

Chemical Analysis Report

NE-DIST-2019-11-20-02

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-2019-11-18-63**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
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Certified by: Colin Wright, Program Administrator

Date Certified: 13-DEC-2019 11:07

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular 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: 11/19/2019 09:10

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137765	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P374542	
	EPA 300.0	Bromide	26		mg Br/L	P374772	
	SM 2320 B-97	Total Alkalinity	86		mg CaCO3/L	P374791	
	SM 2540 D-97	TSS	5	I	mg/L	P375132	
	SM 4500 F-C-97	Fluoride	0.48	I	mg F/L	P374794	
2137766	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P375088	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P374918	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P374867	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P375067	
	SM 5310 B-00	Organic Carbon	8.5		mg C/L	P374889	
2137767	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P374576	
2137771	EPA 8321B	Aldicarb	0.020	U	ug/L	P374481	
		Aldicarb Sulfone	0.0020	U	ug/L	P374481	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P374481	
		Carbaryl	0.0020	U	ug/L	P374481	
		Carbofuran	0.0020	U	ug/L	P374481	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P374481	
		Methiocarb	0.0020	U	ug/L	P374481	
		Methomyl	0.0020	U	ug/L	P374481	
		Oxamyl	0.0020	U	ug/L	P374481	
		Propoxur	0.0020	U	ug/L	P374481	
		2,4-D	0.11		ug/L	P374613	
		Acesulfame K**	0.10	UJ	ug/L	P374550	SUR
		AMPA**	1.0	U	ug/L	P374550	
2137772		Sucralose**	0.085		ug/L	P374550	
		Acetaminophen**	0.0080	U	ug/L	P374613	
		Acetamiprid**	0.0020	U	ug/L	P374613	
		Endothal**	0.25	UJ	ug/L	P374550	SUR
		Glufosinate**	1.0	U	ug/L	P374550	
		Glyphosate**	1.0	U	ug/L	P374550	
		Afidopyropen**	0.0020	UJ	ug/L	P374613	
		Bentazon	0.023		ug/L	P374613	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P374613	
		Carbamazepine**	8.0E-04	U	ug/L	P374613	
		Clothianidin**	0.0033	I	ug/L	P374613	
		Dinotefuran**	0.0020	U	ug/L	P374613	
		Diuron	0.015		ug/L	P374613	
		Fenuron	0.016	U	ug/L	P374613	
		Fluridone**	0.048		ug/L	P374613	
		Imazapyr**	0.25		ug/L	P374613	
		Hydrocodone**	0.0020	U	ug/L	P374613	
		Ibuprofen**	0.020	U	ug/L	P374613	
		Imidacloprid	0.013		ug/L	P374613	

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137772	EPA 8321B	Linuron	0.0040	U	ug/L	P374613	
		Mandestrobin**	0.0020	UJ	ug/L	P374613	
		MCPD	0.0020	U	ug/L	P374613	
		Naproxen**	0.0080	U	ug/L	P374613	
		Primidone**	0.0040	U	ug/L	P374613	
		Pyraclostrobin**	0.0020	U	ug/L	P374613	
		Thiamethoxam**	0.0020	U	ug/L	P374613	
		Tolfenpyrad**	0.0020	U	ug/L	P374613	
		Triclopyr**	0.0040	U	ug/L	P374613	
2137773	EPA 8270E	Aldrin	4.2	U	ng/L	P374489	
		Alpha-BHC	2.1	U	ng/L	P374489	
		Alpha-Chlordane	1.0	U	ng/L	P374489	
		Beta-BHC	10	U	ng/L	P374489	
		Bifenthrin**	4.2	U	ng/L	P374489	
		Delta-BHC	8.3	U	ng/L	P374489	
		Gamma-BHC	8.3	U	ng/L	P374489	
		Carbophenothion	10	U	ng/L	P374489	
		Chlorothalonil	2.1	U	ng/L	P374489	
		Cis-Nonachlor**	1.0	U	ng/L	P374489	MS
		Cypermethrin	21	U	ng/L	P374489	
		DDD-p,p'	6.2	U	ng/L	P374489	
		DDE-p,p'	6.2	U	ng/L	P374489	
		DDT-p,p'	7.3	U	ng/L	P374489	
		Dicofol	31	U	ng/L	P374489	
		Dieldrin	4.2	U	ng/L	P374489	
		Endosulfan I	4.2	U	ng/L	P374489	
		Endosulfan II	4.2	U	ng/L	P374489	
		Endosulfan Sulfate	2.1	U	ng/L	P374489	
		Endrin	2.1	U	ng/L	P374489	
		Endrin Aldehyde	2.1	U	ng/L	P374489	
		Endrin Ketone	2.1	U	ng/L	P374489	
		Ethalfuralin**	3.1	U	ng/L	P374489	MS
		Gamma-Chlordane	1.0	U	ng/L	P374489	
		Heptachlor	1.6	U	ng/L	P374489	
		Heptachlor Epoxide	2.1	U	ng/L	P374489	
		Hexachlorobenzene	2.1	U	ng/L	P374489	
		Methoxychlor	4.2	U	ng/L	P374489	
		Mirex	2.1	U	ng/L	P374489	
		Permethrin	10	U	ng/L	P374489	
		Trans-Nonachlor**	1.0	U	ng/L	P374489	MS
		Trifluralin	2.6	U	ng/L	P374489	
		Chlordane	5.2	U	ng/L	P374489	
		Toxaphene	31	U	ng/L	P374489	
2137774	EPA 8270E	Acetochlor	0.27	U	ng/L	P374719	
		Alachlor	0.27	U	ng/L	P374719	

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137774	EPA 8270E	Ametryn	0.64	U	ng/L	P374719	
		Atrazine	48		ng/L	P374719	
		Atrazine Desethyl	1.6	U	ng/L	P374719	
		Azinphos Methyl	5.3	U	ng/L	P374719	
		Bromacil	0.53	U	ng/L	P374719	
		Butylate	0.43	U	ng/L	P374719	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P374719	
		Chlorpyrifos Methyl	0.11	U	ng/L	P374719	
		Cyanazine	3.5	U	ng/L	P374719	
		Demeton	7.4	U	ng/L	P374719	
		Diazinon	0.13	U	ng/L	P374719	
		Dimethenamid**	0.11	U	ng/L	P374719	RPD
		Disulfoton	0.53	U	ng/L	P374719	
		Dithiopyr**	0.49		ng/L	P374719	
		EPTC	1.3	U	ng/L	P374719	
		Ethion	0.16	U	ng/L	P374719	
		Ethoprop	0.11	U	ng/L	P374719	
		Fenamiphos	0.53	U	ng/L	P374719	
		Fipronil	0.27	U	ng/L	P374719	
		Fipronil Desulfinyl**	0.23	I	ng/L	P374719	
		Fipronil Sulfide	0.42	I	ng/L	P374719	
		Fipronil Sulfone	0.77		ng/L	P374719	
		Fonofos	0.21	U	ng/L	P374719	
		Hexazinone	0.53	U	ng/L	P374719	
		Malathion	0.37	U	ng/L	P374719	
		Metalaxyl	0.32	U	ng/L	P374719	
		Metolachlor	0.78	I	ng/L	P374719	
		Metribuzin	0.80	U	ng/L	P374719	
		Mevinphos	0.53	UJ	ng/L	P374719	CCV
		Molinate	0.32	U	ng/L	P374719	
		Norflurazon	0.53	U	ng/L	P374719	
		Oxadiazon**	19		ng/L	P374719	
		Parathion Ethyl	0.27	U	ng/L	P374719	
		Parathion Methyl	0.58	U	ng/L	P374719	
		Pendimethalin	1.1	U	ng/L	P374719	
		Phorate	0.27	U	ng/L	P374719	
		Prodiamine**	0.45	I	ng/L	P374719	
		Prometon	0.96	U	ng/L	P374719	
		Prometryn	0.21	U	ng/L	P374719	
		Simazine	36		ng/L	P374719	
		Tebuconazole**	0.53	U	ng/L	P374719	RPD
		Terbufos	0.11	U	ng/L	P374719	
		Terbutylazine	0.45	U	ng/L	P374719	
2137775	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P374611	
		Manganese	9.9	I	ug/L	P374611	

Field ID: G2NE1178

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2137775	EPA 200.7 Rev. 4.4	Zinc	15	U	ug/L	P374611	
	EPA 200.8 Rev. 5.4	Aluminum	88		ug/L	P374611	
		Antimony	0.20	U	ug/L	P374611	
		Arsenic	1.90		ug/L	P374611	
		Cadmium	0.080	U	ug/L	P374611	
		Chromium	4.0	U	ug/L	P374611	
		Copper	2.5	I	ug/L	P374611	
		Lead	0.80	U	ug/L	P374611	
		Nickel	2.0	U	ug/L	P374611	
		Selenium	0.80	U	ug/L	P374611	
		Silver	0.040	U	ug/L	P374611	
		Thallium	0.40	U	ug/L	P374611	

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 bentazon and imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: MS accuracy for atrazine and oxadiazon not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374542

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374611

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: P374611

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: P374772

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375088

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374918

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374867

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: P375067

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

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

Reference Method: EPA 8270E
Batch ID: P374489

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 8270E
Batch ID: P374719

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P374719

Component	Result	Code	Units
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
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 8276
Batch ID: P374489

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: P374481

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: P374550

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: P374613

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: P374791

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

Reference Method: SM 2540 D-97
Batch ID: P375132

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374889

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: P374611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115
Manganese	101		P	85 - 115
Zinc	99.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	100		P	85 - 115
Cadmium	98.1		P	85 - 115
Chromium	91.9		P	85 - 115
Copper	99.2		P	85 - 115
Lead	103		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	89.4		P	85 - 115
Silver	104		P	85 - 115
Thallium	108		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P374772

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375088

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374918

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374867

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375067

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

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

Reference Method: EPA 8270E
Batch ID: P374489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	43.1	39.3	P/P	20 - 93.0
Alpha-BHC	72.9	78.7	P/P	55 - 133
Alpha-Chlordane	62.8	69.2	P/P	58 - 112
Beta-BHC	79.1	90.0	P/P	54 - 168
Bifenthrin	60.9	70.6	P/P	30 - 134
Carbophenothion	68.4	78.2	P/P	26 - 147
Chlorothalonil	77.5	85.0	P/P	20 - 155
Cis-Nonachlor	60.6	69.3	P/P	54 - 115
Cypermethrin	66.3	73.0	P/P	40 - 137
DDD-p,p'	66.3	74.4	P/P	65 - 129
DDE-p,p'	61.8	68.6	P/P	57 - 116
DDT-p,p'	68.4	74.6	P/P	53 - 133
Delta-BHC	83.9	101	P/P	59 - 178
Dicofol	90.8	86.7	P/P	24 - 138
Dieldrin	69.3	74.7	P/P	60 - 120
Endosulfan I	70.4	78.7	P/P	64 - 118
Endosulfan II	71.9	77.7	P/P	58 - 142
Endosulfan Sulfate	71.6	80.1	P/P	60 - 127
Endrin	73.1	80.6	P/P	59 - 122
Endrin Aldehyde	73.3	79.2	P/P	49 - 132
Endrin Ketone	73.4	80.3	P/P	64 - 121
Ethalfuralin	66.4	72.9	P/P	60 - 126
Gamma-BHC	75.9	90.0	P/P	57 - 154
Gamma-Chlordane	59.7	66.3	P/P	56 - 110
Heptachlor	62.1	63.6	P/P	46 - 96.0
Heptachlor Epoxide	69.3	73.8	P/P	61 - 112
Hexachlorobenzene	61.2	65.3	P/P	44 - 98.0
Methoxychlor	85.5	90.4	P/P	63 - 134
Mirex	55.6	62.7	P/P	45 - 100
Permethrin	61.1	67.2	P/P	53 - 115
Trans-Nonachlor	58.3	65.8	P/P	47 - 110
Trifluralin	68.2	75.1	P/P	39 - 142

Reference Method: EPA 8270E
Batch ID: P374719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	89.4	92.5	P/P	69 - 122
Alachlor	87.9	90.7	P/P	71 - 120
Ametryn	91.4	94.4	P/P	47 - 138
Atrazine	113	116	P/P	74 - 124
Atrazine Desethyl	121	119	P/P	38 - 138
Azinphos Methyl	103	110	P/P	69 - 154
Bromacil	83.3	86.1	P/P	39 - 121
Butylate	68.2	67.9	P/P	27 - 87.0
Chlorpyrifos Ethyl	98.3	102	P/P	69 - 118

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P374719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorpyrifos Methyl	103	108	P/P	70 - 120
Cyanazine	167	160	P/P	20 - 250
Demeton	90.9	93.3	P/P	39 - 118
Diazinon	98.7	101	P/P	68 - 127
Dimethenamid	85.7	88.7	P/P	66 - 125
Disulfoton	102	108	P/P	52 - 126
Dithiopyr	80.7	83.9	P/P	67 - 127
EPTC	71.0	72.9	P/P	24 - 88.0
Ethion	103	105	P/P	51 - 132
Ethoprop	112	114	P/P	58 - 117
Fenamiphos	59.2	62.4	P/P	38 - 139
Fipronil	75.4	77.8	P/P	61 - 124
Fipronil Desulfinyl	87.8	88.3	P/P	47 - 120
Fipronil Sulfide	96.0	98.8	P/P	56 - 119
Fipronil Sulfone	93.7	95.8	P/P	50 - 117
Fonofos	98.3	103	P/P	60 - 121
Hexazinone	105	106	P/P	55 - 137
Malathion	99.2	99.8	P/P	66 - 126
Metalaxyl	60.5	63.9	P/P	33 - 140
Metolachlor	87.9	91.4	P/P	69 - 119
Metribuzin	234	237	P/P	31 - 238
Mevinphos	72.5	63.8	P/P	42 - 113
Molinate	83.7	86.1	P/P	32 - 96.0
Norflurazon	90.4	93.4	P/P	54 - 123
Oxadiazon	82.7	86.0	P/P	63 - 128
Parathion Ethyl	103	108	P/P	72 - 111
Parathion Methyl	117	118	P/P	74 - 126
Pendimethalin	94.4	96.6	P/P	61 - 131
Phorate	104	106	P/P	51 - 115
Prodiamine	98.3	96.8	P/P	38 - 144
Prometon	83.9	78.8	P/P	54 - 119
Prometryn	88.3	88.8	P/P	63 - 120
Simazine	114	117	P/P	75 - 126
Tebuconazole	32.5	32.3	P/P	20 - 119
Terbufos	102	106	P/P	64 - 116
Terbuthylazine	99.4	102	P/P	73 - 117

Reference Method: EPA 8276
Batch ID: P374489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	71.9	77.7	P/P	43 - 128
Toxaphene	61.2	62.3	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P374481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	84.3		P	40 - 160
Aldicarb	64.4		P	30 - 160
Aldicarb Sulfone	87.2		P	40 - 160
Aldicarb Sulfoxide	85.0		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P374481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbaryl	82.6		P	40 - 160
Carbofuran	81.0		P	40 - 160
Methiocarb	76.9		P	40 - 160
Methomyl	81.1		P	40 - 160
Oxamyl	91.8		P	40 - 160
Propoxur	76.9		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P374550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	91.1		P	40 - 150
AMPA	145		P	40 - 150
Endothall	98.9		P	40 - 150
Glufosinate	99.0		P	40 - 150
Glyphosate	112		P	40 - 140
Sucralose	121		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P374613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	152		P	40 - 160
Acetaminophen	80.7		P	30 - 160
Acetamiprid	103		P	40 - 160
Afidopyropen	112		P	40 - 160
Bentazon	83.4		P	30 - 160
Benzovindiflupyr	75.8		P	40 - 160
Carbamazepine	99.4		P	40 - 160
Clothianidin	90.1		P	40 - 160
Dinotefuran	96.3		P	40 - 160
Diuron	82.8		P	40 - 160
Fenuron	105		P	40 - 160
Fluridone	91.1		P	40 - 160
Hydrocodone	94.0		P	40 - 160
Ibuprofen	81.0		P	30 - 160
Imazapyr	102		P	40 - 160
Imidacloprid	111		P	40 - 160
Linuron	83.3		P	40 - 160
Mandestrobin	85.0		P	40 - 160
MCPP	146		P	40 - 160
Naproxen	97.4		P	40 - 160
Primidone	84.7		P	40 - 160
Pyraclostrobin	83.2		P	30 - 160
Thiamethoxam	99.2		P	40 - 160
Tolfenpyrad	57.8		P	40 - 160
Triclopyr	91.4		P	30 - 160

Reference Method: SM 2320 B-97
Batch ID: P374791

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

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P374791

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P374889

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	102		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137699	Iron	101	102	P/P	70 - 130
2137699	Manganese	97.0	97.1	P/P	70 - 130
2137699	Zinc	104	104	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137699	Aluminum	121	124	P/P	70 - 130
2137699	Antimony	102	102	P/P	70 - 130
2137699	Arsenic	109	110	P/P	70 - 130
2137699	Cadmium	90.6	91.8	P/P	70 - 130
2137699	Chromium	88.1	89.2	P/P	70 - 130
2137699	Copper	94.3	97.1	P/P	70 - 130
2137699	Lead	107	107	P/P	70 - 130
2137699	Nickel	92.5	94.6	P/P	70 - 130
2137699	Selenium	91.8	92.1	P/P	70 - 130
2137699	Silver	94.7	95.3	P/P	70 - 130
2137699	Thallium	111	112	P/P	70 - 130

Reference Method: EPA 300.0
Batch ID: P374772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137703	Bromide	95.9	96.0	P/P	90 - 110
2137706	Bromide	96.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138122	Ammonia-N	103	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138094	Kjeldahl Nitrogen	97.9	96.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137712	NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137712	Total-P	103	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137480	O-Phosphate-P	96.8	98.4	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P374489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137591	Aldrin	40.5	38.5	P/P	25 - 92.0
2137591	Alpha-BHC	83.3	81.2	P/P	48 - 150
2137591	Alpha-Chlordane	63.2	57.7	P/P	50 - 115
2137591	Beta-BHC	114	144	P/P	39 - 184
2137591	Bifenthrin	51.6	53.0	P/P	46 - 116
2137591	Carbophenothion	74.4	67.5	P/P	27 - 180
2137591	Chlorothalonil	93.8	81.0	P/P	10 - 216
2137591	Cis-Nonachlor	55.0	45.3	P/F	55 - 112
2137591	Cypermethrin	56.2	47.8	P/P	40 - 153
2137591	DDD-p,p'	65.7	55.3	P/P	53 - 128
2137591	DDE-p,p'	53.6	48.2	P/P	48 - 116
2137591	DDT-p,p'	61.0	58.5	P/P	47 - 128
2137591	Delta-BHC	110	96.9	P/P	48 - 221
2137591	Dicofol	75.9	103	P/P	10 - 147
2137591	Dieldrin	84.4	70.2	P/P	48 - 128
2137591	Endosulfan I	72.4	65.0	P/P	58 - 126
2137591	Endosulfan II	77.3	61.1	P/P	50 - 150
2137591	Endosulfan Sulfate	75.4	70.5	P/P	56 - 130
2137591	Endrin	69.8	60.6	P/P	50 - 126
2137591	Endrin Aldehyde	70.7	62.6	P/P	12 - 145
2137591	Endrin Ketone	87.3	79.1	P/P	59 - 132
2137591	Ethalfuralin	60.2	56.8	F/F	65 - 122
2137591	Gamma-BHC	98.1	93.4	P/P	40 - 190
2137591	Gamma-Chlordane	56.8	51.3	P/P	50 - 112
2137591	Heptachlor	47.9	47.6	P/P	41 - 98.0
2137591	Heptachlor Epoxide	69.1	58.4	P/P	55 - 117
2137591	Hexachlorobenzene	49.0	47.8	P/P	47 - 91.0
2137591	Methoxychlor	81.7	78.9	P/P	55 - 133
2137591	Mirex	51.9	46.7	P/P	44 - 101
2137591	Permethrin	52.2	53.2	P/P	52 - 124
2137591	Trans-Nonachlor	51.7	43.2	F/F	53 - 99.0
2137591	Trifluralin	60.4	57.6	P/P	10 - 201

Reference Method: EPA 8270E
Batch ID: P374719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137172	Acetochlor	99.4	104	P/P	63 - 129
2137172	Alachlor	99.5	96.0	P/P	65 - 127
2137172	Ametryn	150	119	P/P	40 - 164
2137172	Atrazine Desethyl	112	109	P/P	14 - 157
2137172	Azinphos Methyl	109	113	P/P	49 - 180
2137172	Bromacil	73.9	80.0	P/P	48 - 130
2137172	Butylate	60.2	62.2	P/P	10 - 94.0
2137172	Chlorpyrifos Ethyl	95.2	82.4	P/P	58 - 123
2137172	Chlorpyrifos Methyl	88.7	94.1	P/P	58 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P374719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137172	Cyanazine	129	150	P/P	24 - 253
2137172	Demeton	93.1	93.3	P/P	25 - 149
2137172	Diazinon	113	117	P/P	59 - 144
2137172	Dimethenamid	51.4	76.8	P/P	46 - 139
2137172	Disulfoton	110	112	P/P	54 - 132
2137172	Dithiopyr	77.8	80.1	P/P	64 - 130
2137172	EPTC	63.5	61.1	P/P	10 - 92.0
2137172	Ethion	80.0	97.4	P/P	30 - 148
2137172	Ethoprop	79.5	76.7	P/P	50 - 130
2137172	Fenamiphos	85.1	83.6	P/P	49 - 142
2137172	Fipronil	90.8	101	P/P	46 - 140
2137172	Fipronil Desulfinyf	89.3	96.8	P/P	30 - 121
2137172	Fipronil Sulfide	85.4	97.7	P/P	31 - 136
2137172	Fipronil Sulfone	76.6	79.9	P/P	16 - 136
2137172	Fonofos	116	119	P/P	55 - 129
2137172	Hexazinone	106	115	P/P	56 - 141
2137172	Malathion	91.9	92.9	P/P	56 - 135
2137172	Metalaxyl	105	109	P/P	54 - 135
2137172	Metolachlor	88.2	93.8	P/P	51 - 140
2137172	Metribuzin	232	226	P/P	45 - 254
2137172	Mevinphos	114	105	P/P	33 - 131
2137172	Molinate	75.1	78.0	P/P	14 - 98.0
2137172	Norflurazon	78.5	88.6	P/P	34 - 136
2137172	Parathion Ethyl	94.4	97.5	P/P	66 - 118
2137172	Parathion Methyl	112	114	P/P	64 - 136
2137172	Pendimethalin	90.5	98.1	P/P	59 - 144
2137172	Phorate	114	112	P/P	42 - 130
2137172	Prodiamine	44.2	47.0	P/P	42 - 148
2137172	Prometon	91.6	114	P/P	59 - 134
2137172	Prometryn	99.8	98.7	P/P	54 - 135
2137172	Simazine	128	120	P/P	53 - 156
2137172	Tebuconazole	18.3	32.0	P/P	10 - 131
2137172	Terbufos	123	119	P/P	57 - 131
2137172	Terbuthylazine	100	104	P/P	68 - 125

Reference Method: EPA 8276
Batch ID: P374489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137171	Chlordane	69.3	69.9	P/P	34 - 136
2137171	Toxaphene	69.4	60.8	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P374481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136495	3-Hydroxycarbofuran	83.5	78.3	P/P	40 - 160
2136495	Aldicarb	53.2	57.2	P/P	30 - 160
2136495	Aldicarb Sulfone	97.4	96.3	P/P	40 - 160
2136495	Aldicarb Sulfoxide	50.3	47.8	P/P	40 - 160
2136495	Carbaryl	67.7	70.4	P/P	40 - 160
2136495	Carbofuran	69.9	70.0	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P374481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2136495	Methiocarb	64.8	65.7	P/P	40 - 160
2136495	Methomyl	65.6	63.8	P/P	40 - 160
2136495	Oxamyl	85.6	84.1	P/P	40 - 160
2136495	Propoxur	67.7	66.0	P/P	40 - 160

Reference Method: EPA 8321B
Batch ID: P374550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137386	Acesulfame K	113	109	P/P	40 - 150
2137386	AMPA	135	136	P/P	40 - 150
2137386	Endothall	101	136	P/P	40 - 150
2137386	Glufosinate	92.1	86.6	P/P	40 - 150
2137386	Glyphosate	102	103	P/P	40 - 140
2137386	Sucralose	87.4	64.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P374613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137732	2,4-D	136	128	P/P	40 - 160
2137732	Acetaminophen	86.1	83.2	P/P	30 - 160
2137732	Acetamiprid	106	100	P/P	40 - 160
2137732	Afidopyropen	118	105	P/P	40 - 160
2137732	Benzovindiflupyr	80.3	80.1	P/P	40 - 160
2137732	Carbamazepine	83.6	83.5	P/P	40 - 160
2137732	Clothianidin	101	100	P/P	40 - 160
2137732	Dinotefuran	124	123	P/P	40 - 160
2137732	Diuron	66.9	62.8	P/P	40 - 160
2137732	Fenuron	99.5	95.8	P/P	40 - 160
2137732	Fluridone	81.2	72.8	P/P	40 - 160
2137732	Hydrocodone	101	98.1	P/P	40 - 160
2137732	Ibuprofen	72.5	74.8	P/P	30 - 160
2137732	Imidacloprid	158	158	P/P	40 - 160
2137732	Linuron	70.4	72.1	P/P	40 - 160
2137732	Mandestrobin	83.9	79.9	P/P	40 - 160
2137732	MCPD	137	127	P/P	40 - 160
2137732	Naproxen	103	85.4	P/P	40 - 160
2137732	Primidone	94.8	93.4	P/P	40 - 160
2137732	Pyraclostrobin	86.1	85.6	P/P	30 - 160
2137732	Thiamethoxam	138	134	P/P	40 - 160
2137732	Tolfenpyrad	58.9	59.3	P/P	40 - 160
2137732	Triclopyr	110	101	P/P	30 - 160

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137447	Fluoride	94.6	94.6	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P374889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2137468	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137688	Turbidity	3.16	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137699	Iron	0.849	Spike	P	0 - 20
2137699	Manganese	0.129	Spike	P	0 - 20
2137699	Zinc	0.285	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137699	Aluminum	2.75	Spike	P	0 - 20
2137699	Antimony	0.439	Spike	P	0 - 20
2137699	Arsenic	1.36	Spike	P	0 - 20
2137699	Cadmium	1.39	Spike	P	0 - 20
2137699	Chromium	1.28	Spike	P	0 - 20
2137699	Copper	3.02	Spike	P	0 - 20
2137699	Lead	0.771	Spike	P	0 - 20
2137699	Nickel	2.22	Spike	P	0 - 20
2137699	Selenium	0.301	Spike	P	0 - 20
2137699	Silver	0.670	Spike	P	0 - 20
2137699	Thallium	0.715	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P374772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137703	Bromide	0.0514	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138122	Ammonia-N	1.30	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138094	Kjeldahl Nitrogen	1.68	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137712	NO2NO3-N	0.557	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137712	Total-P	1.17	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137480	O-Phosphate-P	1.64	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P374489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137591	Aldrin	5.00	Spike	P	0 - 30
2137591	Alpha-BHC	2.55	Spike	P	0 - 30
2137591	Alpha-Chlordane	8.97	Spike	P	0 - 30
2137591	Beta-BHC	23.1	Spike	P	0 - 30
2137591	Bifenthrin	2.63	Spike	P	0 - 30
2137591	Carbophenothion	9.74	Spike	P	0 - 30
2137591	Chlorothalonil	14.7	Spike	P	0 - 30
2137591	Cis-Nonachlor	19.4	Spike	P	0 - 30
2137591	Cypermethrin	16.2	Spike	P	0 - 30
2137591	DDD-p,p'	17.2	Spike	P	0 - 30
2137591	DDE-p,p'	10.5	Spike	P	0 - 30
2137591	DDT-p,p'	4.18	Spike	P	0 - 30
2137591	Delta-BHC	12.9	Spike	P	0 - 30
2137591	Dicofol	29.9	Spike	P	0 - 30
2137591	Dieldrin	18.3	Spike	P	0 - 30
2137591	Endosulfan I	10.7	Spike	P	0 - 30
2137591	Endosulfan II	23.4	Spike	P	0 - 30
2137591	Endosulfan Sulfate	6.79	Spike	P	0 - 30
2137591	Endrin	14.1	Spike	P	0 - 30
2137591	Endrin Aldehyde	12.3	Spike	P	0 - 30
2137591	Endrin Ketone	9.79	Spike	P	0 - 30
2137591	Ethalfuralin	5.67	Spike	P	0 - 30
2137591	Gamma-BHC	4.84	Spike	P	0 - 30
2137591	Gamma-Chlordane	10.1	Spike	P	0 - 30
2137591	Heptachlor	0.518	Spike	P	0 - 30
2137591	Heptachlor Epoxide	14.0	Spike	P	0 - 30
2137591	Hexachlorobenzene	2.38	Spike	P	0 - 30
2137591	Methoxychlor	3.53	Spike	P	0 - 30
2137591	Mirex	10.7	Spike	P	0 - 30
2137591	Permethrin	1.92	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P374489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137591	Trans-Nonachlor	17.9	Spike	P	0 - 30
2137591	Trifluralin	4.66	Spike	P	0 - 30
LFB	Aldrin	9.10	LCS	P	0 - 30
LFB	Alpha-BHC	7.69	LCS	P	0 - 30
LFB	Alpha-Chlordane	9.81	LCS	P	0 - 30
LFB	Beta-BHC	13.0	LCS	P	0 - 30
LFB	Bifenthrin	14.8	LCS	P	0 - 30
LFB	Carbophenothion	13.4	LCS	P	0 - 30
LFB	Chlorothalonil	9.24	LCS	P	0 - 30
LFB	Cis-Nonachlor	13.4	LCS	P	0 - 30
LFB	Cypermethrin	9.63	LCS	P	0 - 30
LFB	DDD-p,p'	11.5	LCS	P	0 - 30
LFB	DDE-p,p'	10.5	LCS	P	0 - 30
LFB	DDT-p,p'	8.64	LCS	P	0 - 30
LFB	Delta-BHC	18.2	LCS	P	0 - 30
LFB	Dicofol	4.68	LCS	P	0 - 30
LFB	Dieldrin	7.52	LCS	P	0 - 30
LFB	Endosulfan I	11.2	LCS	P	0 - 30
LFB	Endosulfan II	7.70	LCS	P	0 - 30
LFB	Endosulfan Sulfate	11.2	LCS	P	0 - 30
LFB	Endrin	9.75	LCS	P	0 - 30
LFB	Endrin Aldehyde	7.63	LCS	P	0 - 30
LFB	Endrin Ketone	9.02	LCS	P	0 - 30
LFB	Ethalfuralin	9.29	LCS	P	0 - 30
LFB	Gamma-BHC	17.0	LCS	P	0 - 30
LFB	Gamma-Chlordane	10.5	LCS	P	0 - 30
LFB	Heptachlor	2.51	LCS	P	0 - 30
LFB	Heptachlor Epoxide	6.32	LCS	P	0 - 30
LFB	Hexachlorobenzene	6.50	LCS	P	0 - 30
LFB	Methoxychlor	5.60	LCS	P	0 - 30
LFB	Mirex	12.0	LCS	P	0 - 30
LFB	Permethrin	9.52	LCS	P	0 - 30
LFB	Trans-Nonachlor	12.1	LCS	P	0 - 30
LFB	Trifluralin	9.64	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P374719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137172	Acetochlor	5.02	Spike	P	0 - 30
2137172	Alachlor	3.56	Spike	P	0 - 30
2137172	Ametryn	17.0	Spike	P	0 - 30
2137172	Atrazine	0.998	Spike	P	0 - 30
2137172	Atrazine Desethyl	2.06	Spike	P	0 - 30
2137172	Azinphos Methyl	3.38	Spike	P	0 - 30
2137172	Bromacil	7.97	Spike	P	0 - 30
2137172	Butylate	3.19	Spike	P	0 - 30
2137172	Chlorpyrifos Ethyl	14.4	Spike	P	0 - 30
2137172	Chlorpyrifos Methyl	5.83	Spike	P	0 - 30
2137172	Cyanazine	15.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P374719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137172	Demeton	0.278	Spike	P	0 - 30
2137172	Diazinon	3.31	Spike	P	0 - 30
2137172	Dimethenamid	39.5	Spike	F	0 - 30
2137172	Disulfoton	2.03	Spike	P	0 - 30
2137172	Dithiopyr	2.77	Spike	P	0 - 30
2137172	EPTC	3.88	Spike	P	0 - 30
2137172	Ethion	19.6	Spike	P	0 - 30
2137172	Ethoprop	3.57	Spike	P	0 - 30
2137172	Fenamiphos	1.75	Spike	P	0 - 30
2137172	Fipronil	9.81	Spike	P	0 - 30
2137172	Fipronil Desulfinyl	7.14	Spike	P	0 - 30
2137172	Fipronil Sulfide	9.58	Spike	P	0 - 30
2137172	Fipronil Sulfone	2.68	Spike	P	0 - 30
2137172	Fonofos	2.09	Spike	P	0 - 30
2137172	Hexazinone	5.56	Spike	P	0 - 30
2137172	Malathion	1.10	Spike	P	0 - 30
2137172	Metalaxyl	4.10	Spike	P	0 - 30
2137172	Metolachlor	6.16	Spike	P	0 - 30
2137172	Metribuzin	2.42	Spike	P	0 - 30
2137172	Mevinphos	7.74	Spike	P	0 - 30
2137172	Molinate	3.69	Spike	P	0 - 30
2137172	Norflurazon	12.1	Spike	P	0 - 30
2137172	Oxadiazon	1.82	Spike	P	0 - 30
2137172	Parathion Ethyl	3.19	Spike	P	0 - 30
2137172	Parathion Methyl	2.11	Spike	P	0 - 30
2137172	Pendimethalin	8.10	Spike	P	0 - 30
2137172	Phorate	2.13	Spike	P	0 - 30
2137172	Prodiamine	6.15	Spike	P	0 - 30
2137172	Prometon	15.4	Spike	P	0 - 30
2137172	Prometryn	1.16	Spike	P	0 - 30
2137172	Simazine	6.39	Spike	P	0 - 30
2137172	Tebuconazole	54.5	Spike	F	0 - 30
2137172	Terbufos	3.35	Spike	P	0 - 30
2137172	Terbuthylazine	3.97	Spike	P	0 - 30
LFB	Acetochlor	3.39	LCS	P	0 - 30
LFB	Alachlor	3.14	LCS	P	0 - 30
LFB	Ametryn	3.23	LCS	P	0 - 30
LFB	Atrazine	2.42	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.87	LCS	P	0 - 30
LFB	Azinphos Methyl	6.25	LCS	P	0 - 30
LFB	Bromacil	3.31	LCS	P	0 - 30
LFB	Butylate	0.420	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.53	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.17	LCS	P	0 - 30
LFB	Cyanazine	4.33	LCS	P	0 - 30
LFB	Demeton	2.65	LCS	P	0 - 30
LFB	Diazinon	2.34	LCS	P	0 - 30
LFB	Dimethenamid	3.41	LCS	P	0 - 30
LFB	Disulfoton	4.90	LCS	P	0 - 30
LFB	Dithiopyr	3.92	LCS	P	0 - 30
LFB	EPTC	2.63	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P374719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Ethion	2.56	LCS	P	0 - 30
LFB	Ethoprop	2.05	LCS	P	0 - 30
LFB	Fenamiphos	5.20	LCS	P	0 - 30
LFB	Fipronil	3.04	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	0.551	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.87	LCS	P	0 - 30
LFB	Fipronil Sulfone	2.24	LCS	P	0 - 30
LFB	Fonofos	4.97	LCS	P	0 - 30
LFB	Hexazinone	0.892	LCS	P	0 - 30
LFB	Malathion	0.678	LCS	P	0 - 30
LFB	Metalaxyl	5.49	LCS	P	0 - 30
LFB	Metolachlor	3.94	LCS	P	0 - 30
LFB	Metribuzin	1.35	LCS	P	0 - 30
LFB	Mevinphos	12.7	LCS	P	0 - 30
LFB	Molinate	2.78	LCS	P	0 - 30
LFB	Norflurazon	3.21	LCS	P	0 - 30
LFB	Oxadiazon	3.91	LCS	P	0 - 30
LFB	Parathion Ethyl	4.38	LCS	P	0 - 30
LFB	Parathion Methyl	1.42	LCS	P	0 - 30
LFB	Pendimethalin	2.32	LCS	P	0 - 30
LFB	Phorate	1.75	LCS	P	0 - 30
LFB	Prodiamine	1.54	LCS	P	0 - 30
LFB	Prometon	6.26	LCS	P	0 - 30
LFB	Prometryn	0.500	LCS	P	0 - 30
LFB	Simazine	2.49	LCS	P	0 - 30
LFB	Tebuconazole	0.698	LCS	P	0 - 30
LFB	Terbufos	3.85	LCS	P	0 - 30
LFB	Terbutylazine	2.79	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P374489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137171	Chlordane	0.912	Spike	P	0 - 30
2137171	Toxaphene	13.2	Spike	P	0 - 30
LFB	Chlordane	7.76	LCS	P	0 - 30
LFB	Toxaphene	1.80	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P374481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136495	3-Hydroxycarbofuran	6.41	Spike	P	0 - 30
2136495	Aldicarb	7.24	Spike	P	0 - 30
2136495	Aldicarb Sulfone	1.12	Spike	P	0 - 30
2136495	Aldicarb Sulfoxide	5.18	Spike	P	0 - 30
2136495	Carbaryl	3.89	Spike	P	0 - 30
2136495	Carbofuran	0.231	Spike	P	0 - 30
2136495	Methiocarb	1.36	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P374481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2136495	Methomyl	2.73	Spike	P	0 - 30
2136495	Oxamyl	1.68	Spike	P	0 - 30
2136495	Propoxur	2.61	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P374550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137386	Acesulfame K	3.83	Spike	P	0 - 30
2137386	AMPA	0.769	Spike	P	0 - 30
2137386	Endothall	29.5	Spike	P	0 - 30
2137386	Glufosinate	6.14	Spike	P	0 - 30
2137386	Glyphosate	0.780	Spike	P	0 - 30
2137386	Sucralose	29.7	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P374613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137732	2,4-D	4.48	Spike	P	0 - 30
2137732	Acetaminophen	3.41	Spike	P	0 - 30
2137732	Acetamiprid	5.31	Spike	P	0 - 30
2137732	Afidopyrophen	11.2	Spike	P	0 - 30
2137732	Bentazon	3.15	Spike	P	0 - 30
2137732	Benzovindiflupyr	0.191	Spike	P	0 - 30
2137732	Carbamazepine	0.121	Spike	P	0 - 30
2137732	Clothianidin	0.802	Spike	P	0 - 30
2137732	Dinotefuran	0.273	Spike	P	0 - 30
2137732	Diuron	3.78	Spike	P	0 - 30
2137732	Fenuron	3.81	Spike	P	0 - 30
2137732	Fluridone	5.82	Spike	P	0 - 30
2137732	Hydrocodone	3.00	Spike	P	0 - 30
2137732	Ibuprofen	3.07	Spike	P	0 - 30
2137732	Imazapyr	4.08	Spike	P	0 - 30
2137732	Imidacloprid	0.135	Spike	P	0 - 30
2137732	Linuron	2.34	Spike	P	0 - 30
2137732	Mandestrobin	4.87	Spike	P	0 - 30
2137732	MCP	7.46	Spike	P	0 - 30
2137732	Naproxen	19.0	Spike	P	0 - 30
2137732	Primidone	1.52	Spike	P	0 - 30
2137732	Pyraclostrobin	0.541	Spike	P	0 - 30
2137732	Thiamethoxam	3.11	Spike	P	0 - 30
2137732	Tolfenpyrad	0.634	Spike	P	0 - 30
2137732	Triclopyr	7.65	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P374791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137447	Total Alkalinity	0.496	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-97
Batch ID: P374794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137447	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P374889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2137468	Organic Carbon	0.478	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2137771
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	72.3	P	30 - 160

Lab Sample ID: 2137772
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	127	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.9	P	30 - 160
EPA 8321B	Diuron-d6	79.1	P	30 - 160
EPA 8321B	Endothall-d6	271	F	30 - 160
EPA 8321B	Endothall-d6	271	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.1	P	30 - 160
EPA 8321B	Primidone-d5	89.5	P	30 - 160
EPA 8321B	Sucralose-d6	32.5	P	30 - 160
EPA 8321B	Sucralose-d6	32.5	P	30 - 160

Lab Sample ID: 2137773
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	59.5	P	43 - 111
EPA 8270E	Tetrachloro-m-xylene	41.9	P	35 - 106
EPA 8276	Decachlorobiphenyl	49.6	P	30 - 103
EPA 8276	PCNB	75.6	P	37 - 143

Lab Sample ID: 2137774
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	110	P	68 - 130
EPA 8270E	Terbufos-d10	112	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95857

Included Lab Sample IDs: 2137765

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95869

Included Lab Sample IDs: 2137767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	98.5	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A95919

Included Lab Sample IDs: 2137773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.1		P	80 - 120
Toxaphene	82.8		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95922

Included Lab Sample IDs: 2137775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	102	P/P	90 - 110
Manganese	104	105	P/P	90 - 110
Zinc	100	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95927

Included Lab Sample IDs: 2137771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	96.4	96.3	P/P	60 - 150
Aldicarb	77.5	87.8	P/P	60 - 150
Aldicarb Sulfone	92.8	93.7	P/P	50 - 150
Aldicarb Sulfoxide	87.1	88.4	P/P	50 - 150
Carbaryl	103	98.4	P/P	60 - 150
Carbofuran	104	104	P/P	50 - 150
Methiocarb	110	107	P/P	50 - 150
Methomyl	99.0	96.0	P/P	50 - 150
Oxamyl	96.0	97.2	P/P	50 - 150
Propoxur	108	108	P/P	50 - 150

Reference Method: EPA 300.0

Run ID: A95940

Included Lab Sample IDs: 2137765

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A95944
Included Lab Sample IDs: 2137772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.3	140	P/P	60 - 160
Glufosinate	89.8	100	P/P	60 - 160
Glyphosate	121	120	P/P	60 - 160

Reference Method: SM 2320 B-97
Run ID: A95947
Included Lab Sample IDs: 2137765

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

Reference Method: SM 4500 F-C-97
Run ID: A95947
Included Lab Sample IDs: 2137765

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A95966
Included Lab Sample IDs: 2137766

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

Reference Method: EPA 8321B
Run ID: A95967
Included Lab Sample IDs: 2137772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	87.6	82.4	P/P	60 - 160
Endothall	95.9	99.8	P/P	60 - 160

Reference Method: SM 5310 B-00
Run ID: A95973
Included Lab Sample IDs: 2137766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	99.8	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A95994
Included Lab Sample IDs: 2137773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.7		P	80 - 120
Alpha-BHC	93.9		P	80 - 120
Alpha-Chlordane	93.4		P	80 - 120
Beta-BHC	99.6		P	80 - 120
Bifenthrin	97.1		P	80 - 120
Carbophenothion	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A95994

Included Lab Sample IDs: 2137773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorothalonil	82.8		P	80 - 120
Cis-Nonachlor	91.6		P	80 - 120
Cypermethrin	87.3		P	80 - 120
DDD-p,p'	93.7		P	80 - 120
DDE-p,p'	93.5		P	80 - 120
DDT-p,p'	98.8		P	80 - 120
Delta-BHC	82.5		P	80 - 120
Dicofol	92.3		P	80 - 120
Dieldrin	98.2		P	80 - 120
Endosulfan I	87.5		P	80 - 120
Endosulfan II	85.9		P	80 - 120
Endosulfan Sulfate	94.3		P	80 - 120
Endrin	93.6		P	80 - 120
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	96.4		P	80 - 120
Ethalfuralin	99.0		P	80 - 120
Gamma-BHC	92.5		P	80 - 120
Gamma-Chlordane	94.3		P	80 - 120
Heptachlor	90.6		P	80 - 120
Heptachlor Epoxide	94.8		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Methoxychlor	99.3		P	80 - 120
Mirex	97.9		P	80 - 120
Permethrin	93.4		P	80 - 120
Trans-Nonachlor	93.4		P	80 - 120
Trifluralin	98.3		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A96049

Included Lab Sample IDs: 2137766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.3	98.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96055

Included Lab Sample IDs: 2137772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	111	119	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96062

Included Lab Sample IDs: 2137766

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96067

Included Lab Sample IDs: 2137775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.5	93.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96086

Included Lab Sample IDs: 2137772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.8	97.5	P/P	50 - 150
Acetaminophen	104	107	P/P	60 - 160
Acetamiprid	109	109	P/P	50 - 150
Afidopyropen	110	105	P/P	50 - 150
Bentazon	92.2	92.1	P/P	50 - 160
Benzovindiflupyr	105	103	P/P	50 - 150
Carbamazepine	99.7	105	P/P	60 - 150
Clothianidin	109	106	P/P	60 - 150
Dinotefuran	106	102	P/P	50 - 150
Diuron	93.4	93.4	P/P	60 - 150
Fenuron	118	118	P/P	60 - 150
Fluridone	108	104	P/P	60 - 160
Hydrocodone	102	101	P/P	60 - 150
Ibuprofen	90.7	74.1	P/P	50 - 160
Imazapyr	104	106	P/P	50 - 150
Imidacloprid	101	103	P/P	60 - 150
Linuron	102	101	P/P	60 - 150
Mandestrobin	115	115	P/P	50 - 150
MCPP	95.0	116	P/P	50 - 150
Naproxen	86.8	112	P/P	50 - 160
Primidone	98.9	99.2	P/P	60 - 150
Pyraclostrobin	106	104	P/P	60 - 150
Thiamethoxam	104	107	P/P	50 - 150
Tolfenpyrad	111	115	P/P	60 - 150
Triclopyr	87.8	96.5	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96092

Included Lab Sample IDs: 2137766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A96144

Included Lab Sample IDs: 2137774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	109		P	80 - 120
Atrazine	103		P	80 - 120
Atrazine Desethyl	99.4		P	80 - 120
Azinphos Methyl	93.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A96144
Included Lab Sample IDs: 2137774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	105		P	80 - 120
Butylate	95.6		P	80 - 120
Chlorpyrifos Ethyl	96.0		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	86.5		P	80 - 120
Demeton	97.1		P	80 - 120
Diazinon	102		P	80 - 120
Dimethenamid	101		P	80 - 120
Disulfoton	98.9		P	80 - 120
Dithiopyr	100		P	80 - 120
EPTC	99.5		P	80 - 120
Ethion	94.5		P	80 - 120
Ethoprop	97.5		P	80 - 120
Fenamiphos	97.6		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	96.6		P	80 - 120
Fipronil Sulfone	98.1		P	80 - 120
Fonofos	98.4		P	80 - 120
Hexazinone	101		P	80 - 120
Malathion	92.1		P	80 - 120
Metaxyl	103		P	80 - 120
Metolachlor	106		P	80 - 120
Metribuzin	83.8		P	80 - 120
Mevinphos	79.9*		F	80 - 120
Molinate	99.3		P	80 - 120
Norflurazon	101		P	80 - 120
Oxadiazon	104		P	80 - 120
Parathion Ethyl	101		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	99.9		P	80 - 120
Phorate	95.7		P	80 - 120
Prodiamine	97.8		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	97.3		P	80 - 120
Simazine	102		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	95.6		P	80 - 120
Terbutylazine	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A96204
Included Lab Sample IDs: 2137775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	107	110	P/P	90 - 110
Antimony	100	101	P/P	90 - 110
Arsenic	106	107	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110
Lead	104	104	P/P	90 - 110
Nickel	106	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96204

Included Lab Sample IDs: 2137775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	109	108	P/P	90 - 110
Thallium	100	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96240

Included Lab Sample IDs: 2137775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	92.9	94.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96267

Included Lab Sample IDs: 2137775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	100	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						3.16	
EPA 200.7 Rev. 4.4	Iron	105		101	102			0.849
	Manganese	101		97.0	97.1			0.129
	Zinc	99.2		104	104			0.285
EPA 200.8 Rev. 5.4	Aluminum	101		121	124			2.75
	Antimony	101		102	102			0.439
	Arsenic	100		109	110			1.36
	Cadmium	98.1		90.6	91.8			1.39
	Chromium	91.9		88.1	89.2			1.28
	Copper	99.2		94.3	97.1			3.02
	Lead	103		107	107			0.771
	Nickel	99.9		92.5	94.6			2.22
	Selenium	89.4		91.8	92.1			0.301
	Silver	104		94.7	95.3			0.670
	Thallium	108		111	112			0.715
EPA 300.0	Bromide	100		95.9	96.0	96.1		0.0514
EPA 350.1 Rev. 2.0	Ammonia-N	99.9		103	105			1.30
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		97.9	96.1			1.68
EPA 353.2 Rev. 2.0	NO2NO3-N	100		99.0	100			0.557
EPA 365.1 Rev. 2.0	Total-P	101		103	102			1.17
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.6		96.8	98.4			1.64
EPA 8270E	Acetochlor	89.4	92.5	99.4	104	3.39		5.02
	Alachlor	87.9	90.7	99.5	96.0	3.14		3.56
	Aldrin	43.1	39.3	40.5	38.5	9.10		5.00
	Alpha-BHC	72.9	78.7	83.3	81.2	7.69		2.55
	Alpha-Chlordane	62.8	69.2	63.2	57.7	9.81		8.97
	Ametryn	91.4	94.4	150	119	3.23		17.0
	Atrazine	113	116			2.42		0.998
	Atrazine Desethyl	121	119	112	109	1.87		2.06
	Azinphos Methyl	103	110	109	113	6.25		3.38
	Beta-BHC	90.0	79.1	114	144	13.0		23.1
	Bifenthrin	70.6	60.9	51.6	53.0	14.8		2.63
	Bromacil	83.3	86.1	73.9	80.0	3.31		7.97
	Butylate	68.2	67.9	60.2	62.2	0.420		3.19
	Carbophenothion	78.2	68.4	74.4	67.5	13.4		9.74
	Chlorothalonil	85.0	77.5	93.8	81.0	9.24		14.7
	Chlorpyrifos Ethyl	98.3	102	95.2	82.4	3.53		14.4
	Chlorpyrifos Methyl	103	108	88.7	94.1	5.17		5.83
	Cis-Nonachlor	60.6	69.3	55.0	45.3	13.4		19.4
	Cyanazine	167	160	129	150	4.33		15.2
	Cypermethrin	66.3	73.0	56.2	47.8	9.63		16.2
	DDD-p,p'	66.3	74.4	65.7	55.3	11.5		17.2
	DDE-p,p'	61.8	68.6	53.6	48.2	10.5		10.5
	DDT-p,p'	68.4	74.6	61.0	58.5	8.64		4.18
	Delta-BHC	101	83.9	110	96.9	18.2		12.9
	Demeton	90.9	93.3	93.1	93.3	2.65		0.278
	Diazinon	98.7	101	113	117	2.34		3.31
	Dicofol	90.8	86.7	75.9	103	4.68		29.9
	Dieldrin	69.3	74.7	84.4	70.2	7.52		18.3
	Dimethenamid	85.7	88.7	51.4	76.8	3.41		39.5
	Disulfoton	102	108	110	112	4.90		2.03
	Dithiopyr	80.7	83.9	77.8	80.1	3.92		2.77
	Endosulfan I	70.4	78.7	72.4	65.0	11.2		10.7
	Endosulfan II	71.9	77.7	77.3	61.1	7.70		23.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Endosulfan Sulfate	71.6	80.1	75.4	70.5	11.2	6.79
	Endrin	73.1	80.6	69.8	60.6	9.75	14.1
	Endrin Aldehyde	73.3	79.2	70.7	62.6	7.63	12.3
	Endrin Ketone	73.4	80.3	87.3	79.1	9.02	9.79
	EPTC	71.0	72.9	63.5	61.1	2.63	3.88
	Ethalfuralin	66.4	72.9	60.2	56.8	9.29	5.67
	Ethion	103	105	80.0	97.4	2.56	19.6
	Ethoprop	112	114	79.5	76.7	2.05	3.57
	Fenamiphos	59.2	62.4	85.1	83.6	5.20	1.75
	Fipronil	75.4	77.8	90.8	101	3.04	9.81
	Fipronil Desulfinyl	87.8	88.3	89.3	96.8	0.551	7.14
	Fipronil Sulfide	96.0	98.8	85.4	97.7	2.87	9.58
	Fipronil Sulfone	93.7	95.8	76.6	79.9	2.24	2.68
	Fonofos	98.3	103	116	119	4.97	2.09
	Gamma-BHC	90.0	75.9	98.1	93.4	17.0	4.84
	Gamma-Chlordane	59.7	66.3	56.8	51.3	10.5	10.1
	Heptachlor	62.1	63.6	47.9	47.6	2.51	0.518
	Heptachlor Epoxide	69.3	73.8	69.1	58.4	6.32	14.0
	Hexachlorobenzene	61.2	65.3	49.0	47.8	6.50	2.38
	Hexazinone	105	106	106	115	0.892	5.56
	Malathion	99.2	99.8	91.9	92.9	0.678	1.10
	Metalaxyl	60.5	63.9	105	109	5.49	4.10
	Methoxychlor	85.5	90.4	81.7	78.9	5.60	3.53
	Metolachlor	87.9	91.4	88.2	93.8	3.94	6.16
	Metribuzin	234	237	232	226	1.35	2.42
	Mevinphos	72.5	63.8	114	105	12.7	7.74
	Mirex	55.6	62.7	51.9	46.7	12.0	10.7
	Molinate	83.7	86.1	75.1	78.0	2.78	3.69
	Norflurazon	90.4	93.4	78.5	88.6	3.21	12.1
	Oxadiazon	82.7	86.0			3.91	1.82
	Parathion Ethyl	103	108	94.4	97.5	4.38	3.19
	Parathion Methyl	117	118	112	114	1.42	2.11
	Pendimethalin	94.4	96.6	90.5	98.1	2.32	8.10
	Permethrin	61.1	67.2	52.2	53.2	9.52	1.92
	Phorate	104	106	114	112	1.75	2.13
	Prodiamine	98.3	96.8	44.2	47.0	1.54	6.15
	Prometon	83.9	78.8	91.6	114	6.26	15.4
	Prometryn	88.3	88.8	99.8	98.7	0.500	1.16
	Simazine	114	117	128	120	2.49	6.39
	Tebuconazole	32.5	32.3	18.3	32.0	0.698	54.5
	Terbufos	102	106	123	119	3.85	3.35
	Terbuthylazine	99.4	102	100	104	2.79	3.97
	Trans-Nonachlor	58.3	65.8	51.7	43.2	12.1	17.9
	Trifluralin	75.1	68.2	60.4	57.6	9.64	4.66
EPA 8276	Chlordane	71.9	77.7	69.3	69.9	7.76	0.912
	Toxaphene	61.2	62.3	69.4	60.8	1.80	13.2
EPA 8321B	2,4-D	152		136	128		4.48
	3-Hydroxycarbofuran	84.3		83.5	78.3		6.41
	Acesulfame K	91.1		113	109		3.83
	Acetaminophen	80.7		86.1	83.2		3.41
	Acetamiprid	103		106	100		5.31
	Afidopyropen	112		118	105		11.2
	Aldicarb	64.4		53.2	57.2		7.24
	Aldicarb Sulfone	87.2		97.4	96.3		1.12

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Aldicarb Sulfoxide	85.0	50.3	47.8			5.18
	AMPA	145	135	136			0.769
	Bentazon	83.4					3.15
	Benzovindiflupyr	75.8	80.3	80.1			0.191
	Carbamazepine	99.4	83.6	83.5			0.121
	Carbaryl	82.6	67.7	70.4			3.89
	Carbofuran	81.0	69.9	70.0			0.231
	Clothianidin	90.1	101	100			0.802
	Dinotefuran	96.3	124	123			0.273
	Diuron	82.8	66.9	62.8			3.78
	Endothall	98.9	101	136			29.5
	Fenuron	105	99.5	95.8			3.81
	Fluridone	91.1	81.2	72.8			5.82
	Glufosinate	99.0	92.1	86.6			6.14
	Glyphosate	112	102	103			0.780
	Hydrocodone	94.0	101	98.1			3.00
	Ibuprofen	81.0	72.5	74.8			3.07
	Imazapyr	102					4.08
	Imidacloprid	111	158	158			0.135
	Linuron	83.3	70.4	72.1			2.34
	Mandestrobin	85.0	83.9	79.9			4.87
	MCPP	146	137	127			7.46
	Methiocarb	76.9	64.8	65.7			1.36
	Methomyl	81.1	65.6	63.8			2.73
	Naproxen	97.4	103	85.4			19.0
	Oxamyl	91.8	85.6	84.1			1.68
	Primidone	84.7	94.8	93.4			1.52
	Propoxur	76.9	67.7	66.0			2.61
	Pyraclostrobin	83.2	86.1	85.6			0.541
	Sucralose	121	87.4	64.4			29.7
	Thiamethoxam	99.2	138	134			3.11
	Tolfenpyrad	57.8	58.9	59.3			0.634
	Triclopyr	91.4	110	101			7.65
SM 2320 B-97	Total Alkalinity	102				0.496	
SM 4500 F-C-97	Fluoride	99.4	94.6	94.6			0.0
SM 5310 B-00	Organic Carbon	102	102	102			0.478

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2137765
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2137775
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2137775
EPA 300.0 / E31780	Bromide in aqueous matrices	2137765
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2137766
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2137766
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2137766

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	2137766
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2137767
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2137773
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2137774
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2137773
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2137771
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2137772
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2137772
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2137765
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2137765
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2137765
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2137766

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	11/20/2019			11/20/2019 16:28	Samantha Davila	2137765
EPA 200.7 Rev. 4.4	11/20/2019	11/21/2019 15:55	Elliott D. Healy	11/22/2019 15:13	Vijayalakshmi Reddy	2137775
EPA 200.8 Rev. 5.4	11/20/2019	11/21/2019 15:55	Elliott D. Healy	12/03/2019 01:01	Robert K Palmer	2137775
	11/20/2019	11/21/2019 15:55	Elliott D. Healy	12/10/2019 00:24	Alexander Thompson	2137775
	11/20/2019	11/21/2019 15:55	Elliott D. Healy	12/11/2019 03:23	Alexander Thompson	2137775
	11/20/2019	11/21/2019 15:55	Elliott D. Healy	12/12/2019 05:56	Martin Acosta	2137775
EPA 300.0	11/20/2019			11/23/2019 03:58	Lipi Saha	2137765
EPA 350.1 Rev. 2.0	11/20/2019			11/27/2019 09:39	Ping Hua	2137766
EPA 351.2 Rev. 2.0	11/20/2019	11/27/2019 11:30	Sima Feizi	12/02/2019 13:08	Jhamieka S. Greenwood	2137766
EPA 353.2 Rev. 2.0	11/20/2019			11/26/2019 10:42	Beverly Y. Sanders	2137766
EPA 365.1 Rev. 2.0	11/20/2019	12/02/2019 14:16	Yen Ta	12/03/2019 16:33	Benjamin T. Nordmann	2137766
EPA 365.1 Rev. 2.0 dissolved	11/20/2019			11/20/2019 15:34	Ping Hua	2137767
EPA 8270E	11/20/2019	11/21/2019 09:00	Fe-Val Siddell	11/25/2019 20:59	Arthur Maknenko	2137773
	11/20/2019	11/23/2019 11:30	Rasheda Ghaffari	11/26/2019 20:14	Vandana T. Nagar	2137774
EPA 8276	11/20/2019	11/21/2019 09:00	Fe-Val Siddell	11/23/2019 12:32	Michael Poppell	2137773
EPA 8321B	11/20/2019	11/21/2019 09:00	Hoor Shaik	11/24/2019 16:28	Juyoung Kim	2137771
	11/20/2019	11/21/2019 10:30	Rebecca Ware	11/21/2019 18:08	Rebecca Ware	2137772
	11/20/2019	11/21/2019 10:30	Rebecca Ware	11/24/2019 03:59	Rebecca Ware	2137772
	11/20/2019	11/21/2019 10:30	Rebecca Ware	11/26/2019 04:30	Rebecca Ware	2137772
	11/20/2019	11/25/2019 09:00	Hoor Shaik	11/26/2019 06:04	Juyoung Kim	2137772
SM 2320 B-97	11/20/2019			11/25/2019 14:45	Dale L. Simmons	2137765
SM 2540 D-97	11/20/2019			11/25/2019 15:56	Yijie Li	2137765
SM 4500 F-C-97	11/20/2019			11/25/2019 10:43	Dale L. Simmons	2137765
SM 5310 B-00	11/20/2019			11/26/2019 12:54	Lauren Lees	2137766