

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P337479

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P337369

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

Reference Method: EPA 8270D
 Batch ID: P337230

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P337230

Component	Result	Code	Units
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P337315

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	3.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
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: P337315

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P337204

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P337210

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P337442

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P337300

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P337301

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P337489

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

Reference Method: SM 2540 C-97
Batch ID: P337669

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P337670

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P337673

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P337674

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P337492

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P337473

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

Reference Method: USGS O-2060-01
Batch ID: P337256

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337447

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	109		P	85 - 115
Magnesium	113		P	85 - 115
Potassium	106		P	85 - 115
Sodium	103		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337690

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	108		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	98.2		P	85 - 115
Copper	98.6		P	85 - 115
Lead	99.6		P	85 - 115
Nickel	101		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337690

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	94.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337392

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337396

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337700

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P337593

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P337407

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P337408

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P337417

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P337479

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: P337369

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P337230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	110	90.8	P/P	78 - 118
Alachlor	109	93.8	P/P	77 - 119
Ametryn	79.3	142	P/F	61 - 136
Atrazine	109	111	P/P	73 - 120
Atrazine Desethyl	106	79.2	P/P	16 - 122
Azinphos Methyl	153	127	P/P	69 - 186
Bromacil	112	115	P/P	40 - 125
Butylate	56.7	67.7	P/P	32 - 87.0
Chlorpyrifos Ethyl	125	109	F/P	53 - 110
Chlorpyrifos Methyl	107	100	P/P	31 - 119
Cyanazine	287	127	F/P	36 - 224
Demeton	106	88.6	P/P	39 - 122
Diazinon	104	102	P/P	75 - 119
Disulfoton	121	76.0	P/P	42 - 139
EPTC	54.7	69.1	P/P	33 - 96.0
Ethion	105	114	P/P	63 - 127

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
 Batch ID: P337230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethoprop	122	97.4	F/P	65 - 107
Fenamiphos	130	79.3	P/P	64 - 137
Fipronil	114	106	P/P	60 - 126
Fipronil Sulfide	121	76.0	P/P	58 - 124
Fipronil Sulfone	114	85.6	P/P	57 - 126
Fonofos	133	89.8	F/P	65 - 111
Hexazinone	109	119	P/P	46 - 151
Malathion	120	116	P/P	68 - 132
Metalaxyl	114	96.6	P/P	51 - 132
Metolachlor	110	99.1	P/P	78 - 119
Metribuzin	234	122	F/P	58 - 148
Mevinphos	86.2	104	P/P	34 - 128
Molinate	99.6	61.6	P/P	44 - 101
Norflurazon	113	130	P/F	63 - 129
Parathion Ethyl	112	105	F/P	80 - 109
Parathion Methyl	122	105	P/P	74 - 125
Pendimethalin	120	124	P/P	48 - 134
Phorate	103	67.6	P/P	52 - 119
Prometon	98.9	95.2	P/P	69 - 124
Prometryn	107	100	P/P	66 - 124
Simazine	127	131	P/P	61 - 134
Terbufos	113	86.0	P/P	58 - 115
Terbutylazine	111	91.3	P/P	77 - 113

Reference Method: EPA 8270D
 Batch ID: P337315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	61.9	62.9	P/P	26 - 88.0
Alpha-BHC	77.3	85.6	P/P	63 - 114
Alpha-Chlordane	89.9	83.9	P/P	56 - 117
Beta-BHC	109	102	P/P	57 - 138
Carbophenothion	67.4	68.0	P/P	36 - 148
Chlorothalonil	124	92.0	P/P	26 - 173
Cypermethrin	96.3	83.8	P/P	42 - 159
DDD-p,p'	104	97.4	P/P	62 - 126
DDE-p,p'	93.6	84.6	P/P	53 - 115
DDT-p,p'	90.8	90.1	P/P	54 - 117
Delta-BHC	120	109	P/P	68 - 158
Dicofol	89.2	93.1	P/P	25 - 114
Dieldrin	98.3	86.4	P/P	59 - 126
Endosulfan I	103	96.6	P/P	62 - 138
Endosulfan II	127	96.9	P/P	61 - 150
Endosulfan Sulfate	103	92.7	P/P	63 - 132
Endrin	96.1	87.7	P/P	49 - 148
Endrin Aldehyde	103	98.5	P/P	50 - 144
Endrin Ketone	99.2	93.2	P/P	66 - 122
Gamma-BHC	78.0	78.2	P/P	60 - 137
Gamma-Chlordane	85.7	81.4	P/P	54 - 113
Heptachlor	60.1	67.3	P/P	43 - 104
Heptachlor Epoxide	89.4	86.2	P/P	64 - 118
Methoxychlor	104	95.6	P/P	63 - 129

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P337315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mirex	78.0	72.0	P/P	40 - 96.0
Permethrin	85.9	77.4	P/P	51 - 123
Trifluralin	73.6	77.3	P/P	35 - 187

Reference Method: EPA 8276
Batch ID: P337315

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	91.0	90.0	P/P	48 - 121
Toxaphene	96.3	100	P/P	43 - 135

Reference Method: EPA 8321B
Batch ID: P337204

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	142		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P337210

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	126		P	40 - 150
Glyphosate	120		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P337442

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	81.7		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P337489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P337492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P337473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P337256

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P337256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.3		P	40 - 150
Acetaminophen	100		P	30 - 150
Bentazon	89.3		P	30 - 150
Carbamazepine	101		P	40 - 150
Diuron	90.8		P	40 - 150
Fenuron	113		P	40 - 150
Fluridone	109		P	40 - 150
Imidacloprid	105		P	40 - 160
Linuron	99.6		P	40 - 150
MCPP	89.3		P	40 - 150
Primidone	103		P	40 - 150
Triclopyr	88.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955483	Potassium	112	106	P/P	80 - 120
1955483	Sodium	112	105	P/P	80 - 120
1955483	Zinc	105	98.6	P/P	80 - 120
1955606	Magnesium	113		P	80 - 120
1955606	Potassium	106		P	80 - 120
1955606	Zinc	101		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1956520	Iron	106	109	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955500	Iron	105		P	80 - 120
1956441	Iron	108	108	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955483	Arsenic	100	102	P/P	80 - 120
1955483	Cadmium	102	104	P/P	80 - 120
1955483	Chromium	93.9	95.3	P/P	80 - 120
1955483	Copper	91.7	92.6	P/P	80 - 120
1955483	Lead	97.6	99.4	P/P	80 - 120
1955483	Nickel	94.0	95.2	P/P	80 - 120
1955483	Silver	99.9	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955606	Arsenic	105		P	80 - 120
1955606	Cadmium	105		P	80 - 120
1955606	Chromium	95.6		P	80 - 120
1955606	Lead	101		P	80 - 120
1955606	Nickel	95.6		P	80 - 120
1955606	Silver	99.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1956520	Chromium	93.1	93.8	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337392

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955267	Chloride	105		P	90 - 110
1955302	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955267	Sulfate	101		P	90 - 110
1955302	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955490	Ammonia-N	95.7	96.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337700

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955339	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955490	Kjeldahl Nitrogen	89.3	86.2	F/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337593

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1956249	Kjeldahl Nitrogen	97.8	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955317	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955532	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955532	Total-P	96.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955926	Total-P	98.2	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P337369

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955533	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P337230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955049	Acetochlor	94.3	90.4	P/P	74 - 123
1955049	Alachlor	95.4	92.1	P/P	73 - 124
1955049	Ametryn	88.0	65.0	P/P	56 - 149
1955049	Atrazine	105	108	P/P	73 - 124
1955049	Atrazine Desethyl	66.0	107	P/F	12 - 103
1955049	Azinphos Methyl	105	126	P/P	60 - 202
1955049	Bromacil	93.1	86.4	P/P	42 - 133
1955049	Butylate	59.1	50.4	P/P	10 - 85.0
1955049	Chlorpyrifos Ethyl	99.8	97.8	P/P	53 - 113
1955049	Chlorpyrifos Methyl	92.3	105	P/P	40 - 115
1955049	Cyanazine	113	267	P/F	22 - 210
1955049	Demeton	81.2	90.6	P/P	17 - 149
1955049	Diazinon	79.5	85.6	P/P	72 - 124
1955049	Disulfoton	84.4	99.9	P/P	43 - 139
1955049	EPTC	59.7	49.0	P/P	10 - 86.0
1955049	Ethion	104	87.0	P/P	65 - 131
1955049	Ethoprop	86.7	102	P/P	59 - 110
1955049	Fenamiphos	109	108	P/P	57 - 138
1955049	Fipronil	103	89.8	P/P	40 - 130
1955049	Fipronil Sulfide	107	96.8	P/P	36 - 128
1955049	Fipronil Sulfone	107	92.3	P/P	16 - 145
1955049	Fonofos	80.4	96.7	P/P	60 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
 Batch ID: P337230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955049	Hexazinone	116	94.6	P/P	69 - 142
1955049	Malathion	98.6	90.2	P/P	68 - 132
1955049	Metalaxyl	94.9	91.2	P/P	66 - 118
1955049	Metolachlor	103	91.5	P/P	71 - 124
1955049	Metribuzin	111	175	P/F	61 - 140
1955049	Mevinphos	53.1	62.9	P/P	38 - 130
1955049	Molinate	61.1	61.8	P/P	23 - 99.0
1955049	Norflurazon	107	84.8	P/P	39 - 139
1955049	Parathion Ethyl	91.7	92.2	P/P	75 - 111
1955049	Parathion Methyl	93.1	100	P/P	64 - 130
1955049	Pendimethalin	98.9	102	P/P	26 - 173
1955049	Phorate	75.6	87.7	P/P	43 - 127
1955049	Prometon	97.1	86.6	P/P	50 - 144
1955049	Prometryn	102	87.9	P/P	69 - 126
1955049	Simazine	102	108	P/P	51 - 152
1955049	Terbufos	83.0	97.8	P/P	54 - 125
1955049	Terbuthylazine	99.6	96.7	P/P	76 - 113

Reference Method: EPA 8270D
 Batch ID: P337315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955044	Aldrin	63.4	65.3	P/P	22 - 97.0
1955044	Alpha-BHC	97.6	94.3	P/P	43 - 132
1955044	Alpha-Chlordane	92.6	91.3	P/P	36 - 126
1955044	Beta-BHC	112	101	P/P	41 - 150
1955044	Carbophenothion	84.7	83.7	P/P	13 - 196
1955044	Chlorothalonil	116	116	P/P	10 - 266
1955044	Cypermethrin	101	88.3	P/P	37 - 161
1955044	DDD-p,p'	103	100	P/P	44 - 131
1955044	DDE-p,p'	96.5	94.3	P/P	32 - 127
1955044	DDT-p,p'	95.1	89.1	P/P	45 - 116
1955044	Delta-BHC	126	126	P/P	50 - 201
1955044	Dicofol	93.5	81.0	P/P	10 - 100
1955044	Dieldrin	97.3	104	P/P	39 - 142
1955044	Endosulfan I	103	107	P/P	51 - 139
1955044	Endosulfan II	119	114	P/P	49 - 155
1955044	Endosulfan Sulfate	101	90.7	P/P	54 - 136
1955044	Endrin	92.1	92.7	P/P	38 - 141
1955044	Endrin Aldehyde	104	87.7	P/P	14 - 152
1955044	Endrin Ketone	97.5	90.4	P/P	60 - 128
1955044	Gamma-BHC	92.5	88.5	P/P	48 - 157
1955044	Gamma-Chlordane	88.4	89.5	P/P	35 - 123
1955044	Heptachlor	71.3	74.4	P/P	25 - 112
1955044	Heptachlor Epoxide	92.7	90.6	P/P	48 - 125
1955044	Methoxychlor	114	97.0	P/P	52 - 127
1955044	Mirex	85.6	77.4	P/P	25 - 108
1955044	Permethrin	89.5	80.7	P/P	46 - 133
1955044	Trifluralin	82.1	82.9	P/P	29 - 254

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P337315

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955510	Chlordane	107	101	P/P	44 - 134
1955510	Toxaphene	103	108	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P337204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955156	Pyraclostrobin	148	140	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P337210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955156	AMPA	126	122	P/P	40 - 150
1955156	Glyphosate	128	128	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P337442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955505	Sucralose	104	109	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P337492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955487	Fluoride	94.9	96.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P337473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955140	Organic Carbon	97.1	99.4	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P337256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955250	2,4-D	113	116	P/P	40 - 150
1955250	Acetaminophen	115	109	P/P	30 - 150
1955250	Carbamazepine	112	104	P/P	40 - 150
1955250	Diuron	94.9	89.2	P/P	40 - 150
1955250	Fenuron	124	93.5	P/P	40 - 150
1955250	Fluridone	96.2	88.2	P/P	40 - 150
1955250	Imidacloprid	172	150	F/P	40 - 160
1955250	Linuron	101	89.3	P/P	40 - 150
1955250	MCPP	86.6	86.8	P/P	40 - 150
1955250	Primidone	114	106	P/P	40 - 150
1955250	Triclopyr	91.5	88.4	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P337306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955452	Turbidity	2.53	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955483	Calcium	2.95	Spike	P	0 - 20
1955483	Magnesium	4.35	Spike	P	0 - 20
1955483	Potassium	4.90	Spike	P	0 - 20
1955483	Sodium	3.92	Spike	P	0 - 20
1955483	Zinc	5.91	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1956520	Iron	2.41	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1956441	Iron	0.214	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955483	Arsenic	1.54	Spike	P	0 - 20
1955483	Cadmium	1.93	Spike	P	0 - 20
1955483	Chromium	1.40	Spike	P	0 - 20
1955483	Copper	1.04	Spike	P	0 - 20
1955483	Lead	1.74	Spike	P	0 - 20
1955483	Nickel	1.28	Spike	P	0 - 20
1955483	Silver	0.810	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1956520	Chromium	0.749	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337392

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955302	Chloride	1.99	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955302	Sulfate	2.91	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955490	Ammonia-N	0.434	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955339	Ammonia-N	1.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955490	Kjeldahl Nitrogen	2.79	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1956249	Kjeldahl Nitrogen	2.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337407

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955317	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955532	NO2NO3-N	0.406	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955532	Total-P	3.81	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955926	Total-P	0.148	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P337369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955533	O-Phosphate-P	0.688	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P337230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955049	Acetochlor	4.24	Spike	P	0 - 30
1955049	Alachlor	3.60	Spike	P	0 - 30
1955049	Ametryn	30.0	Spike	F	0 - 30
1955049	Atrazine	2.03	Spike	P	0 - 30
1955049	Atrazine Desethyl	47.0	Spike	F	0 - 30
1955049	Azinphos Methyl	18.4	Spike	P	0 - 30
1955049	Bromacil	7.53	Spike	P	0 - 30
1955049	Butylate	15.9	Spike	P	0 - 30
1955049	Chlorpyrifos Ethyl	2.00	Spike	P	0 - 30
1955049	Chlorpyrifos Methyl	12.5	Spike	P	0 - 30
1955049	Cyanazine	80.8	Spike	F	0 - 30
1955049	Demeton	10.9	Spike	P	0 - 30
1955049	Diazinon	7.33	Spike	P	0 - 30
1955049	Disulfoton	16.8	Spike	P	0 - 30
1955049	EPTC	19.8	Spike	P	0 - 30
1955049	Ethion	17.4	Spike	P	0 - 30
1955049	Ethoprop	16.2	Spike	P	0 - 30
1955049	Fenamiphos	0.945	Spike	P	0 - 30
1955049	Fipronil	14.0	Spike	P	0 - 30
1955049	Fipronil Sulfide	9.96	Spike	P	0 - 30
1955049	Fipronil Sulfone	14.4	Spike	P	0 - 30
1955049	Fonofos	18.4	Spike	P	0 - 30
1955049	Hexazinone	17.7	Spike	P	0 - 30
1955049	Malathion	8.11	Spike	P	0 - 30
1955049	Metalaxyl	3.93	Spike	P	0 - 30
1955049	Metolachlor	11.0	Spike	P	0 - 30
1955049	Metribuzin	43.9	Spike	F	0 - 30
1955049	Mevinphos	16.9	Spike	P	0 - 30
1955049	Molinate	1.12	Spike	P	0 - 30
1955049	Norflurazon	21.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P337230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955049	Parathion Ethyl	0.529	Spike	P	0 - 30
1955049	Parathion Methyl	7.60	Spike	P	0 - 30
1955049	Pendimethalin	3.04	Spike	P	0 - 30
1955049	Phorate	14.8	Spike	P	0 - 30
1955049	Prometon	11.4	Spike	P	0 - 30
1955049	Prometryn	14.4	Spike	P	0 - 30
1955049	Simazine	6.10	Spike	P	0 - 30
1955049	Terbufos	16.4	Spike	P	0 - 30
1955049	Terbuthylazine	2.92	Spike	P	0 - 30
LFB	Acetochlor	19.4	LCS	P	0 - 30
LFB	Alachlor	14.8	LCS	P	0 - 30
LFB	Ametryn	56.5	LCS	F	0 - 30
LFB	Atrazine	1.58	LCS	P	0 - 30
LFB	Atrazine Desethyl	29.0	LCS	P	0 - 30
LFB	Azinphos Methyl	18.2	LCS	P	0 - 30
LFB	Bromacil	2.87	LCS	P	0 - 30
LFB	Butylate	17.7	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	13.7	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.63	LCS	P	0 - 30
LFB	Cyanazine	77.5	LCS	F	0 - 30
LFB	Demeton	18.2	LCS	P	0 - 30
LFB	Diazinon	2.07	LCS	P	0 - 30
LFB	Disulfoton	45.5	LCS	F	0 - 30
LFB	EPTC	23.2	LCS	P	0 - 30
LFB	Ethion	7.72	LCS	P	0 - 30
LFB	Ethoprop	22.8	LCS	P	0 - 30
LFB	Fenamiphos	48.2	LCS	F	0 - 30
LFB	Fipronil	7.23	LCS	P	0 - 30
LFB	Fipronil Sulfide	45.4	LCS	F	0 - 30
LFB	Fipronil Sulfone	28.9	LCS	P	0 - 30
LFB	Fonofos	38.9	LCS	F	0 - 30
LFB	Hexazinone	8.95	LCS	P	0 - 30
LFB	Malathion	3.93	LCS	P	0 - 30
LFB	Metalaxyl	16.6	LCS	P	0 - 30
LFB	Metolachlor	10.3	LCS	P	0 - 30
LFB	Metribuzin	63.1	LCS	F	0 - 30
LFB	Mevinphos	19.0	LCS	P	0 - 30
LFB	Molinate	47.2	LCS	F	0 - 30
LFB	Norflurazon	14.1	LCS	P	0 - 30
LFB	Parathion Ethyl	6.99	LCS	P	0 - 30
LFB	Parathion Methyl	15.2	LCS	P	0 - 30
LFB	Pendimethalin	2.54	LCS	P	0 - 30
LFB	Phorate	41.1	LCS	F	0 - 30
LFB	Prometon	3.82	LCS	P	0 - 30
LFB	Prometryn	5.96	LCS	P	0 - 30
LFB	Simazine	3.00	LCS	P	0 - 30
LFB	Terbufos	27.5	LCS	P	0 - 30
LFB	Terbuthylazine	19.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P337315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955044	Aldrin	2.95	Spike	P	0 - 30
1955044	Alpha-BHC	3.47	Spike	P	0 - 30
1955044	Alpha-Chlordane	1.40	Spike	P	0 - 30
1955044	Beta-BHC	10.2	Spike	P	0 - 30
1955044	Carbophenothion	1.24	Spike	P	0 - 30
1955044	Chlorothalonil	0.154	Spike	P	0 - 30
1955044	Cypermethrin	13.4	Spike	P	0 - 30
1955044	DDD-p,p'	3.33	Spike	P	0 - 30
1955044	DDE-p,p'	2.27	Spike	P	0 - 30
1955044	DDT-p,p'	6.49	Spike	P	0 - 30
1955044	Delta-BHC	0.0231	Spike	P	0 - 30
1955044	Dicofol	14.3	Spike	P	0 - 30
1955044	Dieldrin	6.57	Spike	P	0 - 30
1955044	Endosulfan I	3.06	Spike	P	0 - 30
1955044	Endosulfan II	4.11	Spike	P	0 - 30
1955044	Endosulfan Sulfate	10.5	Spike	P	0 - 30
1955044	Endrin	0.601	Spike	P	0 - 30
1955044	Endrin Aldehyde	16.9	Spike	P	0 - 30
1955044	Endrin Ketone	7.56	Spike	P	0 - 30
1955044	Gamma-BHC	4.39	Spike	P	0 - 30
1955044	Gamma-Chlordane	1.22	Spike	P	0 - 30
1955044	Heptachlor	4.17	Spike	P	0 - 30
1955044	Heptachlor Epoxide	2.30	Spike	P	0 - 30
1955044	Methoxychlor	16.2	Spike	P	0 - 30
1955044	Mirex	10.2	Spike	P	0 - 30
1955044	Permethrin	10.3	Spike	P	0 - 30
1955044	Trifluralin	1.04	Spike	P	0 - 30
LFB	Aldrin	1.50	LCS	P	0 - 30
LFB	Alpha-BHC	10.3	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.93	LCS	P	0 - 30
LFB	Beta-BHC	6.98	LCS	P	0 - 30
LFB	Carbophenothion	0.843	LCS	P	0 - 30
LFB	Chlorothalonil	29.2	LCS	P	0 - 30
LFB	Cypermethrin	13.9	LCS	P	0 - 30
LFB	DDD-p,p'	6.65	LCS	P	0 - 30
LFB	DDE-p,p'	10.1	LCS	P	0 - 30
LFB	DDT-p,p'	0.858	LCS	P	0 - 30
LFB	Delta-BHC	9.61	LCS	P	0 - 30
LFB	Dicofol	4.26	LCS	P	0 - 30
LFB	Dieldrin	12.9	LCS	P	0 - 30
LFB	Endosulfan I	6.86	LCS	P	0 - 30
LFB	Endosulfan II	26.8	LCS	P	0 - 30
LFB	Endosulfan Sulfate	10.7	LCS	P	0 - 30
LFB	Endrin	9.17	LCS	P	0 - 30
LFB	Endrin Aldehyde	4.76	LCS	P	0 - 30
LFB	Endrin Ketone	6.18	LCS	P	0 - 30
LFB	Gamma-BHC	0.326	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.07	LCS	P	0 - 30
LFB	Heptachlor	11.4	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.63	LCS	P	0 - 30
LFB	Methoxychlor	8.49	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P337315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	7.99	LCS	P	0 - 30
LFB	Permethrin	10.4	LCS	P	0 - 30
LFB	Trifluralin	4.92	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P337315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955510	Chlordane	4.99	Spike	P	0 - 30
1955510	Toxaphene	5.26	Spike	P	0 - 30
LFB	Chlordane	1.15	LCS	P	0 - 30
LFB	Toxaphene	4.16	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P337204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955156	Pyraclostrobin	6.04	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P337210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955156	AMPA	3.95	Spike	P	0 - 30
1955156	Glyphosate	0.156	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P337442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955505	Sucralose	5.30	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P337300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955454	Color (true)	5.06	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P337489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955487	Total Alkalinity	0.353	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P337669

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955343	TDS	8.58	Sample	P	0 - 10

Reference Method: SM 2540 C-97
 Batch ID: P337670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955404	TDS	0.727	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P337492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955487	Fluoride	0.953	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P337473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955140	Organic Carbon	2.27	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P337256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955250	2,4-D	1.97	Spike	P	0 - 30
1955250	Acetaminophen	5.36	Spike	P	0 - 30
1955250	Carbamazepine	6.52	Spike	P	0 - 30
1955250	Diuron	5.88	Spike	P	0 - 30
1955250	Fenuron	27.9	Spike	P	0 - 30
1955250	Fluridone	6.18	Spike	P	0 - 30
1955250	Imidacloprid	12.5	Spike	P	0 - 30
1955250	Linuron	12.4	Spike	P	0 - 30
1955250	MCP	0.138	Spike	P	0 - 30
1955250	Primidone	7.44	Spike	P	0 - 30
1955250	Triclopyr	3.39	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: 1955507
 Field Sample ID: G1TLHR0006-2017-05

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
------------------	-----------	--------	-----------	----------------

Quality Assurance Report Surrogates

Lab Sample ID: 1955507

Field Sample ID: G1TLHR0006-2017-05

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	96.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.6	P	30 - 160
EPA 8321B	Diuron-d6	123	P	30 - 160
EPA 8321B	Diuron-d6	89.0	P	30 - 160
EPA 8321B	Diuron-d6	123	P	30 - 160
EPA 8321B	Diuron-d6	89.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	40 - 160
EPA 8321B	Primidone-d5	96.9	P	30 - 160
EPA 8321B	Primidone-d5	96.9	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	40 - 160
EPA 8321B	Sucralose-d6	116	P	40 - 160
USGS O-2060-01	2,4-D-d3	93.2	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	96.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	95.6	P	30 - 160
USGS O-2060-01	Diuron-d6	123	P	30 - 160
USGS O-2060-01	Diuron-d6	89.0	P	30 - 160
USGS O-2060-01	Primidone-d5	96.9	P	30 - 160
USGS O-2060-01	Sucralose-d6	116	P	40 - 160

Lab Sample ID: 1955508

Field Sample ID: G1TLHR0006-2017-05_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	107	P	30 - 160
EPA 8321B	Diuron-d6	126	P	30 - 160
EPA 8321B	Diuron-d6	91.1	P	30 - 160
EPA 8321B	Diuron-d6	126	P	30 - 160
EPA 8321B	Diuron-d6	91.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	116	P	40 - 160
EPA 8321B	Primidone-d5	123	P	30 - 160
EPA 8321B	Primidone-d5	123	P	30 - 160
EPA 8321B	Sucralose-d6	103	P	40 - 160
EPA 8321B	Sucralose-d6	103	P	40 - 160
USGS O-2060-01	2,4-D-d3	91.2	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	105	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	107	P	30 - 160
USGS O-2060-01	Diuron-d6	126	P	30 - 160
USGS O-2060-01	Diuron-d6	91.1	P	30 - 160
USGS O-2060-01	Primidone-d5	123	P	30 - 160
USGS O-2060-01	Sucralose-d6	103	P	40 - 160

Lab Sample ID: 1955509

Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	100	P	30 - 160
EPA 8321B	Acetaminophen-d4	100	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1955509

Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbamazepine-d10	100	P	30 - 160
EPA 8321B	Carbamazepine-d10	100	P	30 - 160
EPA 8321B	Diuron-d6	123	P	30 - 160
EPA 8321B	Diuron-d6	91.0	P	30 - 160
EPA 8321B	Diuron-d6	123	P	30 - 160
EPA 8321B	Diuron-d6	91.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	40 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	40 - 160
EPA 8321B	Sucralose-d6	117	P	40 - 160
USGS O-2060-01	2,4-D-d3	85.6	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	100	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	100	P	30 - 160
USGS O-2060-01	Diuron-d6	123	P	30 - 160
USGS O-2060-01	Diuron-d6	91.0	P	30 - 160
USGS O-2060-01	Primidone-d5	116	P	30 - 160
USGS O-2060-01	Sucralose-d6	117	P	40 - 160

Lab Sample ID: 1955510

Field Sample ID: G1TLHR0006-2017-05

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	71.2	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	58.7	P	32 - 103
EPA 8276	Decachlorobiphenyl	65.0	P	31 - 100

Lab Sample ID: 1955511

Field Sample ID: G1TLHR0006-2017-05_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	88.5	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	62.7	P	32 - 103
EPA 8276	Decachlorobiphenyl	87.0	P	31 - 100

Lab Sample ID: 1955512

Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	81.3	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	76.9	P	32 - 103
EPA 8276	Decachlorobiphenyl	74.2	P	31 - 100

Lab Sample ID: 1955513

Field Sample ID: G1TLHR0006-2017-05

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	103	P	53 - 135
EPA 8270D	Simazine-d10	93.1	P	71 - 126

Quality Assurance Report Surrogates

Lab Sample ID: 1955514

Field Sample ID: G1TLHR0006-2017-05_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	97.2	P	53 - 135
EPA 8270D	Simazine-d10	95.0	P	71 - 126

Lab Sample ID: 1955515

Field Sample ID: FIELD BLANK

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	116	P	53 - 135
EPA 8270D	Simazine-d10	102	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A81047

Included Lab Sample IDs: 1955486, 1955487, 1955488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	100	P/P	85 - 115
Color (true)	98.7	103	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A81048

Included Lab Sample IDs: 1955486, 1955487, 1955488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A81079

Included Lab Sample IDs: 1955492, 1955493, 1955494

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

Reference Method: EPA 8321B

Run ID: A81086

Included Lab Sample IDs: 1955507, 1955508, 1955509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.3	94.7	P/P	60 - 150
Glyphosate	83.8	95.2	P/P	60 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A81087

Included Lab Sample IDs: 1955486, 1955487, 1955488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	105	106	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A81092

Included Lab Sample IDs: 1955489, 1955490, 1955491

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

Reference Method: USGS O-2060-01

Run ID: A81093

Included Lab Sample IDs: 1955507, 1955508, 1955509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.8	100	P/P	50 - 150
Acetaminophen	105	100	P/P	60 - 150
Bentazon	97.6	100	P/P	50 - 150
Carbamazepine	103	103	P/P	60 - 150
Diuron	102	99.7	P/P	60 - 150
Fenuron	104	102	P/P	60 - 150
Fluridone	105	105	P/P	60 - 160
Imidacloprid	96.0	96.8	P/P	60 - 150
Linuron	102	101	P/P	60 - 150
MCPP	91.0	94.9	P/P	50 - 150
Primidone	103	103	P/P	60 - 150
Triclopyr	85.8	87.6	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A81106

Included Lab Sample IDs: 1955507, 1955508, 1955509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	83.8	85.8	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81121

Included Lab Sample IDs: 1955489, 1955490

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

Reference Method: SM 5310 B-00

Run ID: A81124

Included Lab Sample IDs: 1955489, 1955490, 1955491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	96.7	P/P	90 - 110
Organic Carbon	97.0	97.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81127

Included Lab Sample IDs: 1955491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	106	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A81134

Included Lab Sample IDs: 1955486, 1955487, 1955488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A81134

Included Lab Sample IDs: 1955486, 1955487, 1955488

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A81137

Included Lab Sample IDs: 1955507, 1955508, 1955509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	74.6	92.0	P/P	60 - 150
Sucralose	92.0	89.2	P/P	60 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81172

Included Lab Sample IDs: 1955499, 1955500, 1955501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	97.8	P/P	90 - 110
Arsenic	99.9	102	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Cadmium	99.5	100	P/P	90 - 110
Chromium	97.4	96.5	P/P	90 - 110
Copper	100	93.4	P/P	90 - 110
Copper	99.0	100	P/P	90 - 110
Lead	96.6	98.0	P/P	90 - 110
Lead	98.0	97.3	P/P	90 - 110
Nickel	100	94.0	P/P	90 - 110
Nickel	98.8	100	P/P	90 - 110
Silver	97.7	98.2	P/P	90 - 110
Silver	98.2	97.9	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A81173

Included Lab Sample IDs: 1955499, 1955500, 1955501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	105	106	P/P	90 - 110
Calcium	109	105	P/P	90 - 110
Magnesium	104	106	P/P	90 - 110
Magnesium	108	104	P/P	90 - 110
Potassium	103	104	P/P	90 - 110
Potassium	106	103	P/P	90 - 110
Sodium	105	98.8	P/P	90 - 110
Sodium	98.8	99.7	P/P	90 - 110
Zinc	104	103	P/P	90 - 110
Zinc	104	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A81190

Included Lab Sample IDs: 1955510, 1955511, 1955512

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	113		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81222

Included Lab Sample IDs: 1955490, 1955491

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81223

Included Lab Sample IDs: 1955489, 1955490

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81225

Included Lab Sample IDs: 1955489

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81228

Included Lab Sample IDs: 1955491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81265

Included Lab Sample IDs: 1955501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	96.5	94.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A81266

Included Lab Sample IDs: 1955499, 1955500, 1955501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	103	104	P/P	95 - 105
Iron	104	101	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A81287

Included Lab Sample IDs: 1955510, 1955511, 1955512

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A81287

Included Lab Sample IDs: 1955510, 1955511, 1955512

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.8		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	96.9		P	80 - 120
Beta-BHC	94.6		P	80 - 120
Carbophenothion	85.8		P	80 - 120
Chlorothalonil	114		P	80 - 120
Cypermethrin	89.1		P	80 - 120
DDD-p,p'	96.9		P	80 - 120
DDE-p,p'	99.0		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	95.4		P	80 - 120
Dicofol	91.7		P	80 - 120
Dieldrin	96.8		P	80 - 120
Endosulfan I	97.1		P	80 - 120
Endosulfan II	98.7		P	80 - 120
Endosulfan Sulfate	98.2		P	80 - 120
Endrin	91.3		P	80 - 120
Endrin Aldehyde	93.2		P	80 - 120
Endrin Ketone	95.8		P	80 - 120
Gamma-BHC	96.1		P	80 - 120
Gamma-Chlordane	95.9		P	80 - 120
Heptachlor	91.9		P	80 - 120
Heptachlor Epoxide	97.1		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	99.6		P	80 - 120
Permethrin	90.0		P	80 - 120
Trifluralin	100		P	80 - 120

Reference Method: EPA 8270D

Run ID: A81366

Included Lab Sample IDs: 1955513, 1955514, 1955515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.9		P	80 - 120
Alachlor	97.1		P	80 - 120
Ametryn	90.5		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	108		P	80 - 120
Azinphos Methyl	94.8		P	80 - 120
Bromacil	97.9		P	80 - 120
Butylate	98.0		P	80 - 120
Chlorpyrifos Ethyl	96.6		P	80 - 120
Chlorpyrifos Methyl	98.0		P	80 - 120
Cyanazine	108		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	92.6		P	80 - 120
Disulfoton	97.9		P	80 - 120
EPTC	97.7		P	80 - 120
Ethion	99.7		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	94.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A81366

Included Lab Sample IDs: 1955513, 1955514, 1955515

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil	94.5		P	80 - 120
Fipronil Sulfide	96.6		P	80 - 120
Fipronil Sulfone	97.7		P	80 - 120
Fonofos	97.6		P	80 - 120
Hexazinone	94.7		P	80 - 120
Malathion	97.6		P	80 - 120
Metalaxyl	97.2		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	95.5		P	80 - 120
Mevinphos	92.2		P	80 - 120
Molinate	102		P	80 - 120
Norflurazon	98.2		P	80 - 120
Parathion Ethyl	90.9		P	80 - 120
Parathion Methyl	94.0		P	80 - 120
Pendimethalin	96.7		P	80 - 120
Phorate	96.1		P	80 - 120
Prometon	97.3		P	80 - 120
Prometryn	95.8		P	80 - 120
Simazine	92.8		P	80 - 120
Terbufos	96.4		P	80 - 120
Terbuthylazine	96.3		P	80 - 120

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.53	
EPA 200.7 Rev. 4.4	Calcium	109						2.95
	Iron	108	106	109				2.41
	Iron	104	105	108	108			0.214
	Magnesium	113	113					4.35
	Potassium	106	112	106	106			4.90
	Sodium	103	112	105				3.92
	Zinc	102	105	98.6	101			5.91
EPA 200.8 Rev. 5.4	Arsenic	103	100	102	105			1.54
	Cadmium	102	102	104	105			1.93
	Chromium	98.2	93.9	95.3	95.6			1.40
	Chromium	94.6	93.1	93.8				0.749
	Copper	98.6	91.7	92.6				1.04
	Lead	99.6	97.6	99.4	101			1.74
	Nickel	101	94.0	95.2	95.6			1.28
	Silver	101	99.9	101	99.9			0.810
EPA 300.0 Rev. 2.1	Chloride	105	103	105			1.99	
	Sulfate	100	101	101			2.91	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	95.7	96.2				0.434

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 350.1 Rev. 2.0	Ammonia-N	103		101	102			1.22
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		89.3	86.2			2.79
	Kjeldahl Nitrogen	99.0		97.8	101			2.01
EPA 353.2 Rev. 2.0	NO2NO3-N	102		104	104			0.0
	NO2NO3-N	103		103	104			0.406
EPA 365.1 Rev. 2.0	Total-P	101		96.2	100			3.81
	Total-P	102		98.2	98.4			0.148
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3		101	102			0.688
EPA 8270D	Acetochlor	110	90.8	94.3	90.4	19.4		4.24
	Alachlor	109	93.8	95.4	92.1	14.8		3.60
	Aldrin	61.9	62.9	63.4	65.3	1.50		2.95
	Alpha-BHC	77.3	85.6	97.6	94.3	10.3		3.47
	Alpha-Chlordane	83.9	89.9	92.6	91.3	6.93		1.40
	Ametryn	79.3	142	88.0	65.0	56.5		30.0
	Atrazine	109	111	105	108	1.58		2.03
	Atrazine Desethyl	106	79.2	66.0	107	29.0		47.0
	Azinphos Methyl	153	127	105	126	18.2		18.4
	Beta-BHC	102	109	112	101	6.98		10.2
	Bromacil	112	115	93.1	86.4	2.87		7.53
	Butylate	56.7	67.7	59.1	50.4	17.7		15.9
	Carbophenothion	68.0	67.4	84.7	83.7	0.843		1.24
	Chlorothalonil	92.0	124	116	116	29.2		0.154
	Chlorpyrifos Ethyl	125	109	99.8	97.8	13.7		2.00
	Chlorpyrifos Methyl	107	100	92.3	105	6.63		12.5
	Cyanazine	287	127	113	267	77.5		80.8
	Cypermethrin	83.8	96.3	101	88.3	13.9		13.4
	DDD-p,p'	97.4	104	103	100	6.65		3.33
	DDE-p,p'	93.6	84.6	96.5	94.3	10.1		2.27
	DDT-p,p'	90.8	90.1	95.1	89.1	0.858		6.49
	Delta-BHC	109	120	126	126	9.61		0.0231
	Demeton	106	88.6	81.2	90.6	18.2		10.9
	Diazinon	104	102	79.5	85.6	2.07		7.33
	Dicofol	93.1	89.2	93.5	81.0	4.26		14.3
	Dieldrin	98.3	86.4	97.3	104	12.9		6.57
	Disulfoton	121	76.0	84.4	99.9	45.5		16.8
	Endosulfan I	103	96.6	103	107	6.86		3.06
	Endosulfan II	127	96.9	119	114	26.8		4.11
	Endosulfan Sulfate	103	92.7	101	90.7	10.7		10.5
	Endrin	96.1	87.7	92.1	92.7	9.17		0.601
	Endrin Aldehyde	103	98.5	104	87.7	4.76		16.9
	Endrin Ketone	93.2	99.2	97.5	90.4	6.18		7.56
	EPTC	54.7	69.1	59.7	49.0	23.2		19.8
	Ethion	105	114	104	87.0	7.72		17.4
	Ethoprop	122	97.4	86.7	102	22.8		16.2
	Fenamiphos	130	79.3	109	108	48.2		0.945
	Fipronil	114	106	103	89.8	7.23		14.0
	Fipronil Sulfide	121	76.0	107	96.8	45.4		9.96
	Fipronil Sulfone	114	85.6	107	92.3	28.9		14.4
	Fonofos	133	89.8	80.4	96.7	38.9		18.4
	Gamma-BHC	78.2	78.0	92.5	88.5	0.326		4.39
	Gamma-Chlordane	81.4	85.7	88.4	89.5	5.07		1.22
	Heptachlor	60.1	67.3	71.3	74.4	11.4		4.17
	Heptachlor Epoxide	89.4	86.2	92.7	90.6	3.63		2.30
	Hexazinone	109	119	116	94.6	8.95		17.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Malathion	120	116	98.6	90.2	3.93	8.11
	Metalaxyl	114	96.6	94.9	91.2	16.6	3.93
	Methoxychlor	104	95.6	114	97.0	8.49	16.2
	Metolachlor	110	99.1	103	91.5	10.3	11.0
	Metribuzin	234	122	111	175	63.1	43.9
	Mevinphos	86.2	104	53.1	62.9	19.0	16.9
	Mirex	78.0	72.0	85.6	77.4	7.99	10.2
	Molinate	99.6	61.6	61.1	61.8	47.2	1.12
	Norflurazon	113	130	107	84.8	14.1	21.2
	Parathion Ethyl	112	105	91.7	92.2	6.99	0.529
	Parathion Methyl	122	105	93.1	100	15.2	7.60
	Pendimethalin	120	124	98.9	102	2.54	3.04
	Permethrin	85.9	77.4	89.5	80.7	10.4	10.3
	Phorate	103	67.6	75.6	87.7	41.1	14.8
	Prometon	98.9	95.2	97.1	86.6	3.82	11.4
	Prometryn	107	100	102	87.9	5.96	14.4
	Simazine	127	131	102	108	3.00	6.10
	Terbufos	113	86.0	83.0	97.8	27.5	16.4
	Terbuthylazine	111	91.3	99.6	96.7	19.2	2.92
	Trifluralin	77.3	73.6	82.1	82.9	4.92	1.04
EPA 8276	Chlordane	91.0	90.0	107	101	1.15	4.99
	Toxaphene	96.3	100	103	108	4.16	5.26
EPA 8321B	AMPA	126		126	122		3.95
	Glyphosate	120		128	128		0.156
	Pyraclostrobin	142		148	140		6.04
	Sucralose	81.7		104	109		5.30
SM 2120 B	Color (true)					5.06	
SM 2320 B-97	Total Alkalinity	102				0.353	
SM 2540 C-97	TDS					8.58	
	TDS					0.727	
SM 4500 F-C-97	Fluoride	94.2		94.9	96.1		0.953
SM 5310 B-00	Organic Carbon	95.2		97.1	99.4		2.27
USGS O-2060-01	2,4-D	97.3		113	116		1.97
	Acetaminophen	100		115	109		5.36
	Bentazon	89.3					
	Carbamazepine	101		112	104		6.52
	Diuron	90.8		94.9	89.2		5.88
	Fenuron	113		124	93.5		27.9
	Fluridone	109		96.2	88.2		6.18
	Imidacloprid	105		172	150		12.5
	Linuron	99.6		101	89.3		12.4
	MCPP	89.3		86.6	86.8		0.138
	Primidone	103		114	106		7.44
	Triclopyr	88.2		91.5	88.4		3.39

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1955486, 1955487, 1955488
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1955499, 1955500, 1955501

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1955499, 1955500, 1955501
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1955486, 1955487, 1955488
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1955486, 1955487, 1955488
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1955489, 1955490, 1955491
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1955489, 1955490, 1955491
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1955489, 1955490, 1955491
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1955489, 1955490, 1955491
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1955492, 1955493, 1955494
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1955510, 1955511, 1955512
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1955513, 1955514, 1955515
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1955510, 1955511, 1955512
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1955507, 1955508, 1955509
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1955507, 1955508, 1955509
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1955507, 1955508, 1955509
SM 2120 B / E31780	True Color measured at 450 nm	1955486, 1955487, 1955488
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1955486, 1955487, 1955488
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1955486, 1955487, 1955488
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1955486, 1955487, 1955488
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1955486, 1955487, 1955488
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1955489, 1955490, 1955491
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1955507, 1955508, 1955509
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1955507, 1955508, 1955509

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	12/20/2017			12/20/2017 16:23	DeAsia Armster	1955486, 1955487, 1955488
EPA 200.7 Rev. 4.4	12/20/2017	01/02/2018	Elliott D. Healy	01/03/2018	Betina Topolski	1955499, 1955500, 1955501
	12/20/2017	12/26/2017	Elliott D. Healy	12/28/2017	Betina Topolski	1955499, 1955500, 1955501
EPA 200.8 Rev. 5.4	12/20/2017	01/02/2018	Elliott D. Healy	01/03/2018	Nadine Brooks	1955501
	12/20/2017	12/26/2017	Elliott D. Healy	12/28/2017	Nadine Brooks	1955499, 1955500, 1955501
EPA 300.0 Rev. 2.1	12/20/2017			12/21/2017	Julia Storbeck	1955486, 1955487, 1955488
EPA 350.1 Rev. 2.0	12/20/2017			12/29/2017	Sofia Elnemr	1955489, 1955490, 1955491
EPA 351.2 Rev. 2.0	12/20/2017	12/22/2017	Adrian Shelby	12/26/2017	Joseph Suarez	1955491
	12/20/2017	12/29/2017	Adrian Shelby	01/02/2018	Joseph Suarez	1955489, 1955490
EPA 353.2 Rev. 2.0	12/20/2017			12/22/2017	Lipi Saha	1955489, 1955490, 1955491
EPA 365.1 Rev. 2.0	12/20/2017	12/22/2017	Sima Feizi	12/26/2017	Lipi Saha	1955489, 1955490
	12/20/2017	12/27/2017	Sima Feizi	01/02/2018	Beverly Y. Sanders	1955491
EPA 365.1 Rev. 2.0 dissolved	12/20/2017			12/21/2017 14:07	Megan Treadwell	1955492
	12/20/2017			12/21/2017 14:08	Megan Treadwell	1955493
	12/20/2017			12/21/2017 14:09	Megan Treadwell	1955494
EPA 8270D	12/20/2017	12/21/2017	Fe-Val Siddell	12/26/2017	Vandana T. Nagar	1955513, 1955514, 1955515
	12/20/2017	12/21/2017	Rasheda Ghaffari	12/28/2017	Goutam Palui	1955510, 1955511, 1955512
EPA 8276	12/20/2017	12/21/2017	Rasheda Ghaffari	12/27/2017	John P. Burgos	1955510, 1955511, 1955512
EPA 8321B	12/20/2017	12/21/2017	Juyoung Kim	12/21/2017	Juyoung Kim	1955507, 1955508, 1955509
	12/20/2017	12/21/2017	Juyoung Kim	12/23/2017	Juyoung Kim	1955507, 1955508, 1955509
	12/20/2017	12/26/2017	Juyoung Kim	12/26/2017	Juyoung Kim	1955507
	12/20/2017	12/26/2017	Juyoung Kim	12/27/2017	Juyoung Kim	1955508, 1955509
SM 2120 B	12/20/2017			12/20/2017 16:17	Tanya Welborn	1955486
	12/20/2017			12/20/2017 16:21	Tanya Welborn	1955487
	12/20/2017			12/20/2017 16:22	Tanya Welborn	1955488
SM 2320 B-97	12/20/2017			12/27/2017	Dale L. Simmons	1955486, 1955487, 1955488
SM 2540 C-97	12/20/2017			12/25/2017	Yijie Li	1955486, 1955487, 1955488
SM 2540 D-97	12/20/2017			12/25/2017	Yijie Li	1955486, 1955487, 1955488
SM 4500 F-C-97	12/20/2017			12/27/2017	Dale L. Simmons	1955486, 1955487, 1955488
SM 5310 B-00	12/20/2017			12/22/2017	Megan Treadwell	1955489, 1955490, 1955491
USGS O-2060-01	12/20/2017	12/21/2017	Hoor Shaik	12/22/2017	Julie Michelle Frank	1955507, 1955508, 1955509
	12/20/2017	12/21/2017	Hoor Shaik	12/23/2017	Julie Michelle Frank	1955507, 1955508, 1955509