

Chemical Analysis Report

NE-DIST-2019-09-12-01

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

Event Description: **ICW Boat**
Request ID: **RQ-2019-09-09-20**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 08-OCT-2019 15:02

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 by the Florida Department of Health Environmental Laboratory Certification Program 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: OPEN CREEK 200 METERS ABOVE MOUTH

Collection Date/Time: 09/11/2019 11:25

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2118300	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P370589	
	EPA 300.0	Bromide	38		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	103		mg CaCO3/L	P371103	
	SM 2540 D-97	TSS	4	I	mg/L	P370803	
	SM 4500 F-C-97	Fluoride	0.71		mg F/L	P371107	
2118301	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P370767	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P370719	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P370775	
	EPA 365.1 Rev. 2.0	Total-P	0.077		mg P/L	P370644	
	SM 5310 B-00	Organic Carbon	8.5		mg C/L	P370756	
2118302	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.042		mg P/L	P370549	
2118308	EPA 8321B	Aldicarb	0.020	U	ug/L	P370422	
		Aldicarb Sulfone	0.0020	U	ug/L	P370422	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P370422	
		Carbaryl	0.0020	U	ug/L	P370422	
		Carbofuran	0.0020	U	ug/L	P370422	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P370422	
		Methiocarb	0.0020	U	ug/L	P370422	
		Methomyl	0.0020	U	ug/L	P370422	
		Oxamyl	0.0020	U	ug/L	P370422	
		Propoxur	0.0020	U	ug/L	P370422	
		2,4-D	0.0077	I	ug/L	P370625	
		Acesulfame K**	0.10	UJ	ug/L	P370612	MS
		AMPA**	1.0	UJ	ug/L	P370612	MS
2118309		Sucralose**	0.47		ug/L	P370612	
		Acetaminophen**	0.0080	U	ug/L	P370625	
		Acetamiprid**	0.0020	U	ug/L	P370625	
		Endothal**	0.25	UJ	ug/L	P370612	MS
		Glufosinate**	1.0	UJ	ug/L	P370612	MS
		Glyphosate**	1.0	UJ	ug/L	P370612	MS
		Afidopyropen**	0.0020	UJ	ug/L	P370625	
		Bentazon	0.017		ug/L	P370625	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370625	RPD
		Carbamazepine**	8.0E-04	U	ug/L	P370625	
		Clothianidin**	0.0050	I	ug/L	P370625	
		Dinotefuran**	0.0020	U	ug/L	P370625	
		Diuron	0.014		ug/L	P370625	
		Fenuron	0.016	U	ug/L	P370625	
		Fluridone**	0.046		ug/L	P370625	
		Imazapyr**	0.12		ug/L	P370625	
		Hydrocodone**	0.0020	U	ug/L	P370625	
		Ibuprofen**	0.020	U	ug/L	P370625	
		Imidacloprid	0.017	J	ug/L	P370625	MS

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2118309	EPA 8321B	Linuron	0.0040	U	ug/L	P370625	
		Mandestrobin**	0.0020	UJ	ug/L	P370625	
		MCPP	0.0020	U	ug/L	P370625	
		Naproxen**	0.0080	UJ	ug/L	P370625	RPD
		Primidone**	0.0040	U	ug/L	P370625	
		Pyraclostrobin**	0.0020	UJ	ug/L	P370625	RPD
		Thiamethoxam**	0.0020	UJ	ug/L	P370625	MS
		Tolfenpyrad**	0.0020	UJ	ug/L	P370625	LCS, MS
		Triclopyr**	0.0040	U	ug/L	P370625	
2118310	EPA 8270E	Aldrin	4.2	UJ	ng/L	P370757	LCS, RPD
		Alpha-BHC	2.1	U	ng/L	P370757	
		Alpha-Chlordane	1.1	U	ng/L	P370757	
		Beta-BHC	11	U	ng/L	P370757	
		Bifenthrin**	4.2	UJ	ng/L	P370757	RPD
		Delta-BHC	8.4	U	ng/L	P370757	
		Gamma-BHC	8.4	U	ng/L	P370757	
		Carbophenothion	11	U	ng/L	P370757	
		Chlorothalonil	2.1	UJ	ng/L	P370757	CCV
		Cis-Nonachlor**	1.1	U	ng/L	P370757	
		Cypermethrin	21	UJ	ng/L	P370757	RPD
		DDD-p,p'	6.3	U	ng/L	P370757	
		DDE-p,p'	6.3	U	ng/L	P370757	
		DDT-p,p'	7.4	UJ	ng/L	P370757	RPD
		Dicofol	32	U	ng/L	P370757	
		Dieldrin	4.2	U	ng/L	P370757	
		Endosulfan I	4.2	U	ng/L	P370757	
		Endosulfan II	4.2	U	ng/L	P370757	
		Endosulfan Sulfate	2.1	UJ	ng/L	P370757	LCS, MS
		Endrin	2.1	U	ng/L	P370757	
		Endrin Aldehyde	2.1	U	ng/L	P370757	
		Endrin Ketone	2.1	U	ng/L	P370757	
		Ethalfuralin**	3.2	U	ng/L	P370757	
		Gamma-Chlordane	1.1	U	ng/L	P370757	
		Heptachlor	1.6	U	ng/L	P370757	
		Heptachlor Epoxide	2.1	U	ng/L	P370757	
		Hexachlorobenzene	2.1	U	ng/L	P370757	
		Methoxychlor	4.2	UJ	ng/L	P370757	RPD
		Mirex	2.1	UJ	ng/L	P370757	LCS
		Permethrin	11	UJ	ng/L	P370757	RPD
		Trans-Nonachlor**	1.1	U	ng/L	P370757	
		Trifluralin	2.6	U	ng/L	P370757	
	EPA 8276	Chlordane	5.3	U	ng/L	P370757	
		Toxaphene	32	U	ng/L	P370757	
2118311	EPA 8270E	Acetochlor	0.25	U	ng/L	P370470	
		Alachlor	0.25	U	ng/L	P370470	

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2118311	EPA 8270E	Ametryn	0.61	U	ng/L	P370470	MS
		Atrazine	8.2		ng/L	P370470	
		Atrazine Desethyl	1.5	U	ng/L	P370470	RPD
		Azinphos Methyl	5.1	U	ng/L	P370470	
		Bromacil	0.51	U	ng/L	P370470	
		Butylate	0.41	U	ng/L	P370470	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P370470	
		Chlorpyrifos Methyl	0.10	U	ng/L	P370470	
		Cyanazine	3.3	UJ	ng/L	P370470	RPD
		Demeton	7.1	U	ng/L	P370470	
		Diazinon	0.13	U	ng/L	P370470	
		Dimethenamid**	0.10	U	ng/L	P370470	
		Disulfoton	0.51	U	ng/L	P370470	
		Dithiopyr**	0.32	I	ng/L	P370470	
		EPTC	1.3	U	ng/L	P370470	
		Ethion	0.15	U	ng/L	P370470	
		Ethoprop	0.10	U	ng/L	P370470	
		Fenamiphos	0.51	U	ng/L	P370470	MS
		Fipronil	0.25	U	ng/L	P370470	RPD
		Fipronil Desulfinyl**	0.35	I	ng/L	P370470	RPD
		Fipronil Sulfide	0.36	I	ng/L	P370470	MS, RPD
		Fipronil Sulfone	0.92		ng/L	P370470	RPD
		Fonofos	0.20	U	ng/L	P370470	
		Hexazinone	0.63	I	ng/L	P370470	
		Malathion	0.36	U	ng/L	P370470	
		Metalaxyl	0.30	U	ng/L	P370470	
		Metolachlor	1.6	I	ng/L	P370470	
		Metribuzin	4.1	J	ng/L	P370470	RPD
		Mevinphos	0.51	U	ng/L	P370470	
		Molinate	0.30	U	ng/L	P370470	
		Norflurazon	0.51	U	ng/L	P370470	RPD
		Oxadiazon**	4.6		ng/L	P370470	
		Parathion Ethyl	0.25	U	ng/L	P370470	
		Parathion Methyl	0.56	U	ng/L	P370470	
		Pendimethalin	1.0	U	ng/L	P370470	
		Phorate	0.25	U	ng/L	P370470	
		Prodiamine**	0.18	U	ng/L	P370470	
		Prometon	0.91	U	ng/L	P370470	
		Prometryn	0.20	U	ng/L	P370470	
		Simazine	2.1		ng/L	P370470	
		Tebuconazole**	1.8	I	ng/L	P370470	
		Terbufos	0.10	U	ng/L	P370470	
		Terbutylazine	0.43	U	ng/L	P370470	
2118312	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P370727	
		Manganese	24		ug/L	P370727	

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2118312	EPA 200.7 Rev. 4.4	Zinc	20	U	ug/L	P370727	
	EPA 200.8 Rev. 5.4	Aluminum	101		ug/L	P370727	
		Antimony	0.50	U	ug/L	P370727	
		Arsenic	3.92		ug/L	P370727	
		Cadmium	0.20	U	ug/L	P370727	
		Chromium	4.0	U	ug/L	P370727	
		Copper	2.0	I	ug/L	P370727	
		Lead	2.0	U	ug/L	P370727	
		Nickel	3.2	I	ug/L	P370727	
		Selenium	0.80	U	ug/L	P370727	
		Silver	0.10	U	ug/L	P370727	
		Thallium	1.0	U	ug/L	P370727	

Ref. Method and Comment:

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

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for imazapyr and fluridone could not be assessed due to high concentration of parameter in the spiked sample. Matrix spike precision for tolfenpyrad is not available due to low analyte recovery. Refer to the narrative for an explanation of QC Codes.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Matrix spike precision for some analytes is not available due to low analyte recoveries. Refer to the narrative for an explanation of QC Codes.

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

EPA 8270E: MS accuracy for simazine, atrazine, hexazinone, and fipronil sulfone not assessed due to high content of these parameters 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: P370589

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0
Batch ID: P370689

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370767

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370719

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370775

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370644

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370549

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

Reference Method: EPA 8270E
Batch ID: P370470

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	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	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	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	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P370470

Component	Result	Code	Units
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270E
Batch ID: P370757

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	10	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	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
Ethalfuralin	3.0	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P370757

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P370422

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B

Batch ID: P370612

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P370625

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P371103

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

Reference Method: SM 2540 D-97
Batch ID: P370803

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P371107

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P370756

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	101		P	85 - 115
Manganese	100		P	85 - 115
Zinc	99.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	98.0		P	85 - 115
Arsenic	101		P	85 - 115
Cadmium	97.2		P	85 - 115
Chromium	91.3		P	85 - 115
Copper	98.6		P	85 - 115
Lead	98.4		P	85 - 115
Nickel	98.1		P	85 - 115
Selenium	101		P	85 - 115
Silver	98.6		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P370689

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370767

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370775

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370644

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370549

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

Reference Method: EPA 8270E
Batch ID: P370470

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	91.4	97.0	P/P	69 - 122
Alachlor	88.6	94.1	P/P	71 - 120
Ametryn	87.4	84.0	P/P	47 - 138
Atrazine	97.5	99.4	P/P	74 - 124
Atrazine Desethyl	103	80.1	P/P	38 - 138
Azinphos Methyl	108	108	P/P	69 - 154
Bromacil	66.7	83.1	P/P	39 - 121
Butylate	59.1	64.1	P/P	27 - 87.0
Chlorpyrifos Ethyl	93.7	103	P/P	69 - 118
Chlorpyrifos Methyl	98.8	94.0	P/P	70 - 120
Cyanazine	156	108	P/P	20 - 250
Demeton	66.3	65.2	P/P	39 - 118
Diazinon	100	91.8	P/P	68 - 127
Dimethenamid	87.7	97.1	P/P	66 - 125
Disulfoton	96.0	79.2	P/P	52 - 126
Dithiopyr	88.6	94.1	P/P	67 - 127
EPTC	58.7	67.5	P/P	24 - 88.0
Ethion	94.2	106	P/P	51 - 132
Ethoprop	90.6	85.6	P/P	58 - 117
Fenamiphos	89.6	95.7	P/P	38 - 139
Fipronil	79.7	96.3	P/P	61 - 124
Fipronil Desulfinyl	80.0	92.2	P/P	47 - 120
Fipronil Sulfide	83.0	97.2	P/P	56 - 119
Fipronil Sulfone	75.3	96.4	P/P	50 - 117
Fonofos	94.1	82.5	P/P	60 - 121
Hexazinone	99.5	107	P/P	55 - 137
Malathion	99.2	98.5	P/P	66 - 126
Metalaxyl	90.9	97.7	P/P	33 - 140
Metolachlor	83.3	100	P/P	69 - 119
Metribuzin	168	101	P/P	31 - 238
Mevinphos	82.7	85.5	P/P	42 - 113
Molinate	76.1	74.4	P/P	32 - 96.0
Norflurazon	84.5	96.9	P/P	54 - 123
Oxadiazon	90.3	103	P/P	63 - 128
Parathion Ethyl	91.9	94.5	P/P	72 - 111
Parathion Methyl	100	97.7	P/P	74 - 126
Pendimethalin	91.9	90.1	P/P	61 - 131
Phorate	93.9	88.6	P/P	51 - 115
Prodiamine	83.3	84.6	P/P	38 - 144
Prometon	78.5	91.2	P/P	54 - 119
Prometryn	85.1	92.7	P/P	63 - 120
Simazine	108	102	P/P	75 - 126
Tebuconazole	75.7	96.4	P/P	20 - 119
Terbufos	94.7	84.2	P/P	64 - 116
Terbutylazine	92.2	99.5	P/P	73 - 117

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P370757

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	17.4	32.2	F/P	20 - 93.0
Alpha-BHC	67.2	89.7	P/P	55 - 133
Alpha-Chlordane	70.5	91.0	P/P	58 - 112
Beta-BHC	92.4	124	P/P	54 - 168
Bifenthrin	53.6	74.3	P/P	30 - 134
Carbophenothion	57.8	67.4	P/P	26 - 147
Chlorothalonil	52.7	68.6	P/P	20 - 155
Cis-Nonachlor	69.4	91.4	P/P	54 - 115
Cypermethrin	43.7	66.5	P/P	40 - 137
DDD-p,p'	80.1	105	P/P	65 - 129
DDE-p,p'	64.1	86.3	P/P	57 - 116
DDT-p,p'	64.0	90.6	P/P	53 - 133
Delta-BHC	96.9	124	P/P	59 - 178
Dicofol	75.3	87.9	P/P	24 - 138
Dieldrin	84.8	111	P/P	60 - 120
Endosulfan I	82.8	107	P/P	64 - 118
Endosulfan II	92.4	113	P/P	58 - 142
Endosulfan Sulfate	105	132	P/F	60 - 127
Endrin	89.2	107	P/P	59 - 122
Endrin Aldehyde	86.8	112	P/P	49 - 132
Endrin Ketone	92.6	117	P/P	64 - 121
Ethalfuralin	74.5	95.7	P/P	60 - 126
Gamma-BHC	88.1	111	P/P	57 - 154
Gamma-Chlordane	60.3	79.4	P/P	56 - 110
Heptachlor	58.1	74.3	P/P	46 - 96.0
Heptachlor Epoxide	77.3	97.8	P/P	61 - 112
Hexachlorobenzene	65.7	85.3	P/P	44 - 98.0
Methoxychlor	64.5	88.6	P/P	63 - 134
Mirex	39.7	52.2	F/P	45 - 100
Permethrin	58.4	79.0	P/P	53 - 115
Trans-Nonachlor	60.9	78.9	P/P	47 - 110
Trifluralin	73.1	94.3	P/P	39 - 142

Reference Method: EPA 8276
Batch ID: P370757

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	75.5	74.8	P/P	43 - 128
Toxaphene	55.4	66.1	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P370422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	109		P	40 - 160
Aldicarb	113		P	30 - 160
Aldicarb Sulfone	105		P	40 - 160
Aldicarb Sulfoxide	105		P	40 - 160
Carbaryl	113		P	40 - 160
Carbofuran	93.0		P	40 - 160
Methiocarb	80.4		P	40 - 160
Methomyl	90.6		P	40 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P370422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Oxamyl	112		P	40 - 160
Propoxur	95.4		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P370612

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	46.3		P	40 - 150
AMPA	106		P	40 - 150
Endothall	87.5		P	40 - 150
Glufosinate	115		P	40 - 150
Glyphosate	111		P	40 - 140
Sucralose	87.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P370625

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	74.6		P	40 - 160
Acetaminophen	83.7		P	30 - 160
Acetamiprid	96.7		P	40 - 160
Afidopyropen	79.9		P	40 - 160
Bentazon	93.6		P	30 - 160
Benzovindiflupyr	50.5		P	40 - 160
Carbamazepine	97.5		P	40 - 160
Clothianidin	95.6		P	40 - 160
Dinotefuran	89.5		P	40 - 160
Diuron	103		P	40 - 160
Fenuron	119		P	40 - 160
Fluridone	88.8		P	40 - 160
Hydrocodone	98.6		P	40 - 160
Ibuprofen	49.3		P	30 - 160
Imazapyr	86.7		P	40 - 160
Imidacloprid	100		P	40 - 160
Linuron	66.3		P	40 - 160
Mandestrobin	73.0		P	40 - 160
MCPP	75.3		P	40 - 160
Naproxen	60.1		P	40 - 160
Primidone	84.4		P	40 - 160
Pyraclostrobin	41.1		P	30 - 160
Thiamethoxam	108		P	40 - 160
Tolfenpyrad	14.2		F	40 - 160
Triclopyr	50.7		P	30 - 160

Reference Method: SM 2320 B-97
Batch ID: P371103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P371107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.6		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P370756

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117903	Iron	95.8	95.7	P/P	80 - 120
2117903	Manganese	93.9	94.6	P/P	80 - 120
2117903	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117903	Aluminum	112	113	P/P	70 - 130
2117903	Antimony	101	103	P/P	70 - 130
2117903	Arsenic	108	109	P/P	70 - 130
2117903	Cadmium	99.1	98.4	P/P	70 - 130
2117903	Chromium	93.7	91.4	P/P	70 - 130
2117903	Copper	97.4	98.9	P/P	70 - 130
2117903	Lead	103	102	P/P	70 - 130
2117903	Nickel	95.0	96.3	P/P	70 - 130
2117903	Selenium	102	104	P/P	70 - 130
2117903	Silver	94.3	94.9	P/P	70 - 130
2117903	Thallium	105	106	P/P	70 - 130

Reference Method: EPA 300.0
Batch ID: P370689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117129	Bromide	92.6	93.4	P/P	90 - 110
2117707	Bromide	92.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118246	Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118416	Kjeldahl Nitrogen	95.9	97.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118180	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118181	Total-P	91.4	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370549

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118554	O-Phosphate-P	96.2	96.2	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P370470

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117895	Acetochlor	95.1	87.3	P/P	63 - 129
2117895	Alachlor	95.4	91.4	P/P	65 - 127
2117895	Ametryn	215	198	F/F	40 - 164
2117895	Atrazine Desethyl	42.7	137	P/P	14 - 157
2117895	Azinphos Methyl	94.1	92.5	P/P	49 - 180
2117895	Bromacil	58.6	94.2	P/P	48 - 130
2117895	Butylate	61.8	71.3	P/P	10 - 94.0
2117895	Chlorpyrifos Ethyl	101	91.1	P/P	58 - 123
2117895	Chlorpyrifos Methyl	95.4	96.8	P/P	58 - 125
2117895	Cyanazine	89.8	155	P/P	24 - 253
2117895	Demeton	81.2	99.0	P/P	25 - 149
2117895	Diazinon	111	107	P/P	59 - 144
2117895	Dimethenamid	86.2	68.3	P/P	46 - 139
2117895	Disulfoton	105	109	P/P	54 - 132
2117895	Dithiopyr	90.4	83.3	P/P	64 - 130
2117895	EPTC	61.5	72.9	P/P	10 - 92.0
2117895	Ethion	89.0	84.3	P/P	30 - 148
2117895	Ethoprop	99.3	120	P/P	50 - 130
2117895	Fenamiphos	30.8	34.3	F/F	49 - 142
2117895	Fipronil	46.5	85.0	P/P	46 - 140
2117895	Fipronil Desulfiny	36.7	83.2	P/P	30 - 121
2117895	Fipronil Sulfide	13.0	88.8	F/P	31 - 136
2117895	Fonofos	101	110	P/P	55 - 129
2117895	Malathion	89.4	89.9	P/P	56 - 135
2117895	Metalaxyl	92.3	85.3	P/P	54 - 135
2117895	Metolachlor	98.6	79.6	P/P	51 - 140
2117895	Metribuzin	180	224	P/P	45 - 254
2117895	Mevinphos	90.4	97.9	P/P	33 - 131
2117895	Molinate	80.5	82.2	P/P	14 - 98.0
2117895	Norflurazon	40.1	85.2	P/P	34 - 136
2117895	Oxadiazon	95.5	72.2	P/P	67 - 116
2117895	Parathion Ethyl	91.7	98.3	P/P	66 - 118
2117895	Parathion Methyl	99.8	109	P/P	64 - 136
2117895	Pendimethalin	95.9	95.0	P/P	59 - 144
2117895	Phorate	88.5	100	P/P	42 - 130
2117895	Prodiamine	83.2	83.8	P/P	42 - 148
2117895	Prometon	81.1	77.6	P/P	59 - 134
2117895	Prometryn	87.1	83.2	P/P	54 - 135
2117895	Tebuconazole	13.8	11.1	P/P	10 - 131
2117895	Terbufos	105	116	P/P	57 - 131
2117895	Terbutylazine	97.9	99.4	P/P	68 - 125

Reference Method: EPA 8270E
Batch ID: P370757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P370757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118310	Aldrin	44.4	39.6	P/P	25 - 92.0
2118310	Alpha-BHC	101	101	P/P	48 - 150
2118310	Alpha-Chlordane	73.9	72.3	P/P	50 - 115
2118310	Beta-BHC	105	110	P/P	39 - 184
2118310	Bifenthrin	93.5	90.8	P/P	46 - 116
2118310	Carbophenothion	94.0	98.2	P/P	27 - 180
2118310	Chlorothalonil	42.3	40.3	P/P	10 - 216
2118310	Cis-Nonachlor	77.1	76.4	P/P	55 - 112
2118310	Cypermethrin	101	105	P/P	40 - 153
2118310	DDD-p,p'	85.5	85.2	P/P	53 - 128
2118310	DDE-p,p'	73.8	71.5	P/P	48 - 116
2118310	DDT-p,p'	79.5	75.3	P/P	47 - 128
2118310	Delta-BHC	104	110	P/P	48 - 221
2118310	Dicofol	67.6	76.2	P/P	10 - 147
2118310	Dieldrin	86.7	95.5	P/P	48 - 128
2118310	Endosulfan I	85.8	89.7	P/P	58 - 126
2118310	Endosulfan II	99.4	102	P/P	50 - 150
2118310	Endosulfan Sulfate	120	140	P/F	56 - 130
2118310	Endrin	94.2	97.9	P/P	50 - 126
2118310	Endrin Aldehyde	51.8	50.7	P/P	12 - 145
2118310	Endrin Ketone	113	122	P/P	59 - 132
2118310	Ethalfuralin	77.0	75.9	P/P	65 - 122
2118310	Gamma-BHC	95.6	87.1	P/P	40 - 190
2118310	Gamma-Chlordane	67.0	64.9	P/P	50 - 112
2118310	Heptachlor	58.9	58.9	P/P	41 - 98.0
2118310	Heptachlor Epoxide	80.8	83.3	P/P	55 - 117
2118310	Hexachlorobenzene	58.6	58.4	P/P	47 - 91.0
2118310	Methoxychlor	66.6	75.8	P/P	55 - 133
2118310	Mirex	55.6	48.1	P/P	44 - 101
2118310	Permethrin	70.5	71.8	P/P	52 - 124
2118310	Trans-Nonachlor	61.4	61.2	P/P	53 - 99.0
2118310	Trifluralin	74.2	72.4	P/P	10 - 201

Reference Method: EPA 8276
Batch ID: P370757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2119145	Chlordane	68.1	67.5	P/P	34 - 136
2119145	Toxaphene	61.9	66.1	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P370422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116928	3-Hydroxycarbofuran	93.4	98.9	P/P	40 - 160
2116928	Aldicarb	78.3	93.7	P/P	30 - 160
2116928	Aldicarb Sulfone	101	110	P/P	40 - 160
2116928	Aldicarb Sulfoxide	52.3	55.4	P/P	40 - 160
2116928	Carbaryl	81.7	88.9	P/P	40 - 160
2116928	Carbofuran	65.3	68.7	P/P	40 - 160
2116928	Methiocarb	64.5	70.6	P/P	40 - 160
2116928	Methomyl	69.8	76.4	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P370422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116928	Oxamyl	92.4	96.4	P/P	40 - 160
2116928	Propoxur	67.0	70.5	P/P	40 - 160

Reference Method: EPA 8321B
Batch ID: P370612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118309	Acesulfame K	21.0	21.8	F/F	40 - 150
2118309	AMPA	0.0	0.0	F/F	40 - 150
2118309	Endothall	212	212	F/F	40 - 150
2118309	Glufosinate	0.0	0.0	F/F	40 - 150
2118309	Glyphosate	0.0	0.0	F/F	40 - 140
2118309	Sucralose	142	141	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P370625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118309	2,4-D	132	119	P/P	40 - 160
2118309	Acetaminophen	88.0	89.4	P/P	30 - 160
2118309	Acetamiprid	127	110	P/P	40 - 160
2118309	Afidopyropen	117	114	P/P	40 - 160
2118309	Bentazon	73.0	75.1	P/P	30 - 160
2118309	Benzovindiflupyr	45.1	73.3	P/P	40 - 160
2118309	Carbamazepine	116	114	P/P	40 - 160
2118309	Clothianidin	117	116	P/P	40 - 160
2118309	Dinotefuran	123	123	P/P	40 - 160
2118309	Diuron	115	106	P/P	40 - 160
2118309	Fenuron	100	103	P/P	40 - 160
2118309	Hydrocodone	110	108	P/P	40 - 160
2118309	Ibuprofen	70.2	76.9	P/P	30 - 160
2118309	Imidacloprid	222	210	F/F	40 - 160
2118309	Linuron	72.3	71.9	P/P	40 - 160
2118309	Mandestrobin	86.0	90.6	P/P	40 - 160
2118309	MCPP	141	130	P/P	40 - 160
2118309	Naproxen	116	74.0	P/P	40 - 160
2118309	Primidone	102	101	P/P	40 - 160
2118309	Pyraclostrobin	36.8	65.1	P/P	30 - 160
2118309	Thiamethoxam	174	176	F/F	40 - 160
2118309	Tolfenpyrad	2.13	23.2	F/F	40 - 160
2118309	Triclopyr	100	88.9	P/P	30 - 160

Reference Method: SM 4500 F-C-97
Batch ID: P371107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117596	Fluoride	93.6	96.2	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P370756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P370756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118449	Organic Carbon	90.0	92.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118320	Turbidity	0.494	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117903	Iron	0.0664	Spike	P	0 - 20
2117903	Manganese	0.602	Spike	P	0 - 20
2117903	Zinc	0.355	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117903	Aluminum	0.634	Spike	P	0 - 20
2117903	Antimony	1.68	Spike	P	0 - 20
2117903	Arsenic	1.20	Spike	P	0 - 20
2117903	Cadmium	0.716	Spike	P	0 - 20
2117903	Chromium	2.50	Spike	P	0 - 20
2117903	Copper	1.42	Spike	P	0 - 20
2117903	Lead	1.16	Spike	P	0 - 20
2117903	Nickel	1.36	Spike	P	0 - 20
2117903	Selenium	1.65	Spike	P	0 - 20
2117903	Silver	0.607	Spike	P	0 - 20
2117903	Thallium	1.26	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P370689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117129	Bromide	0.738	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118246	Ammonia-N	0.0193	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118416	Kjeldahl Nitrogen	1.31	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118180	NO2NO3-N	0.489	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118181	Total-P	9.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118554	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P370470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117895	Acetochlor	8.55	Spike	P	0 - 30
2117895	Alachlor	4.30	Spike	P	0 - 30
2117895	Ametryn	8.39	Spike	P	0 - 30
2117895	Atrazine	7.43	Spike	P	0 - 30
2117895	Atrazine Desethyl	52.2	Spike	F	0 - 30
2117895	Azinphos Methyl	1.75	Spike	P	0 - 30
2117895	Bromacil	25.8	Spike	P	0 - 30
2117895	Butylate	14.3	Spike	P	0 - 30
2117895	Chlorpyrifos Ethyl	9.98	Spike	P	0 - 30
2117895	Chlorpyrifos Methyl	1.45	Spike	P	0 - 30
2117895	Cyanazine	53.1	Spike	F	0 - 30
2117895	Demeton	19.7	Spike	P	0 - 30
2117895	Diazinon	3.23	Spike	P	0 - 30
2117895	Dimethenamid	20.0	Spike	P	0 - 30
2117895	Disulfoton	4.29	Spike	P	0 - 30
2117895	Dithiopyr	7.47	Spike	P	0 - 30
2117895	EPTC	17.1	Spike	P	0 - 30
2117895	Ethion	5.41	Spike	P	0 - 30
2117895	Ethoprop	18.9	Spike	P	0 - 30
2117895	Fenamiphos	10.7	Spike	P	0 - 30
2117895	Fipronil	46.2	Spike	F	0 - 30
2117895	Fipronil Desulfinyl	51.0	Spike	F	0 - 30
2117895	Fipronil Sulfide	50.2	Spike	F	0 - 30
2117895	Fipronil Sulfone	49.7	Spike	F	0 - 30
2117895	Fonofos	8.55	Spike	P	0 - 30
2117895	Hexazinone	21.5	Spike	P	0 - 30
2117895	Malathion	0.466	Spike	P	0 - 30
2117895	Metalaxyl	7.90	Spike	P	0 - 30
2117895	Metolachlor	14.1	Spike	P	0 - 30
2117895	Metribuzin	20.3	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P370470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117895	Mevinphos	7.97	Spike	P	0 - 30
2117895	Molinate	2.10	Spike	P	0 - 30
2117895	Norflurazon	72.0	Spike	F	0 - 30
2117895	Oxadiazon	18.0	Spike	P	0 - 30
2117895	Parathion Ethyl	6.92	Spike	P	0 - 30
2117895	Parathion Methyl	9.04	Spike	P	0 - 30
2117895	Pendimethalin	0.934	Spike	P	0 - 30
2117895	Phorate	10.8	Spike	P	0 - 30
2117895	Prodiamine	0.719	Spike	P	0 - 30
2117895	Prometon	3.32	Spike	P	0 - 30
2117895	Prometryn	4.56	Spike	P	0 - 30
2117895	Simazine	12.3	Spike	P	0 - 30
2117895	Tebuconazole	12.5	Spike	P	0 - 30
2117895	Terbufos	9.97	Spike	P	0 - 30
2117895	Terbutylazine	1.58	Spike	P	0 - 30
LFB	Acetochlor	6.00	LCS	P	0 - 30
LFB	Alachlor	5.97	LCS	P	0 - 30
LFB	Ametryn	4.03	LCS	P	0 - 30
LFB	Atrazine	1.90	LCS	P	0 - 30
LFB	Atrazine Desethyl	25.4	LCS	P	0 - 30
LFB	Azinphos Methyl	0.0515	LCS	P	0 - 30
LFB	Bromacil	21.9	LCS	P	0 - 30
LFB	Butylate	8.06	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	9.34	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.02	LCS	P	0 - 30
LFB	Cyanazine	36.4	LCS	F	0 - 30
LFB	Demeton	1.56	LCS	P	0 - 30
LFB	Diazinon	8.58	LCS	P	0 - 30
LFB	Dimethenamid	10.2	LCS	P	0 - 30
LFB	Disulfoton	19.1	LCS	P	0 - 30
LFB	Dithiopyr	5.94	LCS	P	0 - 30
LFB	EPTC	13.9	LCS	P	0 - 30
LFB	Ethion	12.1	LCS	P	0 - 30
LFB	Ethoprop	5.63	LCS	P	0 - 30
LFB	Fenamiphos	6.58	LCS	P	0 - 30
LFB	Fipronil	18.8	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	14.2	LCS	P	0 - 30
LFB	Fipronil Sulfide	15.8	LCS	P	0 - 30
LFB	Fipronil Sulfone	24.6	LCS	P	0 - 30
LFB	Fonofos	13.1	LCS	P	0 - 30
LFB	Hexazinone	7.31	LCS	P	0 - 30
LFB	Malathion	0.766	LCS	P	0 - 30
LFB	Metalaxyl	7.21	LCS	P	0 - 30
LFB	Metolachlor	18.4	LCS	P	0 - 30
LFB	Metribuzin	50.1	LCS	F	0 - 30
LFB	Mevinphos	3.33	LCS	P	0 - 30
LFB	Molinate	2.27	LCS	P	0 - 30
LFB	Norflurazon	13.7	LCS	P	0 - 30
LFB	Oxadiazon	13.1	LCS	P	0 - 30
LFB	Parathion Ethyl	2.79	LCS	P	0 - 30
LFB	Parathion Methyl	2.58	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P370470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Pendimethalin	1.92	LCS	P	0 - 30
LFB	Phorate	5.80	LCS	P	0 - 30
LFB	Prodiamine	1.57	LCS	P	0 - 30
LFB	Prometon	15.0	LCS	P	0 - 30
LFB	Prometryn	8.58	LCS	P	0 - 30
LFB	Simazine	5.61	LCS	P	0 - 30
LFB	Tebuconazole	24.1	LCS	P	0 - 30
LFB	Terbufos	11.8	LCS	P	0 - 30
LFB	Terbutylazine	7.68	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P370757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118310	Aldrin	11.3	Spike	P	0 - 30
2118310	Alpha-BHC	0.315	Spike	P	0 - 30
2118310	Alpha-Chlordane	2.24	Spike	P	0 - 30
2118310	Beta-BHC	5.39	Spike	P	0 - 30
2118310	Bifenthrin	2.95	Spike	P	0 - 30
2118310	Carbophenothion	4.39	Spike	P	0 - 30
2118310	Chlorothalonil	4.69	Spike	P	0 - 30
2118310	Cis-Nonachlor	0.871	Spike	P	0 - 30
2118310	Cypermethrin	3.85	Spike	P	0 - 30
2118310	DDD-p,p'	0.372	Spike	P	0 - 30
2118310	DDE-p,p'	3.15	Spike	P	0 - 30
2118310	DDT-p,p'	5.40	Spike	P	0 - 30
2118310	Delta-BHC	5.45	Spike	P	0 - 30
2118310	Dicofol	12.0	Spike	P	0 - 30
2118310	Dieldrin	9.58	Spike	P	0 - 30
2118310	Endosulfan I	4.47	Spike	P	0 - 30
2118310	Endosulfan II	2.62	Spike	P	0 - 30
2118310	Endosulfan Sulfate	14.8	Spike	P	0 - 30
2118310	Endrin	3.79	Spike	P	0 - 30
2118310	Endrin Aldehyde	2.08	Spike	P	0 - 30
2118310	Endrin Ketone	7.57	Spike	P	0 - 30
2118310	Ethalfuralin	1.54	Spike	P	0 - 30
2118310	Gamma-BHC	9.33	Spike	P	0 - 30
2118310	Gamma-Chlordane	3.09	Spike	P	0 - 30
2118310	Heptachlor	0.0682	Spike	P	0 - 30
2118310	Heptachlor Epoxide	3.14	Spike	P	0 - 30
2118310	Hexachlorobenzene	0.320	Spike	P	0 - 30
2118310	Methoxychlor	12.9	Spike	P	0 - 30
2118310	Mirex	14.5	Spike	P	0 - 30
2118310	Permethrin	1.78	Spike	P	0 - 30
2118310	Trans-Nonachlor	0.183	Spike	P	0 - 30
2118310	Trifluralin	2.40	Spike	P	0 - 30
LFB	Aldrin	59.9	LCS	F	0 - 30
LFB	Alpha-BHC	28.8	LCS	P	0 - 30
LFB	Alpha-Chlordane	25.3	LCS	P	0 - 30
LFB	Beta-BHC	29.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P370757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Bifenthrin	32.5	LCS	F	0 - 30
LFB	Carbophenothion	15.3	LCS	P	0 - 30
LFB	Chlorothalonil	26.3	LCS	P	0 - 30
LFB	Cis-Nonachlor	27.3	LCS	P	0 - 30
LFB	Cypermethrin	41.5	LCS	F	0 - 30
LFB	DDD-p,p'	26.4	LCS	P	0 - 30
LFB	DDE-p,p'	29.5	LCS	P	0 - 30
LFB	DDT-p,p'	34.4	LCS	F	0 - 30
LFB	Delta-BHC	24.5	LCS	P	0 - 30
LFB	Dicofol	15.4	LCS	P	0 - 30
LFB	Dieldrin	26.7	LCS	P	0 - 30
LFB	Endosulfan I	25.6	LCS	P	0 - 30
LFB	Endosulfan II	19.8	LCS	P	0 - 30
LFB	Endosulfan Sulfate	23.2	LCS	P	0 - 30
LFB	Endrin	18.0	LCS	P	0 - 30
LFB	Endrin Aldehyde	25.7	LCS	P	0 - 30
LFB	Endrin Ketone	23.1	LCS	P	0 - 30
LFB	Ethalfuralin	24.8	LCS	P	0 - 30
LFB	Gamma-BHC	23.0	LCS	P	0 - 30
LFB	Gamma-Chlordane	27.4	LCS	P	0 - 30
LFB	Heptachlor	24.5	LCS	P	0 - 30
LFB	Heptachlor Epoxide	23.4	LCS	P	0 - 30
LFB	Hexachlorobenzene	26.0	LCS	P	0 - 30
LFB	Methoxychlor	31.4	LCS	F	0 - 30
LFB	Mirex	27.3	LCS	P	0 - 30
LFB	Permethrin	30.0	LCS	F	0 - 30
LFB	Trans-Nonachlor	25.7	LCS	P	0 - 30
LFB	Trifluralin	25.4	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P370757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2119145	Chlordane	0.778	Spike	P	0 - 30
2119145	Toxaphene	6.54	Spike	P	0 - 30
LFB	Chlordane	0.904	LCS	P	0 - 30
LFB	Toxaphene	17.7	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116928	3-Hydroxycarbofuran	5.71	Spike	P	0 - 30
2116928	Aldicarb	17.8	Spike	P	0 - 30
2116928	Aldicarb Sulfone	7.96	Spike	P	0 - 30
2116928	Aldicarb Sulfoxide	5.81	Spike	P	0 - 30
2116928	Carbaryl	8.44	Spike	P	0 - 30
2116928	Carbofuran	5.11	Spike	P	0 - 30
2116928	Methiocarb	9.03	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P370422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116928	Methomyl	8.99	Spike	P	0 - 30
2116928	Oxamyl	4.25	Spike	P	0 - 30
2116928	Propoxur	5.05	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118309	Acesulfame K	3.60	Spike	P	0 - 30
2118309	Endothall	0.0455	Spike	P	0 - 30
2118309	Sucralose	0.548	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118309	2,4-D	9.18	Spike	P	0 - 30
2118309	Acetaminophen	1.55	Spike	P	0 - 30
2118309	Acetamiprid	14.0	Spike	P	0 - 30
2118309	Afidopyropen	2.93	Spike	P	0 - 30
2118309	Bentazon	1.31	Spike	P	0 - 30
2118309	Benzovindiflupyr	47.5	Spike	F	0 - 30
2118309	Carbamazepine	2.37	Spike	P	0 - 30
2118309	Clothianidin	0.551	Spike	P	0 - 30
2118309	Dinotefuran	0.391	Spike	P	0 - 30
2118309	Diuron	7.38	Spike	P	0 - 30
2118309	Fenuron	2.67	Spike	P	0 - 30
2118309	Fluridone	2.67	Spike	P	0 - 30
2118309	Hydrocodone	1.74	Spike	P	0 - 30
2118309	Ibuprofen	9.11	Spike	P	0 - 30
2118309	Imazapyr	4.82	Spike	P	0 - 30
2118309	Imidacloprid	5.12	Spike	P	0 - 30
2118309	Linuron	0.554	Spike	P	0 - 30
2118309	Mandestrobin	5.18	Spike	P	0 - 30
2118309	MCPP	8.08	Spike	P	0 - 30
2118309	Naproxen	44.2	Spike	F	0 - 30
2118309	Primidone	0.586	Spike	P	0 - 30
2118309	Pyraclostrobin	55.4	Spike	F	0 - 30
2118309	Thiamethoxam	1.23	Spike	P	0 - 30
2118309	Triclopyr	11.8	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P371103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117596	Total Alkalinity	0.228	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P371107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117596	Fluoride	1.95	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P370756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118449	Organic Carbon	2.27	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2118308
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	107	P	30 - 160

Lab Sample ID: 2118309
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.3	P	30 - 160
EPA 8321B	Diuron-d6	103	P	30 - 160
EPA 8321B	Endothall-d6	72.9	P	30 - 160
EPA 8321B	Endothall-d6	72.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	54.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	54.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.9	P	30 - 160
EPA 8321B	Primidone-d5	97.7	P	30 - 160
EPA 8321B	Sucralose-d6	142	P	30 - 160
EPA 8321B	Sucralose-d6	142	P	30 - 160

Lab Sample ID: 2118310
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	89.1	P	39 - 109
EPA 8270E	Tetrachloro-m-xylene	54.4	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	45.4	P	30 - 103
EPA 8276	PCNB	106	P	37 - 143

Lab Sample ID: 2118311
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	103	P	68 - 130
EPA 8270E	Terbufos-d10	79.1	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0
Run ID: A94097
Included Lab Sample IDs: 2118300

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A94160
Included Lab Sample IDs: 2118302

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A94168
Included Lab Sample IDs: 2118300

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

Reference Method: EPA 8321B
Run ID: A94238
Included Lab Sample IDs: 2118309

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.9	83.5	P/P	60 - 160
Glufosinate	101	90.8	P/P	60 - 160
Glyphosate	108	107	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A94244
Included Lab Sample IDs: 2118301

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

Reference Method: SM 5310 B-00
Run ID: A94255
Included Lab Sample IDs: 2118301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	94.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A94258
Included Lab Sample IDs: 2118301

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A94262
Included Lab Sample IDs: 2118301

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94262

Included Lab Sample IDs: 2118301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94277

Included Lab Sample IDs: 2118301

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.8	98.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94290

Included Lab Sample IDs: 2118309

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	72.4	65.0	P/P	60 - 160
Endothall	138	108	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94322

Included Lab Sample IDs: 2118312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	98.6	96.8	P/P	90 - 110
Manganese	103	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94333

Included Lab Sample IDs: 2118309

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	76.1	85.2	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94354

Included Lab Sample IDs: 2118312

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

Reference Method: SM 2320 B-97

Run ID: A94392

Included Lab Sample IDs: 2118300

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

Reference Method: SM 4500 F-C-97

Run ID: A94392

Included Lab Sample IDs: 2118300

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

Reference Method: SM 4500 F-C-97

Run ID: A94392

Included Lab Sample IDs: 2118300

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	98.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94400

Included Lab Sample IDs: 2118309

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.5	105	P/P	50 - 150
3-Hydroxycarbofuran	120	112	P/P	60 - 150
Acetaminophen	99.4	116	P/P	60 - 160
Acetamiprid	110	111	P/P	50 - 150
Afidopyropen	122	114	P/P	50 - 150
Aldicarb	129	119	P/P	60 - 150
Aldicarb Sulfone	101	108	P/P	50 - 150
Aldicarb Sulfoxide	114	112	P/P	50 - 150
Bentazon	75.8	80.5	P/P	50 - 160
Benzovindiflupyr	97.3	104	P/P	50 - 150
Carbamazepine	100	109	P/P	60 - 150
Carbaryl	128	130	P/P	60 - 150
Carbofuran	117	116	P/P	50 - 150
Clothianidin	97.7	104	P/P	60 - 150
Dinotefuran	90.3	97.3	P/P	50 - 150
Diuron	121	135	P/P	60 - 150
Fenuron	104	111	P/P	60 - 150
Fluridone	109	104	P/P	60 - 160
Hydrocodone	105	111	P/P	60 - 150
Ibuprofen	88.5	85.8	P/P	50 - 160
Imazapyr	91.8	92.1	P/P	50 - 150
Imidacloprid	96.7	96.7	P/P	60 - 150
Linuron	91.7	93.7	P/P	60 - 150
Mandestrobin	105	112	P/P	50 - 150
MCPP	92.3	88.9	P/P	50 - 150
Methiocarb	101	101	P/P	50 - 150
Methomyl	112	112	P/P	50 - 150
Naproxen	83.8	60.8	P/P	50 - 160
Oxamyl	115	121	P/P	50 - 150
Primidone	86.3	90.6	P/P	60 - 150
Propoxur	110	115	P/P	50 - 150
Pyraclostrobin	104	109	P/P	60 - 150
Thiamethoxam	105	103	P/P	50 - 150
Tolfenpyrad	110	116	P/P	60 - 150
Triclopyr	88.1	89.6	P/P	50 - 150

Reference Method: EPA 8276

Run ID: A94440

Included Lab Sample IDs: 2118310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	92.4		P	80 - 120
Toxaphene	106		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A94470
Included Lab Sample IDs: 2118311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	106		P	80 - 120
Ametryn	94.8		P	80 - 120
Atrazine	90.6		P	80 - 120
Atrazine Desethyl	95.3		P	80 - 120
Azinphos Methyl	98.3		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	95.3		P	80 - 120
Chlorpyrifos Ethyl	98.3		P	80 - 120
Chlorpyrifos Methyl	99.9		P	80 - 120
Cyanazine	84.2		P	80 - 120
Demeton	85.7		P	80 - 120
Diazinon	104		P	80 - 120
Dimethenamid	105		P	80 - 120
Disulfoton	98.7		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	99.9		P	80 - 120
Ethion	97.2		P	80 - 120
Ethoprop	98.0		P	80 - 120
Fenamiphos	94.7		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	96.7		P	80 - 120
Fipronil Sulfone	96.6		P	80 - 120
Fonofos	96.5		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	96.3		P	80 - 120
Metaxyl	104		P	80 - 120
Metolachlor	108		P	80 - 120
Metribuzin	96.2		P	80 - 120
Mevinphos	100		P	80 - 120
Molinate	99.8		P	80 - 120
Norflurazon	103		P	80 - 120
Oxadiazon	108		P	80 - 120
Parathion Ethyl	98.2		P	80 - 120
Parathion Methyl	99.0		P	80 - 120
Pendimethalin	96.6		P	80 - 120
Phorate	95.1		P	80 - 120
Prodiamine	95.4		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	104		P	80 - 120
Simazine	97.8		P	80 - 120
Tebuconazole	104		P	80 - 120
Terbufos	96.6		P	80 - 120
Terbutylazine	99.2		P	80 - 120

Reference Method: EPA 8270E
Run ID: A94507
Included Lab Sample IDs: 2118310

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

Reference Method: EPA 8270E
Run ID: A94507
Included Lab Sample IDs: 2118310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	106		P	80 - 120
Alpha-BHC	113		P	80 - 120
Alpha-Chlordane	108		P	80 - 120
Beta-BHC	112		P	80 - 120
Bifenthrin	106		P	80 - 120
Carbophenothion	114		P	80 - 120
Chlorothalonil	121*		F	80 - 120
Cis-Nonachlor	107		P	80 - 120
Cypermethrin	115		P	80 - 120
DDD-p,p'	109		P	80 - 120
DDE-p,p'	109		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	110		P	80 - 120
Dicofol	107		P	80 - 120
Dieldrin	108		P	80 - 120
Endosulfan I	108		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	110		P	80 - 120
Endrin	107		P	80 - 120
Endrin Aldehyde	102		P	80 - 120
Endrin Ketone	108		P	80 - 120
Ethalfuralin	113		P	80 - 120
Gamma-BHC	95.2		P	80 - 120
Gamma-Chlordane	107		P	80 - 120
Heptachlor	107		P	80 - 120
Heptachlor Epoxide	105		P	80 - 120
Hexachlorobenzene	118		P	80 - 120
Methoxychlor	108		P	80 - 120
Mirex	108		P	80 - 120
Permethrin	101		P	80 - 120
Trans-Nonachlor	107		P	80 - 120
Trifluralin	113		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A94545
Included Lab Sample IDs: 2118312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	93.6	92.4	P/P	90 - 110
Lead	94.2	93.7	P/P	90 - 110
Silver	95.4	94.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A94675
Included Lab Sample IDs: 2118312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	100	100	P/P	90 - 110
Cadmium	104	103	P/P	90 - 110
Thallium	98.4	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A9471

Included Lab Sample IDs: 2118312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	103	102	P/P	90 - 110
Selenium	100	99.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94722

Included Lab Sample IDs: 2118312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	105	106	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Copper	101	102	P/P	90 - 110

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

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.494	
EPA 200.7 Rev. 4.4	Iron	101		95.8	95.7			0.0664
	Manganese	100		93.9	94.6			0.602
	Zinc	99.0		101	102			0.355
EPA 200.8 Rev. 5.4	Aluminum	105		112	113			0.634
	Antimony	98.0		101	103			1.68
	Arsenic	101		108	109			1.20
	Cadmium	97.2		99.1	98.4			0.716
	Chromium	91.3		93.7	91.4			2.50
	Copper	98.6		97.4	98.9			1.42
	Lead	98.4		103	102			1.16
	Nickel	98.1		95.0	96.3			1.36
	Selenium	101		102	104			1.65
	Silver	98.6		94.3	94.9			0.607
	Thallium	102		105	106			1.26
EPA 300.0	Bromide	94.8		92.6	93.4	92.5		0.738
EPA 350.1 Rev. 2.0	Ammonia-N	99.8		104	104			0.0193
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.2		95.9	97.3			1.31
EPA 353.2 Rev. 2.0	NO2NO3-N	102		102	102			0.489
EPA 365.1 Rev. 2.0	Total-P	99.0		91.4	100			9.11
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		96.2	96.2			0.0
EPA 8270E	Acetochlor	97.0	91.4	95.1	87.3	6.00		8.55
	Alachlor	94.1	88.6	95.4	91.4	5.97		4.30
	Aldrin	17.4	32.2	44.4	39.6	59.9		11.3
	Alpha-BHC	67.2	89.7	101	101	28.8		0.315
	Alpha-Chlordane	70.5	91.0	73.9	72.3	25.3		2.24
	Ametryn	84.0	87.4	215	198	4.03		8.39
	Atrazine	99.4	97.5			1.90		7.43
	Atrazine Desethyl	103	80.1	42.7	137	25.4		52.2
	Azinphos Methyl	108	108	94.1	92.5	0.0515		1.75
	Beta-BHC	92.4	124	105	110	29.2		5.39
	Bifenthrin	53.6	74.3	93.5	90.8	32.5		2.95
	Bromacil	66.7	83.1	58.6	94.2	21.9		25.8
	Butylate	59.1	64.1	61.8	71.3	8.06		14.3
	Carbophenothion	57.8	67.4	94.0	98.2	15.3		4.39
	Chlorothalonil	52.7	68.6	42.3	40.3	26.3		4.69
	Chlorpyrifos Ethyl	93.7	103	101	91.1	9.34		9.98
	Chlorpyrifos Methyl	94.0	98.8	95.4	96.8	5.02		1.45
	Cis-Nonachlor	69.4	91.4	77.1	76.4	27.3		0.871
	Cyanazine	108	156	89.8	155	36.4		53.1
	Cypermethrin	43.7	66.5	101	105	41.5		3.85
	DDD-p,p'	80.1	105	85.5	85.2	26.4		0.372
	DDE-p,p'	64.1	86.3	73.8	71.5	29.5		3.15
	DDT-p,p'	64.0	90.6	79.5	75.3	34.4		5.40
	Delta-BHC	96.9	124	104	110	24.5		5.45
	Demeton	65.2	66.3	81.2	99.0	1.56		19.7
	Diazinon	91.8	100	111	107	8.58		3.23
	Dicofol	75.3	87.9	67.6	76.2	15.4		12.0
	Dieldrin	84.8	111	86.7	95.5	26.7		9.58
	Dimethenamid	97.1	87.7	86.2	68.3	10.2		20.0
	Disulfoton	79.2	96.0	105	109	19.1		4.29
	Dithiopyr	94.1	88.6	90.4	83.3	5.94		7.47
	Endosulfan I	82.8	107	85.8	89.7	25.6		4.47
	Endosulfan II	92.4	113	99.4	102	19.8		2.62

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Endosulfan Sulfate	105	132	120	140	23.2		14.8
	Endrin	89.2	107	94.2	97.9	18.0		3.79
	Endrin Aldehyde	86.8	112	51.8	50.7	25.7		2.08
	Endrin Ketone	92.6	117	113	122	23.1		7.57
	EPTC	67.5	58.7	61.5	72.9	13.9		17.1
	Ethalfuralin	74.5	95.7	77.0	75.9	24.8		1.54
	Ethion	106	94.2	89.0	84.3	12.1		5.41
	Ethoprop	85.6	90.6	99.3	120	5.63		18.9
	Fenamiphos	89.6	95.7	30.8	34.3	6.58		10.7
	Fipronil	96.3	79.7	46.5	85.0	18.8		46.2
	Fipronil Desulfinyl	92.2	80.0	36.7	83.2	14.2		51.0
	Fipronil Sulfide	97.2	83.0	13.0	88.8	15.8		50.2
	Fipronil Sulfone	96.4	75.3			24.6		49.7
	Fonofos	82.5	94.1	101	110	13.1		8.55
	Gamma-BHC	88.1	111	95.6	87.1	23.0		9.33
	Gamma-Chlordane	60.3	79.4	67.0	64.9	27.4		3.09
	Heptachlor	58.1	74.3	58.9	58.9	24.5		0.0682
	Heptachlor Epoxide	77.3	97.8	80.8	83.3	23.4		3.14
	Hexachlorobenzene	65.7	85.3	58.6	58.4	26.0		0.320
	Hexazinone	107	99.5			7.31		21.5
	Malathion	99.2	98.5	89.4	89.9	0.766		0.466
	Metalaxyl	97.7	90.9	92.3	85.3	7.21		7.90
	Methoxychlor	64.5	88.6	66.6	75.8	31.4		12.9
	Metolachlor	100	83.3	98.6	79.6	18.4		14.1
	Metribuzin	168	101	180	224	50.1		20.3
	Mevinphos	85.5	82.7	90.4	97.9	3.33		7.97
	Mirex	39.7	52.2	55.6	48.1	27.3		14.5
	Molinate	74.4	76.1	80.5	82.2	2.27		2.10
	Norflurazon	96.9	84.5	40.1	85.2	13.7		72.0
	Oxadiazon	103	90.3	95.5	72.2	13.1		18.0
	Parathion Ethyl	94.5	91.9	91.7	98.3	2.79		6.92
	Parathion Methyl	97.7	100	99.8	109	2.58		9.04
	Pendimethalin	90.1	91.9	95.9	95.0	1.92		0.934
	Permethrin	58.4	79.0	70.5	71.8	30.0		1.78
	Phorate	88.6	93.9	88.5	100	5.80		10.8
	Prodiamine	84.6	83.3	83.2	83.8	1.57		0.719
	Prometon	91.2	78.5	81.1	77.6	15.0		3.32
	Prometryn	92.7	85.1	87.1	83.2	8.58		4.56
	Simazine	102	108			5.61		12.3
	Tebuconazole	75.7	96.4	13.8	11.1	24.1		12.5
	Terbufos	84.2	94.7	105	116	11.8		9.97
	Terbuthylazine	99.5	92.2	97.9	99.4	7.68		1.58
	Trans-Nonachlor	60.9	78.9	61.4	61.2	25.7		0.183
	Trifluralin	73.1	94.3	74.2	72.4	25.4		2.40
EPA 8276	Chlordane	75.5	74.8	68.1	67.5	0.904		0.778
	Toxaphene	55.4	66.1	61.9	66.1	17.7		6.54
EPA 8321B	2,4-D	74.6		132	119			9.18
	3-Hydroxycarbofuran	109		93.4	98.9			5.71
	Acesulfame K	46.3		21.0	21.8			3.60
	Acetaminophen	83.7		88.0	89.4			1.55
	Acetamiprid	96.7		127	110			14.0
	Afidopyropen	79.9		117	114			2.93
	Aldicarb	113		78.3	93.7			17.8
	Aldicarb Sulfone	105		101	110			7.96

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Aldicarb Sulfoxide	105	52.3	55.4			5.81
	AMPA	106	0.0	0.0			
	Bentazon	93.6	73.0	75.1			1.31
	Benzovindiflupyr	50.5	45.1	73.3			47.5
	Carbamazepine	97.5	116	114			2.37
	Carbaryl	113	81.7	88.9			8.44
	Carbofuran	93.0	65.3	68.7			5.11
	Clothianidin	95.6	117	116			0.551
	Dinotefuran	89.5	123	123			0.391
	Diuron	103	115	106			7.38
	Endothall	87.5	212	212			0.0455
	Fenuron	119	100	103			2.67
	Fluridone	88.8					2.67
	Glufosinate	115	0.0	0.0			
	Glyphosate	111	0.0	0.0			
	Hydrocodone	98.6	110	108			1.74
	Ibuprofen	49.3	70.2	76.9			9.11
	Imazapyr	86.7					4.82
	Imidacloprid	100	222	210			5.12
	Linuron	66.3	72.3	71.9			0.554
	Mandestrobin	73.0	86.0	90.6			5.18
	MCPP	75.3	141	130			8.08
	Methiocarb	80.4	64.5	70.6			9.03
	Methomyl	90.6	69.8	76.4			8.99
	Naproxen	60.1	116	74.0			44.2
	Oxamyl	112	92.4	96.4			4.25
	Primidone	84.4	102	101			0.586
	Propoxur	95.4	67.0	70.5			5.05
	Pyraclostrobin	41.1	36.8	65.1			55.4
	Sucralose	87.0	142	141			0.548
	Thiamethoxam	108	174	176			1.23
	Tolfenpyrad	14.2	2.13	23.2			
	Triclopyr	50.7	100	88.9			11.8
SM 2320 B-97	Total Alkalinity	104				0.228	
SM 4500 F-C-97	Fluoride	96.6	93.6	96.2			1.95
SM 5310 B-00	Organic Carbon	104	90.0	92.9			2.27

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2118300
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2118312
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2118312
EPA 300.0 / E31780	Bromide in aqueous matrices	2118300
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2118301
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2118301
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2118301

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2118301
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2118302
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2118310
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2118311
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2118310
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2118308
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2118309
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2118309
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2118300
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2118300
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2118300
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2118301

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	09/12/2019			09/12/2019 17:00	Samantha Davila	2118300
EPA 200.7 Rev. 4.4	09/12/2019	09/16/2019 14:50	Elliott D. Healy	09/18/2019 15:10	Betina Topolski	2118312
	09/12/2019	09/16/2019 14:50	Elliott D. Healy	09/19/2019 16:02	Betina Topolski	2118312
EPA 200.8 Rev. 5.4	09/12/2019	09/16/2019 14:50	Elliott D. Healy	09/26/2019 16:06	Robert K Palmer	2118312
	09/12/2019	09/16/2019 14:50	Elliott D. Healy	10/02/2019 19:50	Robert K Palmer	2118312
	09/12/2019	09/16/2019 14:50	Elliott D. Healy	10/03/2019 19:07	Justin Cutchin	2118312
	09/12/2019	09/16/2019 14:50	Elliott D. Healy	10/04/2019 20:43	Justin Cutchin	2118312
EPA 300.0	09/12/2019			09/13/2019 18:02	Jhamieka S. Greenwood	2118300
EPA 350.1 Rev. 2.0	09/12/2019			09/16/2019 14:16	Ping Hua	2118301
EPA 351.2 Rev. 2.0	09/12/2019	09/16/2019 12:20	Sima Feizi	09/17/2019 14:39	Julia Storbeck	2118301
EPA 353.2 Rev. 2.0	09/12/2019			09/17/2019 10:14	Beverly Y. Sanders	2118301
EPA 365.1 Rev. 2.0	09/12/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 15:39	Rosalyn Ballman	2118301
EPA 365.1 Rev. 2.0 dissolved	09/12/2019			09/12/2019 13:04	Ping Hua	2118302
EPA 8270E	09/12/2019	09/12/2019 13:00	Fe-Val Siddell	09/13/2019 18:03	Vandana T. Nagar	2118311
	09/12/2019	09/17/2019 10:00	Fe-Val Siddell	09/24/2019 22:21	Arthur Maknenko	2118310
EPA 8276	09/12/2019	09/17/2019 10:00	Fe-Val Siddell	09/24/2019 00:13	Michael Poppell	2118310
EPA 8321B	09/12/2019	09/12/2019 13:00	Hoor Shaik	09/14/2019 00:39	Juyoung Kim	2118308
	09/12/2019	09/13/2019 11:00	Rebecca Ware	09/14/2019 01:12	Rebecca Ware	2118309
	09/12/2019	09/13/2019 11:00	Rebecca Ware	09/16/2019 15:18	Rebecca Ware	2118309
	09/12/2019	09/13/2019 11:00	Rebecca Ware	09/18/2019 18:24	Rebecca Ware	2118309
	09/12/2019	09/16/2019 09:00	Fe-Val Siddell	09/16/2019 17:42	Juyoung Kim	2118309
SM 2320 B-97	09/12/2019			09/19/2019 12:56	Dale L. Simmons	2118300
SM 2540 D-97	09/12/2019			09/13/2019 17:30	Blanca Fach	2118300
SM 4500 F-C-97	09/12/2019			09/19/2019 09:48	Dale L. Simmons	2118300
SM 5310 B-00	09/12/2019			09/17/2019 03:58	Madeline Funaro	2118301