

Chemical Analysis Report

NE-DIST-2017-06-13-01

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

Event Description: **Di water check-NEROC**
Request ID: **RQ-2017-06-12-38**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

For additional information please contact
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 05-JUL-2017 12:00

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

Case Narrative

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

Results for the following analytical groups are included in this report: 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: Di Water Check-NE

Collection Date/Time: 06/12/2017 09:30

Field ID: 06122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905491	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P326751	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P327033	
		Sulfate	0.31	I	mg SO4/L	P327037	
	SM 2120 B	Color (true)	2.5	U	PCU	P326733	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P326900	
	SM 2540 C-97	TDS	15	U	mg/L	P327120	
	SM 2540 D-97	TSS	2	I	mg/L	P327086	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P326906	
1905492	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P326801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P326725	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326758	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P326757	
	SM 5310 B-00	Organic Carbon	1.2		mg C/L	P326871	
1905493	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P326746	
1905495	EPA 8321B	Glyphosate**	10	U	ug/L	P326686	
		Pyraclostrobin**	0.0020	U	ug/L	P326579	
		Sucralose**	0.010	U	ug/L	P326632	
	USGS O-2060-01	2,4-D	8.0E-04	U	ug/L	P326684	
		Diuron	8.0E-04	U	ug/L	P326684	
		Fenuron	0.0080	U	ug/L	P326684	RPD
		Imidacloprid	8.0E-04	U	ug/L	P326684	
		Bentazon	8.0E-04	U	ug/L	P326684	
		Linuron	0.0040	U	ug/L	P326684	
		MCPP	0.0020	U	ug/L	P326684	
		Triclopyr**	0.0040	U	ug/L	P326684	
		Aldrin	4.0	U	ng/L	P326890	
		Alpha-BHC	2.0	U	ng/L	P326890	
		Beta-BHC	4.0	U	ng/L	P326890	
		PCB-1016	15	U	ng/L	P326890	
		Delta-BHC	4.0	UJ	ng/L	P326890	RPD
1905496	EPA 8270D	PCB-1221	15	U	ng/L	P326890	
		Gamma-BHC	4.0	U	ng/L	P326890	
		PCB-1232	15	U	ng/L	P326890	
		Carbophenothion	4.0	U	ng/L	P326890	
		PCB-1242	15	U	ng/L	P326890	
		Chlorothalonil	2.0	U	ng/L	P326890	
		PCB-1248	15	U	ng/L	P326890	
		Cypermethrin	20	U	ng/L	P326890	
		PCB-1254	15	U	ng/L	P326890	
		DDD-p,p'	2.0	U	ng/L	P326890	
		PCB-1260	15	U	ng/L	P326890	
		DDE-p,p'	3.0	U	ng/L	P326890	
		DDT-p,p'	3.0	U	ng/L	P326890	

Field ID: 06122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905496	EPA 8270D	Dieldrin	4.0	U	ng/L	P326890	
		Endosulfan I	4.0	U	ng/L	P326890	
		Endosulfan II	4.0	U	ng/L	P326890	
		Endosulfan Sulfate	2.0	U	ng/L	P326890	
		Endrin	2.0	U	ng/L	P326890	
		Endrin Aldehyde	2.0	U	ng/L	P326890	
		Heptachlor	1.5	U	ng/L	P326890	
		Heptachlor Epoxide	2.0	U	ng/L	P326890	
		Methoxychlor	4.0	U	ng/L	P326890	
		Mirex	2.0	U	ng/L	P326890	
		Permethrin	10	U	ng/L	P326890	
		Trifluralin	1.0	U	ng/L	P326890	
		Alpha-Chlordane	1.0	U	ng/L	P326890	
		Gamma-Chlordane	1.0	U	ng/L	P326890	
		Endrin Ketone	2.0	U	ng/L	P326890	
		Dicofol	30	UJ	ng/L	P326890	CCV
		Chlordane**	2.5	U	ng/L	P326890	
		Toxaphene**	12	U	ng/L	P326890	
1905497	EPA 8270D	Alachlor	0.24	U	ng/L	P326941	
		Ametryn	0.31	U	ng/L	P326941	
		Atrazine	0.24	U	ng/L	P326941	
		Atrazine Desethyl	1.4	U	ng/L	P326941	
		Azinphos Methyl	2.2	U	ng/L	P326941	
		Bromacil	0.48	U	ng/L	P326941	
		Butylate	0.38	U	ng/L	P326941	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P326941	
		Chlorpyrifos Methyl	0.096	U	ng/L	P326941	
		Demeton	1.9	U	ng/L	P326941	
		Diazinon	0.12	U	ng/L	P326941	
		Disulfoton	0.31	U	ng/L	P326941	
		EPTC	1.2	U	ng/L	P326941	
		Ethion	0.14	U	ng/L	P326941	
		Ethoprop	0.096	U	ng/L	P326941	
		Fenamiphos	0.24	U	ng/L	P326941	
		Fipronil	0.24	U	ng/L	P326941	
		Fipronil Sulfide	0.14	U	ng/L	P326941	
		Fipronil Sulfone	0.14	U	ng/L	P326941	
		Hexazinone	0.48	U	ng/L	P326941	
		Malathion	0.34	U	ng/L	P326941	
		Metribuzin	0.19	U	ng/L	P326941	MS
		Mevinphos	0.48	U	ng/L	P326941	
		Molinate	0.29	UJ	ng/L	P326941	LCS, MS, RPD
		Norflurazon	0.48	U	ng/L	P326941	
		Pendimethalin	1.4	U	ng/L	P326941	

Field ID: 06122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1905497	EPA 8270D	Phorate	0.24	U	ng/L	P326941	
		Prometon	0.86	U	ng/L	P326941	
		Prometryn	0.19	U	ng/L	P326941	
		Simazine	0.48	U	ng/L	P326941	
		Terbufos	0.096	U	ng/L	P326941	
		Terbuthylazine	0.41	U	ng/L	P326941	
		Fonofos	0.19	U	ng/L	P326941	
		Metalaxyl	0.19	U	ng/L	P326941	
		Metolachlor	0.24	U	ng/L	P326941	
		Acetochlor	0.24	U	ng/L	P326941	
		Cyanazine	0.48	U	ng/L	P326941	
		Parathion Ethyl	0.24	U	ng/L	P326941	
		Parathion Methyl	0.24	U	ng/L	P326941	
1905512	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P326830	
		Iron	30	U	ug/L	P326830	
		Magnesium	0.040	U	mg/L	P326830	
		Potassium	0.30	U	mg/L	P326830	
		Sodium	0.50	U	mg/L	P326830	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P326830	
		Arsenic	0.050	U	ug/L	P326830	
		Cadmium	0.020	U	ug/L	P326830	
		Chromium	0.40	U	ug/L	P326830	
		Copper	0.20	U	ug/L	P326830	
		Lead	0.050	U	ug/L	P326830	
		Nickel	0.20	U	ug/L	P326830	
		Silver	0.010	U	ug/L	P326830	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: The result was confirmed on 6/21/2017.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample was reanalyzed on 06/23/2017. The result was 2 UQ mg/L.

SM 5310 B-00: The result was confirmed on 06/22/2017.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample was reanalyzed 06/22/2017. The result was 0.004 UQ mg P/L.

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

EPA 8270D: MS accuracy for Metolachlor not assessed due to high content of this parameter in the sample spiked. 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: P326751

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P326830

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P326830

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326830

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: P327033

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327037

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326801

Component	Result	Code	Units
Ammonia-N	0.003	I	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326725

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326757

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326746

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

Reference Method: EPA 8270D
Batch ID: P326890

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	2.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
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
PCB-1016	15	U	ng/L
PCB-1221	15	U	ng/L
PCB-1232	15	U	ng/L
PCB-1242	15	U	ng/L
PCB-1248	15	U	ng/L
PCB-1254	15	U	ng/L
PCB-1260	15	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D
Batch ID: P326941

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P326941

Component	Result	Code	Units
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
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P326890

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

Reference Method: EPA 8321B

Batch ID: P326579

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B

Batch ID: P326632

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P326686

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P326733

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P326900

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

Reference Method: SM 2540 C-97
Batch ID: P327120

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P327086

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P326906

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P326871

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

Reference Method: USGS O-2060-01
Batch ID: P326684

Component	Result	Code	Units
2,4-D	8.0E-04	U	ug/L
Bentazon	8.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0040	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	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: P326830

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	108		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	101		P	85 - 115
Sodium	102		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326830

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	100		P	85 - 115
Cadmium	98.5		P	85 - 115
Chromium	98.0		P	85 - 115
Copper	95.7		P	85 - 115
Lead	100		P	85 - 115
Nickel	98.5		P	85 - 115
Silver	97.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327033

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327037

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326801

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326725

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P326757

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P326746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P326890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	50.1	64.2	P/P	26 - 88.0
Alpha-BHC	74.9	80.5	P/P	63 - 114
Alpha-Chlordane	72.4	78.8	P/P	56 - 117
Beta-BHC	87.1	84.1	P/P	57 - 138
Carbophenothion	93.0	96.3	P/P	36 - 148
Chlorothalonil	79.0	90.3	P/P	26 - 173
Cypermethrin	83.4	107	P/P	42 - 159
DDD-p,p'	95.9	92.3	P/P	62 - 126
DDE-p,p'	80.8	82.3	P/P	53 - 115
DDT-p,p'	86.1	81.0	P/P	54 - 117
Delta-BHC	85.6	75.3	P/P	68 - 158
Dicofol	41.1	48.8	P/P	25 - 114
Dieldrin	84.5	90.9	P/P	59 - 126
Endosulfan I	87.5	92.9	P/P	62 - 138
Endosulfan II	89.4	93.4	P/P	61 - 150
Endosulfan Sulfate	72.7	86.4	P/P	63 - 132
Endrin	88.6	97.6	P/P	49 - 148
Endrin Aldehyde	90.4	87.3	P/P	50 - 144
Endrin Ketone	78.7	82.9	P/P	66 - 122
Gamma-BHC	84.9	78.9	P/P	60 - 137
Gamma-Chlordane	75.3	83.3	P/P	54 - 113
Heptachlor	56.9	65.1	P/P	43 - 104
Heptachlor Epoxide	83.8	88.5	P/P	64 - 118
Methoxychlor	101	105	P/P	63 - 129
Mirex	64.3	63.4	P/P	39 - 93.0
PCB-1016	53.4	59.7	P/P	53 - 100
PCB-1260	64.8	65.3	P/P	43 - 99.0
Permethrin	87.3	92.5	P/P	51 - 123
Trifluralin	140	151	P/P	35 - 187

Reference Method: EPA 8270D
 Batch ID: P326941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	88.9	86.8	P/P	78 - 118
Alachlor	89.6	87.7	P/P	77 - 119
Ametryn	90.2	91.3	P/P	61 - 136
Atrazine	98.7	84.1	P/P	73 - 120
Atrazine Desethyl	96.9	90.9	P/P	16 - 122
Azinphos Methyl	111	110	P/P	69 - 186

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P326941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromacil	80.6	77.9	P/P	40 - 125
Butylate	42.7	36.4	P/P	32 - 87.0
Chlorpyrifos Ethyl	88.3	84.7	P/P	53 - 110
Chlorpyrifos Methyl	92.5	87.0	P/P	31 - 119
Cyanazine	197	178	P/P	36 - 224
Demeton	78.9	79.5	P/P	39 - 122
Diazinon	96.1	90.5	P/P	75 - 119
Disulfoton	87.3	89.1	P/P	42 - 139
EPTC	37.9	33.4	P/P	33 - 96.0
Ethion	98.0	96.4	P/P	63 - 127
Ethoprop	79.7	69.2	P/P	65 - 107
Fenamiphos	102	101	P/P	64 - 137
Fipronil	96.5	98.0	P/P	60 - 126
Fipronil Sulfide	92.6	92.7	P/P	58 - 124
Fipronil Sulfone	82.6	83.0	P/P	57 - 126
Fonofos	91.5	81.4	P/P	65 - 111
Hexazinone	89.2	86.3	P/P	46 - 151
Malathion	97.3	92.8	P/P	68 - 132
Metalaxyl	94.0	92.9	P/P	51 - 132
Metolachlor	89.1	87.3	P/P	78 - 119
Metribuzin	124	126	P/P	64 - 138
Mevinphos	71.7	65.9	P/P	34 - 128
Molinate	44.1	39.9	P/F	44 - 101
Norflurazon	93.3	94.0	P/P	63 - 129
Parathion Ethyl	93.4	91.8	P/P	80 - 109
Parathion Methyl	92.8	93.3	P/P	74 - 125
Pendimethalin	99.1	99.0	P/P	48 - 134
Phorate	87.3	78.5	P/P	52 - 119
Prometon	87.7	85.3	P/P	69 - 124
Prometryn	89.2	91.3	P/P	66 - 124
Simazine	107	101	P/P	61 - 134
Terbufos	88.6	80.2	P/P	58 - 115
Terbuthylazine	89.8	87.9	P/P	77 - 113

Reference Method: EPA 8276
Batch ID: P326890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	75.7	77.4	P/P	48 - 121
Toxaphene	91.2	98.5	P/P	43 - 135

Reference Method: EPA 8321B
Batch ID: P326579

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	60.3		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P326632

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	83.0		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P326686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	95.6		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P326900

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

Reference Method: SM 4500 F-C-97
Batch ID: P326906

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

Reference Method: SM 5310 B-00
Batch ID: P326871

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.1		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P326684

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	75.8		P	40 - 140
Bentazon	68.2		P	40 - 140
Diuron	109		P	40 - 140
Fenuron	105		P	40 - 140
Imidacloprid	96.7		P	40 - 160
Linuron	103		P	40 - 140
MCPP	79.6		P	40 - 140
Triclopyr	79.0		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P326830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905489	Calcium	100		P	80 - 120
1905489	Iron	108	107	P/P	80 - 120
1905489	Magnesium	103		P	80 - 120
1905489	Potassium	101		P	80 - 120
1905489	Sodium	98.9		P	80 - 120
1905489	Zinc	100	100	P/P	80 - 120
1905640	Calcium	109		P	80 - 120
1905640	Iron	111		P	80 - 120
1905640	Magnesium	108		P	80 - 120
1905640	Potassium	107		P	80 - 120
1905640	Sodium	107		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P326830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905640	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905489	Arsenic	109	109	P/P	80 - 120
1905489	Cadmium	106	104	P/P	80 - 120
1905489	Chromium	94.8	94.3	P/P	80 - 120
1905489	Copper	96.2	96.8	P/P	80 - 120
1905489	Lead	105	102	P/P	80 - 120
1905489	Nickel	98.3	98.1	P/P	80 - 120
1905489	Silver	98.5	98.7	P/P	80 - 120
1905640	Arsenic	105		P	80 - 120
1905640	Cadmium	104		P	80 - 120
1905640	Chromium	95.3		P	80 - 120
1905640	Copper	95.5		P	80 - 120
1905640	Lead	102		P	80 - 120
1905640	Nickel	97.1		P	80 - 120
1905640	Silver	98.2		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1904975	Chloride	102		P	90 - 110
1905441	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327037

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1904975	Sulfate	98.1		P	90 - 110
1905441	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905442	Ammonia-N	95.3	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326725

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905492	Kjeldahl Nitrogen	109	110	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905442	NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P326757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1904380	Total-P	103	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P326746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905502	O-Phosphate-P	94.7	96.7	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P326890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905496	Aldrin	71.0	68.0	P/P	22 - 97.0
1905496	Alpha-BHC	91.7	89.8	P/P	43 - 132
1905496	Alpha-Chlordane	85.6	69.6	P/P	36 - 126
1905496	Beta-BHC	100	91.4	P/P	41 - 150
1905496	Carbophenothion	119	90.9	P/P	13 - 196
1905496	Chlorothalonil	119	118	P/P	10 - 266
1905496	Cypermethrin	109	92.0	P/P	37 - 161
1905496	DDD-p,p'	105	83.0	P/P	44 - 131
1905496	DDE-p,p'	88.2	83.8	P/P	32 - 127
1905496	DDT-p,p'	87.2	86.5	P/P	45 - 116
1905496	Delta-BHC	104	75.3	P/P	50 - 201
1905496	Dicofol	57.6	47.9	P/P	10 - 100
1905496	Dieldrin	93.6	77.4	P/P	39 - 142
1905496	Endosulfan I	96.7	94.5	P/P	51 - 139
1905496	Endosulfan II	93.1	88.1	P/P	49 - 155
1905496	Endosulfan Sulfate	90.7	90.1	P/P	54 - 136
1905496	Endrin	82.9	87.3	P/P	38 - 141
1905496	Endrin Aldehyde	89.8	90.3	P/P	14 - 152
1905496	Endrin Ketone	105	92.4	P/P	60 - 128
1905496	Gamma-BHC	90.8	84.6	P/P	48 - 157
1905496	Gamma-Chlordane	92.6	76.8	P/P	35 - 123
1905496	Heptachlor	78.1	73.7	P/P	25 - 112
1905496	Heptachlor Epoxide	97.2	95.5	P/P	48 - 125
1905496	Methoxychlor	111	102	P/P	52 - 127
1905496	Mirex	77.2	75.7	P/P	25 - 108
1905496	PCB-1016	68.5	69.9	P/P	37 - 110
1905496	PCB-1260	73.0	72.7	P/P	32 - 103
1905496	Permethrin	105	87.3	P/P	46 - 133
1905496	Trifluralin	200	194	P/P	29 - 254

Reference Method: EPA 8270D
 Batch ID: P326941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905875	Acetochlor	97.4	92.7	P/P	74 - 123
1905875	Alachlor	96.5	86.9	P/P	73 - 124
1905875	Ametryn	105	92.7	P/P	56 - 149
1905875	Atrazine	101	97.0	P/P	73 - 124
1905875	Atrazine Desethyl	78.9	83.6	P/P	12 - 103
1905875	Azinphos Methyl	93.4	95.3	P/P	60 - 202

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P326941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905875	Bromacil	86.4	94.9	P/P	42 - 133
1905875	Butylate	13.5	13.3	P/P	10 - 85.0
1905875	Chlorpyrifos Ethyl	90.4	85.0	P/P	53 - 113
1905875	Chlorpyrifos Methyl	89.1	82.7	P/P	40 - 115
1905875	Cyanazine	168	151	P/P	22 - 210
1905875	Demeton	84.5	71.5	P/P	17 - 149
1905875	Diazinon	95.3	90.4	P/P	72 - 124
1905875	Disulfoton	73.7	61.3	P/P	43 - 139
1905875	EPTC	15.4	13.2	P/P	10 - 86.0
1905875	Ethion	87.7	86.0	P/P	65 - 131
1905875	Ethoprop	77.6	65.0	P/P	59 - 110
1905875	Fenamiphos	103	96.3	P/P	57 - 138
1905875	Fipronil	97.9	96.0	P/P	40 - 130
1905875	Fipronil Sulfide	94.0	91.2	P/P	36 - 128
1905875	Fipronil Sulfone	81.7	77.7	P/P	16 - 145
1905875	Fonofos	97.2	83.2	P/P	60 - 112
1905875	Hexazinone	89.8	89.1	P/P	69 - 142
1905875	Malathion	92.8	87.2	P/P	68 - 132
1905875	Metalaxyl	101	91.9	P/P	66 - 118
1905875	Metribuzin	153	123	F/P	61 - 140
1905875	Mevinphos	62.0	54.3	P/P	38 - 130
1905875	Molinate	35.2	20.6	P/F	23 - 99.0
1905875	Norflurazon	90.8	88.7	P/P	39 - 139
1905875	Parathion Ethyl	91.2	89.5	P/P	75 - 111
1905875	Parathion Methyl	89.7	92.5	P/P	64 - 130
1905875	Pendimethalin	98.1	94.2	P/P	26 - 173
1905875	Phorate	86.5	70.2	P/P	43 - 127
1905875	Prometon	86.6	89.2	P/P	50 - 144
1905875	Prometryn	95.0	92.8	P/P	69 - 126
1905875	Simazine	103	102	P/P	51 - 152
1905875	Terbufos	96.5	77.8	P/P	54 - 125
1905875	Terbutylazine	93.2	87.0	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P326890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905874	Chlordane	60.3	68.8	P/P	44 - 134
1905874	Toxaphene	78.3	84.1	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P326579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905091	Pyraclostrobin	59.2	49.3	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P326632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905341	Sucralose	82.0	77.5	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P326686

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905730	Glyphosate	101	94.8	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P326906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905717	Fluoride	100	96.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P326871

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905300	Organic Carbon	99.1	96.2	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P326684

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1905398	2,4-D	72.8	74.8	P/P	40 - 140
1905398	Bentazon	56.0	56.0	P/P	40 - 140
1905398	Diuron	117	117	P/P	40 - 140
1905398	Fenuron	92.2	64.2	P/P	40 - 140
1905398	Imidacloprid	123	120	P/P	40 - 160
1905398	Linuron	121	123	P/P	40 - 140
1905398	MCP	74.0	78.0	P/P	40 - 140
1905398	Triclopyr	72.4	79.8	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P326751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905441	Turbidity	5.87	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P326830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905489	Calcium	1.15	Spike	P	0 - 20
1905489	Iron	0.985	Spike	P	0 - 20
1905489	Magnesium	0.526	Spike	P	0 - 20
1905489	Potassium	0.891	Spike	P	0 - 20
1905489	Sodium	0.605	Spike	P	0 - 20
1905489	Zinc	0.0146	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905489	Arsenic	0.0695	Spike	P	0 - 20
1905489	Cadmium	1.44	Spike	P	0 - 20
1905489	Chromium	0.501	Spike	P	0 - 20
1905489	Copper	0.564	Spike	P	0 - 20
1905489	Lead	2.21	Spike	P	0 - 20
1905489	Nickel	0.194	Spike	P	0 - 20
1905489	Silver	0.247	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1904975	Chloride	0.330	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327037

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1904975	Sulfate	2.51	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905442	Ammonia-N	1.51	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905492	Kjeldahl Nitrogen	0.771	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905442	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1904380	Total-P	3.45	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905502	O-Phosphate-P	1.99	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P326890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905496	Aldrin	4.42	Spike	P	0 - 30
1905496	Alpha-BHC	2.16	Spike	P	0 - 30
1905496	Alpha-Chlordane	20.6	Spike	P	0 - 30
1905496	Beta-BHC	9.15	Spike	P	0 - 30
1905496	Carbophenothion	26.8	Spike	P	0 - 30
1905496	Chlorothalonil	0.432	Spike	P	0 - 30
1905496	Cypermethrin	16.5	Spike	P	0 - 30
1905496	DDD-p,p'	23.7	Spike	P	0 - 30
1905496	DDE-p,p'	5.09	Spike	P	0 - 30
1905496	DDT-p,p'	0.894	Spike	P	0 - 30
1905496	Delta-BHC	32.4	Spike	F	0 - 30
1905496	Dicofol	18.4	Spike	P	0 - 30
1905496	Dieldrin	18.9	Spike	P	0 - 30
1905496	Endosulfan I	2.35	Spike	P	0 - 30
1905496	Endosulfan II	5.61	Spike	P	0 - 30
1905496	Endosulfan Sulfate	0.718	Spike	P	0 - 30
1905496	Endrin	5.24	Spike	P	0 - 30
1905496	Endrin Aldehyde	0.549	Spike	P	0 - 30
1905496	Endrin Ketone	12.3	Spike	P	0 - 30
1905496	Gamma-BHC	7.06	Spike	P	0 - 30
1905496	Gamma-Chlordane	18.6	Spike	P	0 - 30
1905496	Heptachlor	5.77	Spike	P	0 - 30
1905496	Heptachlor Epoxide	1.79	Spike	P	0 - 30
1905496	Methoxychlor	8.37	Spike	P	0 - 30
1905496	Mirex	1.99	Spike	P	0 - 30
1905496	PCB-1016	2.03	Spike	P	0 - 30
1905496	PCB-1260	0.456	Spike	P	0 - 30
1905496	Permethrin	18.8	Spike	P	0 - 30
1905496	Trifluralin	3.45	Spike	P	0 - 30
LFB	Aldrin	24.8	LCS	P	0 - 30
LFB	Alpha-BHC	7.26	LCS	P	0 - 30
LFB	Alpha-Chlordane	8.48	LCS	P	0 - 30
LFB	Beta-BHC	3.54	LCS	P	0 - 30
LFB	Carbophenothion	3.55	LCS	P	0 - 30
LFB	Chlorothalonil	13.2	LCS	P	0 - 30
LFB	Cypermethrin	24.9	LCS	P	0 - 30
LFB	DDD-p,p'	3.86	LCS	P	0 - 30
LFB	DDE-p,p'	1.90	LCS	P	0 - 30
LFB	DDT-p,p'	6.08	LCS	P	0 - 30
LFB	Delta-BHC	12.8	LCS	P	0 - 30
LFB	Dicofol	17.1	LCS	P	0 - 30
LFB	Dieldrin	7.28	LCS	P	0 - 30
LFB	Endosulfan I	6.01	LCS	P	0 - 30
LFB	Endosulfan II	4.41	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P326890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endosulfan Sulfate	17.2	LCS	P	0 - 30
LFB	Endrin	9.63	LCS	P	0 - 30
LFB	Endrin Aldehyde	3.49	LCS	P	0 - 30
LFB	Endrin Ketone	5.18	LCS	P	0 - 30
LFB	Gamma-BHC	7.27	LCS	P	0 - 30
LFB	Gamma-Chlordane	10.0	LCS	P	0 - 30
LFB	Heptachlor	13.4	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.41	LCS	P	0 - 30
LFB	Methoxychlor	3.66	LCS	P	0 - 30
LFB	Mirex	1.46	LCS	P	0 - 30
LFB	PCB-1016	11.0	LCS	P	0 - 30
LFB	PCB-1260	0.795	LCS	P	0 - 30
LFB	Permethrin	5.79	LCS	P	0 - 30
LFB	Trifluralin	7.30	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P326941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905875	Acetochlor	5.03	Spike	P	0 - 30
1905875	Alachlor	10.4	Spike	P	0 - 30
1905875	Ametryn	12.9	Spike	P	0 - 30
1905875	Atrazine	4.49	Spike	P	0 - 30
1905875	Atrazine Desethyl	5.80	Spike	P	0 - 30
1905875	Azinphos Methyl	2.01	Spike	P	0 - 30
1905875	Bromacil	9.38	Spike	P	0 - 30
1905875	Butylate	1.29	Spike	P	0 - 30
1905875	Chlorpyrifos Ethyl	6.13	Spike	P	0 - 30
1905875	Chlorpyrifos Methyl	7.47	Spike	P	0 - 30
1905875	Cyanazine	10.8	Spike	P	0 - 30
1905875	Demeton	16.7	Spike	P	0 - 30
1905875	Diazinon	5.20	Spike	P	0 - 30
1905875	Disulfoton	14.6	Spike	P	0 - 30
1905875	EPTC	15.3	Spike	P	0 - 30
1905875	Ethion	1.91	Spike	P	0 - 30
1905875	Ethoprop	17.6	Spike	P	0 - 30
1905875	Fenamiphos	6.35	Spike	P	0 - 30
1905875	Fipronil	1.97	Spike	P	0 - 30
1905875	Fipronil Sulfide	3.11	Spike	P	0 - 30
1905875	Fipronil Sulfone	4.93	Spike	P	0 - 30
1905875	Fonofos	15.6	Spike	P	0 - 30
1905875	Hexazinone	0.747	Spike	P	0 - 30
1905875	Malathion	6.24	Spike	P	0 - 30
1905875	Metalaxyl	9.24	Spike	P	0 - 30
1905875	Metolachlor	8.20	Spike	P	0 - 30
1905875	Metribuzin	21.8	Spike	P	0 - 30
1905875	Mevinphos	13.3	Spike	P	0 - 30
1905875	Molinate	52.5	Spike	F	0 - 30
1905875	Norflurazon	2.29	Spike	P	0 - 30
1905875	Parathion Ethyl	1.85	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P326941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905875	Parathion Methyl	3.04	Spike	P	0 - 30
1905875	Pendimethalin	4.09	Spike	P	0 - 30
1905875	Phorate	20.7	Spike	P	0 - 30
1905875	Prometon	2.94	Spike	P	0 - 30
1905875	Prometryn	2.29	Spike	P	0 - 30
1905875	Simazine	1.02	Spike	P	0 - 30
1905875	Terbufos	21.5	Spike	P	0 - 30
1905875	Terbuthylazine	6.93	Spike	P	0 - 30
LFB	Acetochlor	2.43	LCS	P	0 - 30
LFB	Alachlor	2.11	LCS	P	0 - 30
LFB	Ametryn	1.13	LCS	P	0 - 30
LFB	Atrazine	16.0	LCS	P	0 - 30
LFB	Atrazine Desethyl	6.40	LCS	P	0 - 30
LFB	Azinphos Methyl	0.456	LCS	P	0 - 30
LFB	Bromacil	3.45	LCS	P	0 - 30
LFB	Butylate	16.0	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	4.16	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.06	LCS	P	0 - 30
LFB	Cyanazine	9.90	LCS	P	0 - 30
LFB	Demeton	0.833	LCS	P	0 - 30
LFB	Diazinon	5.95	LCS	P	0 - 30
LFB	Disulfoton	2.11	LCS	P	0 - 30
LFB	EPTC	12.7	LCS	P	0 - 30
LFB	Ethion	1.58	LCS	P	0 - 30
LFB	Ethoprop	14.0	LCS	P	0 - 30
LFB	Fenamiphos	0.986	LCS	P	0 - 30
LFB	Fipronil	1.53	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.0715	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.551	LCS	P	0 - 30
LFB	Fonofos	11.6	LCS	P	0 - 30
LFB	Hexazinone	3.33	LCS	P	0 - 30
LFB	Malathion	4.77	LCS	P	0 - 30
LFB	Metalaxyl	1.13	LCS	P	0 - 30
LFB	Metolachlor	1.99	LCS	P	0 - 30
LFB	Metribuzin	1.47	LCS	P	0 - 30
LFB	Mevinphos	8.41	LCS	P	0 - 30
LFB	Molinate	9.88	LCS	P	0 - 30
LFB	Norflurazon	0.827	LCS	P	0 - 30
LFB	Parathion Ethyl	1.72	LCS	P	0 - 30
LFB	Parathion Methyl	0.602	LCS	P	0 - 30
LFB	Pendimethalin	0.110	LCS	P	0 - 30
LFB	Phorate	10.6	LCS	P	0 - 30
LFB	Prometon	2.77	LCS	P	0 - 30
LFB	Prometryn	2.39	LCS	P	0 - 30
LFB	Simazine	5.31	LCS	P	0 - 30
LFB	Terbufos	9.95	LCS	P	0 - 30
LFB	Terbuthylazine	2.07	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P326890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905874	Chlordane	13.1	Spike	P	0 - 30
1905874	Toxaphene	7.13	Spike	P	0 - 30
LFB	Chlordane	2.20	LCS	P	0 - 30
LFB	Toxaphene	7.74	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P326579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905091	Pyraclostrobin	18.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P326632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905341	Sucralose	5.47	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P326686

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905730	Glyphosate	6.13	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P326733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905449	Color (true)	0.165	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P326900

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905717	Total Alkalinity	0.799	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P327120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905012	TDS	5.45	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
 Batch ID: P326906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905717	Fluoride	2.41	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P326871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905300	Organic Carbon	2.01	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P326684

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1905398	2,4-D	2.42	Spike	P	0 - 30
1905398	Bentazon	0.0	Spike	P	0 - 30
1905398	Diuron	0.135	Spike	P	0 - 30
1905398	Fenuron	35.9	Spike	F	0 - 30
1905398	Imidacloprid	2.34	Spike	P	0 - 30
1905398	Linuron	1.83	Spike	P	0 - 30
1905398	MCP	5.26	Spike	P	0 - 30
1905398	Triclopyr	9.72	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: 1905495
 Field Sample ID: 06122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	118	P	30 - 160
EPA 8321B	Diuron-d6	84.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.2	P	40 - 150
EPA 8321B	Sucralose-d6	72.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	87.1	P	40 - 150
USGS O-2060-01	Diuron-d6	118	P	30 - 160
USGS O-2060-01	Diuron-d6	84.4	P	30 - 160

Lab Sample ID: 1905496
 Field Sample ID: 06122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	68.2	P	39 - 118
EPA 8270D	Decachlorobiphenyl	75.2	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	67.2	P	32 - 103
EPA 8270D	Tetrachloro-m-xylene	45.9	P	32 - 103
EPA 8276	Decachlorobiphenyl	66.8	P	31 - 100

Quality Assurance Report Surrogates

Lab Sample ID: 1905497
 Field Sample ID: 06122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	70.3	P	62 - 132
EPA 8270D	Simazine-d10	85.7	P	72 - 127

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
 Run ID: A77057
 Included Lab Sample IDs: 1905491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.3	98.3	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Run ID: A77060
 Included Lab Sample IDs: 1905493

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

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A77064
 Included Lab Sample IDs: 1905491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	99.5	P/P	95 - 105

Reference Method: EPA 8321B
 Run ID: A77065
 Included Lab Sample IDs: 1905495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	97.2	104	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A77069
 Included Lab Sample IDs: 1905492

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

Reference Method: EPA 8321B
 Run ID: A77071
 Included Lab Sample IDs: 1905495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	81.8	95.8	P/P	70 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A77076

Included Lab Sample IDs: 1905491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	98.7	P/P	90 - 110
Sulfate	101	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77081

Included Lab Sample IDs: 1905492

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

Reference Method: SM 5310 B-00

Run ID: A77100

Included Lab Sample IDs: 1905492

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77106

Included Lab Sample IDs: 1905492

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A77119

Included Lab Sample IDs: 1905491

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

Reference Method: SM 4500 F-C-97

Run ID: A77119

Included Lab Sample IDs: 1905491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	95.3	96.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A77123

Included Lab Sample IDs: 1905512

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.4	103	P/P	95 - 105
Iron	103	103	P/P	95 - 105
Magnesium	102	103	P/P	95 - 105
Potassium	98.4	99.6	P/P	95 - 105
Sodium	98.0	101	P/P	95 - 105
Zinc	100	98.6	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A77124

Included Lab Sample IDs: 1905512

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.2	96.3	P/P	90 - 110
Cadmium	99.0	96.7	P/P	90 - 110
Chromium	96.9	95.6	P/P	90 - 110
Copper	97.9	95.3	P/P	90 - 110
Lead	98.9	98.2	P/P	90 - 110
Nickel	97.7	95.6	P/P	90 - 110
Silver	98.6	97.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77142

Included Lab Sample IDs: 1905492

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	103	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A77208

Included Lab Sample IDs: 1905495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	81.2	83.2	P/P	50 - 150
Bentazon	98.0	97.2	P/P	50 - 150
Diuron	101	96.0	P/P	60 - 150
Fenuron	102	94.6	P/P	60 - 150
Imidacloprid	101	96.8	P/P	60 - 150
Linuron	99.5	98.3	P/P	60 - 150
MCPP	76.0	72.8	P/P	50 - 150
Triclopyr	77.2	76.0	P/P	50 - 150

Reference Method: EPA 8270D

Run ID: A77231

Included Lab Sample IDs: 1905496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.0		P	80 - 120
PCB-1260	105		P	80 - 120

Reference Method: EPA 8276

Run ID: A77239

Included Lab Sample IDs: 1905496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.3		P	80 - 120
Toxaphene	104		P	80 - 120

Reference Method: EPA 8270D

Run ID: A77268

Included Lab Sample IDs: 1905496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	94.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A77268

Included Lab Sample IDs: 1905496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	103		P	80 - 120
Alpha-Chlordane	96.5		P	80 - 120
Beta-BHC	95.6		P	80 - 120
Carbophenothion	92.3		P	80 - 120
Chlorothalonil	88.1		P	80 - 120
Cypermethrin	92.8		P	80 - 120
DDD-p,p'	105		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	110		P	80 - 120
Delta-BHC	95.2		P	80 - 120
Dicofol	129*		F	80 - 120
Dieldrin	103		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	90.6		P	80 - 120
Endrin	109		P	80 - 120
Endrin Aldehyde	101		P	80 - 120
Endrin Ketone	85.4		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	104		P	80 - 120
Heptachlor	98.4		P	80 - 120
Heptachlor Epoxide	107		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	102		P	80 - 120
Permethrin	94.3		P	80 - 120
Trifluralin	105		P	80 - 120

Reference Method: EPA 8270D

Run ID: A77314

Included Lab Sample IDs: 1905497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.3		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine	99.3		P	80 - 120
Atrazine Desethyl	94.6		P	80 - 120
Azinphos Methyl	92.0		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	105		P	80 - 120
Chlorpyrifos Ethyl	101		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	85.1		P	80 - 120
Demeton	95.2		P	80 - 120
Diazinon	101		P	80 - 120
Disulfoton	95.1		P	80 - 120
EPTC	100		P	80 - 120
Ethion	96.9		P	80 - 120
Ethoprop	99.8		P	80 - 120
Fenamiphos	96.3		P	80 - 120
Fipronil	99.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A77314
 Included Lab Sample IDs: 1905497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Sulfide	101		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	98.7		P	80 - 120
Hexazinone	102		P	80 - 120
Malathion	97.7		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	92.3		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	113		P	80 - 120
Norflurazon	101		P	80 - 120
Parathion Ethyl	95.7		P	80 - 120
Parathion Methyl	95.2		P	80 - 120
Pendimethalin	88.9		P	80 - 120
Phorate	99.0		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	101		P	80 - 120
Simazine	102		P	80 - 120
Terbufos	97.9		P	80 - 120
Terbutylazine	98.7		P	80 - 120

Reference Method: EPA 8321B
 Run ID: A77393
 Included Lab Sample IDs: 1905495

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	75.0	116	P/P	60 - 160

* 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					5.87	
EPA 200.7 Rev. 4.4	Calcium	104	100	109			1.15
	Iron	108	108	107	111		0.985
	Magnesium	105	103	108			0.526
	Potassium	101	101	107			0.891
	Sodium	102	98.9	107			0.605
	Zinc	101	100	100	105		0.0146
EPA 200.8 Rev. 5.4	Arsenic	100	109	109	105		0.0695
	Cadmium	98.5	106	104	104		1.44
	Chromium	98.0	94.8	94.3	95.3		0.501
	Copper	95.7	96.2	96.8	95.5		0.564
	Lead	100	105	102	102		2.21
	Nickel	98.5	98.3	98.1	97.1		0.194

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	MS
								SMP	
EPA 200.8 Rev. 5.4	Silver	97.0		98.5	98.7	98.2			0.247
EPA 300.0 Rev. 2.1	Chloride	104		102	106			0.330	
	Sulfate	104		98.1	103			2.51	
EPA 350.1 Rev. 2.0	Ammonia-N	104		95.3	98.6				1.51
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		109	110				0.771
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102		102	102				0.0
EPA 365.1 Rev. 2.0	Total-P	103		103	99.3				3.45
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9		94.7	96.7				1.99
EPA 8270D	Acetochlor	88.9	86.8	92.7	97.4		2.43		5.03
	Alachlor	89.6	87.7	86.9	96.5		2.11		10.4
	Aldrin	50.1	64.2	71.0	68.0		24.8		4.42
	Alpha-BHC	74.9	80.5	91.7	89.8		7.26		2.16
	Alpha-Chlordane	72.4	78.8	85.6	69.6		8.48		20.6
	Ametryn	90.2	91.3	92.7	105		1.13		12.9
	Atrazine	98.7	84.1	97.0	101		16.0		4.49
	Atrazine Desethyl	96.9	90.9	83.6	78.9		6.40		5.80
	Azinphos Methyl	111	110	93.4	95.3		0.456		2.01
	Beta-BHC	87.1	84.1	100	91.4		3.54		9.15
	Bromacil	80.6	77.9	94.9	86.4		3.45		9.38
	Butylate	42.7	36.4	13.3	13.5		16.0		1.29
	Carbophenothion	93.0	96.3	119	90.9		3.55		26.8
	Chlorothalonil	79.0	90.3	119	118		13.2		0.432
	Chlorpyrifos Ethyl	88.3	84.7	85.0	90.4		4.16		6.13
	Chlorpyrifos Methyl	92.5	87.0	82.7	89.1		6.06		7.47
	Cyanazine	197	178	151	168		9.90		10.8
	Cypermethrin	83.4	107	109	92.0		24.9		16.5
	DDD-p,p'	95.9	92.3	105	83.0		3.86		23.7
	DDE-p,p'	80.8	82.3	88.2	83.8		1.90		5.09
	DDT-p,p'	86.1	81.0	87.2	86.5		6.08		0.894
	Delta-BHC	85.6	75.3	104	75.3		12.8		32.4
	Demeton	78.9	79.5	71.5	84.5		0.833		16.7
	Diazinon	96.1	90.5	90.4	95.3		5.95		5.20
	Dicofol	41.1	48.8	57.6	47.9		17.1		18.4
	Dieldrin	84.5	90.9	93.6	77.4		7.28		18.9
	Disulfoton	87.3	89.1	61.3	73.7		2.11		14.6
	Endosulfan I	87.5	92.9	96.7	94.5		6.01		2.35
	Endosulfan II	89.4	93.4	93.1	88.1		4.41		5.61
	Endosulfan Sulfate	72.7	86.4	90.7	90.1		17.2		0.718
	Endrin	88.6	97.6	82.9	87.3		9.63		5.24
	Endrin Aldehyde	90.4	87.3	89.8	90.3		3.49		0.549
	Endrin Ketone	78.7	82.9	105	92.4		5.18		12.3
	EPTC	37.9	33.4	13.2	15.4		12.7		15.3
	Ethion	98.0	96.4	86.0	87.7		1.58		1.91
	Ethoprop	79.7	69.2	77.6	65.0		14.0		17.6
	Fenamiphos	102	101	103	96.3		0.986		6.35
	Fipronil	96.5	98.0	97.9	96.0		1.53		1.97
	Fipronil Sulfide	92.6	92.7	94.0	91.2		0.0715		3.11
	Fipronil Sulfone	82.6	83.0	81.7	77.7		0.551		4.93
	Fonofos	91.5	81.4	97.2	83.2		11.6		15.6
	Gamma-BHC	84.9	78.9	90.8	84.6		7.27		7.06
	Gamma-Chlordane	75.3	83.3	92.6	76.8		10.0		18.6
	Heptachlor	56.9	65.1	78.1	73.7		13.4		5.77
	Heptachlor Epoxide	83.8	88.5	97.2	95.5		5.41		1.79
	Hexazinone	89.2	86.3	89.8	89.1		3.33		0.747

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Malathion	97.3	92.8	92.8	87.2	4.77	6.24
	Metalaxyl	94.0	92.9	101	91.9	1.13	9.24
	Methoxychlor	101	105	111	102	3.66	8.37
	Metolachlor	89.1	87.3			1.99	8.20
	Metribuzin	124	126	153	123	1.47	21.8
	Mevinphos	71.7	65.9	62.0	54.3	8.41	13.3
	Mirex	64.3	63.4	77.2	75.7	1.46	1.99
	Molinate	44.1	39.9	35.2	20.6	9.88	52.5
	Norflurazon	93.3	94.0	90.8	88.7	0.827	2.29
	Parathion Ethyl	93.4	91.8	91.2	89.5	1.72	1.85
	Parathion Methyl	92.8	93.3	89.7	92.5	0.602	3.04
	PCB-1016	53.4	59.7	68.5	69.9	11.0	2.03
	PCB-1260	64.8	65.3	73.0	72.7	0.795	0.456
	Pendimethalin	99.1	99.0	98.1	94.2	0.110	4.09
	Permethrin	87.3	92.5	105	87.3	5.79	18.8
	Phorate	87.3	78.5	86.5	70.2	10.6	20.7
	Prometon	87.7	85.3	86.6	89.2	2.77	2.94
	Prometryn	89.2	91.3	95.0	92.8	2.39	2.29
	Simazine	107	101	103	102	5.31	1.02
	Terbufos	88.6	80.2	96.5	77.8	9.95	21.5
	Terbuthylazine	89.8	87.9	93.2	87.0	2.07	6.93
	Trifluralin	140	151	200	194	7.30	3.45
EPA 8276	Chlordane	75.7	77.4	60.3	68.8	2.20	13.1
	Toxaphene	91.2	98.5	78.3	84.1	7.74	7.13
EPA 8321B	Glyphosate	95.6		101	94.8		6.13
	Pyraclostrobin	60.3		49.3	59.2		18.2
	Sucralose	83.0		82.0	77.5		5.47
SM 2120 B	Color (true)					0.165	
SM 2320 B-97	Total Alkalinity	103				0.799	
SM 2540 C-97	TDS					5.45	
SM 4500 F-C-97	Fluoride	95.4		100	96.3		2.41
SM 5310 B-00	Organic Carbon	94.1		99.1	96.2		2.01
USGS O-2060-01	2,4-D	75.8		72.8	74.8		2.42
	Bentazon	68.2		56.0	56.0		0.0
	Diuron	109		117	117		0.135
	Fenuron	105		92.2	64.2		35.9
	Imidacloprid	96.7		123	120		2.34
	Linuron	103		121	123		1.83
	MCP	79.6		74.0	78.0		5.26
	Triclopyr	79.0		72.4	79.8		9.72

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1905491
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1905512
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1905512
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1905491
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1905491

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1905492
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1905492
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1905492
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1905492
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1905493
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1905496
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1905497
EPA 8270D / E31780	PCBs in water matrices by GC/MS-SIM	1905496
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1905496
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1905495
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1905495
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1905495
SM 2120 B / E31780	True Color measured at 450 nm	1905491
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1905491
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1905491
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1905491
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1905491
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1905492
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1905495
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1905495

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	06/13/2017			06/13/2017 17:34	Blanca Fach	1905491
EPA 200.7 Rev. 4.4	06/13/2017	06/14/2017	Elliott D. Healy	06/15/2017	Betina Topolski	1905512
EPA 200.8 Rev. 5.4	06/13/2017	06/14/2017	Elliott D. Healy	06/15/2017	Robert K Palmer	1905512
EPA 300.0 Rev. 2.1	06/13/2017			06/17/2017	Julia Storbeck	1905491
EPA 350.1 Rev. 2.0	06/13/2017			06/13/2017	Sofia Elnemr	1905492
EPA 351.2 Rev. 2.0	06/13/2017	06/14/2017	Adrian Shelby	06/16/2017	Joseph Suarez	1905492
EPA 353.2 Rev. 2.0	06/13/2017			06/14/2017	Beverly Y. Sanders	1905492
EPA 365.1 Rev. 2.0	06/13/2017	06/14/2017	Vijayalakshmi Reddy	06/15/2017	Lipi Saha	1905492
EPA 365.1 Rev. 2.0 dissolved	06/13/2017			06/13/2017 15:17	Anthony C. Onicha	1905493
EPA 8270D	06/13/2017	06/15/2017	Rasheda Ghaffari	06/16/2017	Vandana T. Nagar	1905496
	06/13/2017	06/15/2017	Rasheda Ghaffari	06/19/2017	Vandana T. Nagar	1905496
	06/13/2017	06/16/2017	John Kaba	06/21/2017	Irina Carbone	1905497
EPA 8276	06/13/2017	06/15/2017	Rasheda Ghaffari	06/17/2017	Marek Topolski	1905496
EPA 8321B	06/13/2017	06/13/2017	Hoor Shaik	06/13/2017	Juyoung Kim	1905495
	06/13/2017	06/14/2017	Mohammad Ghaffari	06/14/2017	Mohammad Ghaffari	1905495
	06/13/2017	06/15/2017	Mohammad Ghaffari	06/27/2017	Mohammad Ghaffari	1905495
SM 2120 B	06/13/2017			06/13/2017 15:50	Tanya Welborn	1905491
SM 2320 B-97	06/13/2017			06/14/2017	Dale L. Simmons	1905491
SM 2540 C-97	06/13/2017			06/14/2017	Yijie Li	1905491
SM 2540 D-97	06/13/2017			06/14/2017	Yijie Li	1905491
SM 4500 F-C-97	06/13/2017			06/14/2017	Dale L. Simmons	1905491
SM 5310 B-00	06/13/2017			06/14/2017	Christopher Armour	1905492
USGS O-2060-01	06/13/2017	06/15/2017	Hoor Shaik	06/17/2017	Juyoung Kim	1905495