

Chemical Analysis Report

NE-DIST-2019-12-27-01

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

Event Description: **Goodbys**
Request ID: **RQ-2019-12-16-28**
Customer: **NE-DIST**
Project ID: **SMP**

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8800 Baymeadows Way West
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Jacksonville, FL 32256
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 21-JAN-2020 09:33



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: Goodbys CR @ SR-13

Collection Date/Time: 12/26/2019 13:00

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2146158	EPA 180.1 Rev. 2.0	Turbidity	6.0	A	NTU	P377144	
	EPA 300.0	Bromide	4.6		mg Br/L	P376633	
	SM 2320 B-2011	Total Alkalinity	81		mg CaCO3/L	P376671	
	SM 2540 D-2011	TSS	7	I	mg/L	P376614	
	SM 4500 F-C-2011	Fluoride	0.18		mg F/L	P376672	
2146159	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P376739	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P376666	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P376595	
	EPA 365.1 Rev. 2.0	Total-P	0.073		mg P/L	P376657	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P376571	
2146160	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.043		mg P/L	P376484	
2146168	EPA 8321B	Aldicarb	0.020	U	ug/L	P376470	
		Aldicarb Sulfone	0.0020	U	ug/L	P376470	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P376470	
		Carbaryl	0.0020	U	ug/L	P376470	
		Carbofuran	0.0020	U	ug/L	P376470	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P376470	
		Methiocarb	0.0020	U	ug/L	P376470	
		Methomyl	0.0020	U	ug/L	P376470	
		Oxamyl	0.0020	U	ug/L	P376470	
		Propoxur	0.0020	U	ug/L	P376470	
2146169		2,4-D	0.029		ug/L	P376470	
		Acesulfame K**	0.10	U	ug/L	P376543	
		AMPA**	0.10	U	ug/L	P376543	
		Sucralose**	0.12	J	ug/L	P376543	SUR
		Acetaminophen**	0.0080	U	ug/L	P376470	
		Acetamiprid**	0.0020	U	ug/L	P376470	
		Endothal**	0.25	U	ug/L	P376543	
		Glufosinate**	0.10	U	ug/L	P376543	
		Glyphosate**	0.10	U	ug/L	P376543	
		Afidopyropen**	0.0020	UJ	ug/L	P376470	
		Bentazon	0.019	J	ug/L	P376470	MS
		Benzovindiflupyr**	0.0020	UJ	ug/L	P376470	
		Carbamazepine**	8.0E-04	U	ug/L	P376470	
		Clothianidin**	0.0038	I	ug/L	P376470	
		Dinotefuran**	0.0022	I	ug/L	P376470	
		Diuron	0.011		ug/L	P376470	
		Fenuron	0.016	U	ug/L	P376470	
		Fluridone**	0.0082		ug/L	P376470	
		Imazapyr**	0.18		ug/L	P376470	
		Hydrocodone**	0.0020	U	ug/L	P376470	
		Ibuprofen**	0.020	U	ug/L	P376470	
		Imidacloprid	0.017		ug/L	P376470	

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2146169	EPA 8321B	Linuron	0.0040	U	ug/L	P376470	
		Mandestrobin**	0.0020	UJ	ug/L	P376470	
		MCP	0.0020	U	ug/L	P376470	
		Naproxen**	0.0080	U	ug/L	P376470	
		Primidone**	0.0040	UJ	ug/L	P376470	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P376470	
		Thiamethoxam**	0.0020	U	ug/L	P376470	
		Tolfenpyrad**	0.0020	U	ug/L	P376470	
		Triclopyr**	0.0040	U	ug/L	P376470	
2146170	EPA 8270E	Aldrin	4.1	U	ng/L	P376523	
		Alpha-BHC	2.1	U	ng/L	P376523	
		Alpha-Chlordane	1.0	U	ng/L	P376523	
		Beta-BHC	10	U	ng/L	P376523	
		Bifenthrin**	4.1	U	ng/L	P376523	
		Delta-BHC	8.3	U	ng/L	P376523	
		Gamma-BHC	8.3	U	ng/L	P376523	
		Carbophenothion	10	U	ng/L	P376523	
		Chlorothalonil	2.1	UJ	ng/L	P376523	CCV
		Cis-Nonachlor**	1.0	U	ng/L	P376523	
		Cypermethrin	21	UJ	ng/L	P376523	MS
		DDD-p,p'	6.2	U	ng/L	P376523	
		DDE-p,p'	6.2	U	ng/L	P376523	
		DDT-p,p'	7.3	U	ng/L	P376523	
		Dicofol	31	U	ng/L	P376523	
		Dieldrin	4.1	U	ng/L	P376523	
		Endosulfan I	4.1	U	ng/L	P376523	
		Endosulfan II	4.1	U	ng/L	P376523	
		Endosulfan Sulfate	2.1	U	ng/L	P376523	
		Endrin	2.1	U	ng/L	P376523	
		Endrin Aldehyde	2.1	U	ng/L	P376523	
		Endrin Ketone	2.1	U	ng/L	P376523	
		Ethalfuralin**	3.1	U	ng/L	P376523	
		Gamma-Chlordane	1.0	U	ng/L	P376523	
		Heptachlor	1.6	UJ	ng/L	P376523	MS
		Heptachlor Epoxide	2.1	U	ng/L	P376523	
		Hexachlorobenzene	2.1	U	ng/L	P376523	
		Methoxychlor	4.1	U	ng/L	P376523	
		Mirex	2.1	U	ng/L	P376523	
		Permethrin	10	UJ	ng/L	P376523	MS
		Trans-Nonachlor**	1.0	U	ng/L	P376523	
		Trifluralin	2.6	U	ng/L	P376523	
		Chlordane	8.3	I	ng/L	P376523	
		Toxaphene	31	U	ng/L	P376523	
2146171	EPA 8270E	Acetochlor	0.24	U	ng/L	P376550	
		Alachlor	0.24	U	ng/L	P376550	

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2146171	EPA 8270E	Ametryn	0.58	U	ng/L	P376550	
		Atrazine	56		ng/L	P376550	
		Atrazine Desethyl	11		ng/L	P376550	
		Azinphos Methyl	1.9	U	ng/L	P376550	
		Bromacil	0.48	UJ	ng/L	P376550	MS
		Butylate	0.39	UJ	ng/L	P376550	LCS, MS
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P376550	LCS
		Chlorpyrifos Methyl	0.048	U	ng/L	P376550	
		Cyanazine	3.1	U	ng/L	P376550	
		Demeton	1.4	U	ng/L	P376550	
		Diazinon	0.29	I	ng/L	P376550	
		Dimethenamid**	0.28	I	ng/L	P376550	
		Disulfoton	0.48	U	ng/L	P376550	
		Dithiopyr**	0.22	I	ng/L	P376550	
		EPTC	1.2	UJ	ng/L	P376550	LCS
		Ethion	0.14	U	ng/L	P376550	
		Ethoprop	0.097	U	ng/L	P376550	
		Fenamiphos	0.48	U	ng/L	P376550	
		Fipronil	1.2		ng/L	P376550	
		Fipronil Desulfinyl**	0.57		ng/L	P376550	
		Fipronil Sulfide	0.95	J	ng/L	P376550	LCS
		Fipronil Sulfone	1.9	J	ng/L	P376550	LCS
		Fonofos	0.19	U	ng/L	P376550	
		Hexazinone	11	J	ng/L	P376550	LCS
		Malathion	0.34	U	ng/L	P376550	
		Metalaxyl	0.73	I	ng/L	P376550	
		Metolachlor	3.8		ng/L	P376550	
		Metribuzin	32		ng/L	P376550	
		Mevinphos	0.48	U	ng/L	P376550	
		Molinate	0.29	UJ	ng/L	P376550	LCS
		Norflurazon	0.48	U	ng/L	P376550	
		Oxadiazon**	2.2		ng/L	P376550	
		Parathion Ethyl	0.24	U	ng/L	P376550	
		Parathion Methyl	0.53	U	ng/L	P376550	
		Pendimethalin	16		ng/L	P376550	
		Phorate	0.24	U	ng/L	P376550	
		Prodiamine**	0.31	I	ng/L	P376550	
		Prometon	0.87	U	ng/L	P376550	
		Prometryn	0.19	U	ng/L	P376550	
		Simazine	29		ng/L	P376550	
		Tebuconazole**	2.2		ng/L	P376550	
		Terbufos	0.097	U	ng/L	P376550	
		Terbutylazine	0.41	U	ng/L	P376550	
2146172	EPA 200.7 Rev. 4.4	Iron	420		ug/L	P376573	
		Manganese	9.7		ug/L	P376573	

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2146172	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P376573	
	EPA 200.8 Rev. 5.4	Aluminum	169		ug/L	P376573	
		Antimony	0.12	I	ug/L	P376573	
		Arsenic	1.52		ug/L	P376573	
		Cadmium	0.020	U	ug/L	P376573	
		Chromium	0.40	U	ug/L	P376573	
		Copper	1.36		ug/L	P376573	
		Lead	0.48		ug/L	P376573	
		Nickel	0.50	U	ug/L	P376573	
		Selenium	0.20	U	ug/L	P376573	
		Silver	0.010	U	ug/L	P376573	
		Thallium	0.10	U	ug/L	P376573	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high 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 could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.
 EPA 8321B: Results confirmed in re-extraction. Refer to the Lab Analysis Report for an explanation of QC Codes.
 EPA 8270E: Insufficient sample available to perform duplicate matrix spikes. Refer to the Lab Analysis Report for an explanation of QC Codes.
 EPA 8276: Insufficient sample available to perform duplicate matrix spikes.
 EPA 8270E: MS accuracy for some parameters 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: P377144

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376573

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: P376573

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: P376633

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376739

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P376666

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376595

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: P376657

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P376484

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

Reference Method: EPA 8270E
Batch ID: P376523

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: P376550

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: P376550

Component	Result	Code	Units
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	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	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	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: P376523

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: P376470

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	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
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	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
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	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

Reference Method: EPA 8321B

Batch ID: P376543

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: SM 2320 B-2011

Batch ID: P376671

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P376614

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P376672

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P376571

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: P376573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	106		P	85 - 115
Manganese	101		P	85 - 115
Zinc	97.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.6		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	98.8		P	85 - 115
Cadmium	97.7		P	85 - 115
Chromium	98.8		P	85 - 115
Copper	97.7		P	85 - 115
Lead	101		P	85 - 115
Nickel	99.4		P	85 - 115
Selenium	98.3		P	85 - 115
Silver	106		P	85 - 115
Thallium	107		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P376633

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P376666

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376595

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: P376657

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.0		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P376484

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

Reference Method: EPA 8270E
Batch ID: P376523

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	64.2	65.6	P/P	20 - 87.0
Alpha-BHC	95.0	92.1	P/P	65 - 142
Alpha-Chlordane	75.8	76.3	P/P	58 - 106
Beta-BHC	101	92.1	P/P	65 - 179
Bifenthrin	113	109	P/P	38 - 128
Carbophenothion	88.9	85.3	P/P	20 - 144
Chlorothalonil	110	88.0	P/P	20 - 214
Cis-Nonachlor	72.1	74.4	P/P	56 - 113
Cypermethrin	116	116	P/P	37 - 130
DDD-p,p'	78.4	81.1	P/P	66 - 119
DDE-p,p'	74.2	75.6	P/P	53 - 108
DDT-p,p'	89.8	90.1	P/P	57 - 133
Delta-BHC	112	103	P/P	68 - 187
Dicofol	92.7	90.0	P/P	66 - 123
Dieldrin	77.5	79.3	P/P	65 - 111
Endosulfan I	86.5	85.1	P/P	65 - 115
Endosulfan II	86.9	88.1	P/P	68 - 133
Endosulfan Sulfate	101	99.6	P/P	62 - 127
Endrin	76.6	79.4	P/P	64 - 122
Endrin Aldehyde	76.7	78.1	P/P	61 - 132
Endrin Ketone	96.6	97.3	P/P	66 - 120
Ethalfuralin	82.8	81.8	P/P	57 - 127
Gamma-BHC	132	102	P/P	71 - 158
Gamma-Chlordane	74.5	73.9	P/P	53 - 106
Heptachlor	78.9	78.7	P/P	45 - 96.0
Heptachlor Epoxide	77.4	78.8	P/P	64 - 109
Hexachlorobenzene	80.5	78.9	P/P	46 - 103
Methoxychlor	102	100	P/P	69 - 149
Mirex	82.5	81.3	P/P	31 - 90.0
Permethrin	108	105	P/P	41 - 108
Trans-Nonachlor	70.3	71.8	P/P	50 - 107
Trifluralin	87.8	85.2	P/P	58 - 119

Reference Method: EPA 8270E
Batch ID: P376550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	118	106	P/P	71 - 122
Alachlor	118	108	P/P	70 - 121
Ametryn	117	112	P/P	49 - 137
Atrazine	116	109	P/P	76 - 125
Atrazine Desethyl	122	113	P/P	31 - 144
Azinphos Methyl	108	101	P/P	67 - 150
Bromacil	111	117	P/P	36 - 121
Butylate	101	96.7	F/F	33 - 88.0
Chlorpyrifos Ethyl	123	109	F/P	73 - 117

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P376550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorpyrifos Methyl	115	104	P/P	68 - 121
Cyanazine	115	106	P/P	20 - 250
Demeton	106	91.2	P/P	30 - 123
Diazinon	118	106	P/P	70 - 128
Dimethenamid	121	112	P/P	66 - 122
Disulfoton	111	102	P/P	46 - 124
Dithiopyr	121	110	P/P	69 - 122
EPTC	102	96.2	F/F	31 - 90.0
Ethion	124	113	P/P	45 - 135
Ethoprop	118	110	P/P	59 - 118
Fenamiphos	121	101	P/P	30 - 136
Fipronil	121	110	P/P	57 - 127
Fipronil Desulfinyl	113	105	P/P	51 - 122
Fipronil Sulfide	125	111	F/P	57 - 119
Fipronil Sulfone	122	109	F/P	51 - 119
Fonofos	118	104	P/P	60 - 120
Hexazinone	172	135	F/P	57 - 142
Malathion	126	116	P/P	67 - 128
Metalaxyl	130	114	P/P	21 - 148
Metolachlor	115	105	P/P	70 - 120
Metribuzin	113	102	P/P	20 - 253
Mevinphos	111	110	P/P	47 - 116
Molinate	107	103	F/F	41 - 99.0
Norflurazon	111	110	P/P	54 - 127
Oxadiazon	116	103	P/P	65 - 122
Parathion Ethyl	111	104	P/P	71 - 113
Parathion Methyl	109	104	P/P	73 - 129
Pendimethalin	108	100	P/P	63 - 130
Phorate	105	98.9	P/P	48 - 118
Prodiamine	116	106	P/P	20 - 144
Prometon	117	105	P/P	53 - 120
Prometryn	112	103	P/P	63 - 119
Simazine	114	107	P/P	77 - 129
Tebuconazole	109	102	P/P	20 - 118
Terbufos	118	104	P/P	61 - 119
Terbuthylazine	115	104	P/P	75 - 119

Reference Method: EPA 8276
Batch ID: P376523

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	101	89.3	P/P	47 - 119
Toxaphene	92.5	79.9	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P376470

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	150		P	40 - 160
3-Hydroxycarbofuran	83.7		P	40 - 160
Acetaminophen	94.9		P	30 - 160
Acetamiprid	90.8		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P376470

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Afidopyropen	93.4		P	40 - 160
Aldicarb	62.5		P	30 - 160
Aldicarb Sulfone	84.3		P	40 - 160
Aldicarb Sulfoxide	88.5		P	40 - 160
Bentazon	75.4		P	30 - 160
Benzovindiflupyr	102		P	40 - 160
Carbamazepine	78.8		P	40 - 160
Carbaryl	68.7		P	40 - 160
Carbofuran	65.8		P	40 - 160
Clothianidin	84.8		P	40 - 160
Dinotefuran	88.7		P	40 - 160
Diuron	75.9		P	40 - 160
Fenuron	87.5		P	40 - 160
Fluridone	92.6		P	40 - 160
Hydrocodone	90.1		P	40 - 160
Ibuprofen	85.3		P	30 - 160
Imazapyr	116		P	40 - 160
Imidacloprid	97.9		P	40 - 160
Linuron	65.4		P	40 - 160
Mandestrobin	92.1		P	40 - 160
MCPP	139		P	40 - 160
Methiocarb	62.7		P	40 - 160
Methomyl	72.4		P	40 - 160
Naproxen	92.7		P	40 - 160
Oxamyl	85.0		P	40 - 160
Primidone	87.3		P	40 - 160
Propoxur	65.6		P	40 - 160
Pyraclostrobin	79.8		P	30 - 160
Thiamethoxam	97.6		P	40 - 160
Tolfenpyrad	51.4		P	40 - 160
Triclopyr	105		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P376543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	108		P	40 - 150
AMPA	92.5		P	40 - 150
Endothall	68.8		P	40 - 150
Glufosinate	133		P	40 - 150
Glyphosate	105		P	40 - 140
Sucralose	103		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P376671

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P376672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P376571

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145468	Iron	103	103	P/P	80 - 120
2145468	Manganese	97.0	95.4	P/P	80 - 120
2145468	Zinc	96.3	95.1	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145468	Aluminum	95.3	98.0	P/P	80 - 120
2145468	Antimony	103	106	P/P	80 - 120
2145468	Arsenic	99.7	102	P/P	80 - 120
2145468	Cadmium	99.6	103	P/P	80 - 120
2145468	Chromium	97.8	99.1	P/P	80 - 120
2145468	Copper	92.2	94.6	P/P	80 - 120
2145468	Lead	102	105	P/P	80 - 120
2145468	Nickel	93.0	96.6	P/P	80 - 120
2145468	Selenium	96.2	98.9	P/P	80 - 120
2145468	Silver	106	106	P/P	80 - 120
2145468	Thallium	110	114	P/P	80 - 120

Reference Method: EPA 300.0
Batch ID: P376633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145253	Bromide	102	104	P/P	90 - 110
2146158	Bromide	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2145996	Ammonia-N	99.1	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376595

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146159	NO2NO3-N	98.0	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P376657

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146487	Total-P	98.0	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P376484

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146288	O-Phosphate-P	91.4	96.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P376523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146170	Aldrin	78.9		P	32 - 82.0
2146170	Alpha-BHC	97.0		P	68 - 157
2146170	Alpha-Chlordane	65.2		P	54 - 108
2146170	Beta-BHC	62.5		P	54 - 200
2146170	Bifenthrin	122		P	49 - 124
2146170	Carbophenothion	101		P	42 - 173
2146170	Chlorothalonil	172		P	10 - 289
2146170	Cis-Nonachlor	63.3		P	53 - 112
2146170	Cypermethrin	190		F	43 - 141
2146170	DDD-p,p'	68.9		P	58 - 125
2146170	DDE-p,p'	64.0		P	50 - 108
2146170	DDT-p,p'	87.4		P	52 - 140
2146170	Delta-BHC	76.5		P	61 - 228
2146170	Dicofol	92.4		P	59 - 130
2146170	Dieldrin	66.1		P	57 - 121
2146170	Endosulfan I	74.4		P	62 - 123
2146170	Endosulfan II	83.7		P	48 - 163
2146170	Endosulfan Sulfate	107		P	63 - 132
2146170	Endrin	65.7		P	58 - 128
2146170	Endrin Aldehyde	61.8		P	44 - 126
2146170	Endrin Ketone	102		P	68 - 127
2146170	Ethalfuralin	79.5		P	55 - 131
2146170	Gamma-BHC	122		P	54 - 206
2146170	Gamma-Chlordane	65.4		P	52 - 105
2146170	Heptachlor	96.9		F	47 - 94.0
2146170	Heptachlor Epoxide	74.8		P	61 - 113
2146170	Hexachlorobenzene	65.5		P	45 - 100
2146170	Methoxychlor	89.8		P	63 - 153
2146170	Mirex	80.5		P	38 - 90.0
2146170	Permethrin	121		F	45 - 112
2146170	Trans-Nonachlor	59.7		P	50 - 103
2146170	Trifluralin	83.3		P	57 - 122

Reference Method: EPA 8270E
Batch ID: P376550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146171	Acetochlor	102	103	P/P	68 - 126
2146171	Alachlor	99.7	112	P/P	66 - 125
2146171	Ametryn	129	130	P/P	31 - 182
2146171	Atrazine Desethyl	138	132	P/P	13 - 161
2146171	Azinphos Methyl	124	113	P/P	54 - 162
2146171	Bromacil	160	139	F/P	34 - 144
2146171	Butylate	92.4	88.5	F/P	16 - 92.0
2146171	Chlorpyrifos Ethyl	81.5	81.9	P/P	63 - 124
2146171	Chlorpyrifos Methyl	90.5	88.2	P/P	64 - 125
2146171	Cyanazine	149	144	P/P	13 - 245
2146171	Demeton	91.2	86.8	P/P	20 - 154
2146171	Diazinon	117	116	P/P	66 - 141
2146171	Dimethenamid	91.7	95.5	P/P	50 - 130
2146171	Disulfoton	109	106	P/P	55 - 130
2146171	Dithiopyr	101	101	P/P	66 - 122

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P376550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146171	EPTC	79.7	79.9	P/P	15 - 93.0
2146171	Ethion	42.6	44.3	P/P	15 - 148
2146171	Ethoprop	80.0	79.9	P/P	59 - 126
2146171	Fenamiphos	93.5	75.0	P/P	39 - 137
2146171	Fipronil	107	108	P/P	47 - 131
2146171	Fipronil Desulfinyl	116	115	P/P	43 - 121
2146171	Fipronil Sulfide	84.8	82.9	P/P	29 - 134
2146171	Fipronil Sulfone	79.9	77.9	P/P	19 - 131
2146171	Fonofos	103	97.0	P/P	62 - 128
2146171	Hexazinone	109	101	P/P	58 - 154
2146171	Malathion	62.4	65.5	P/P	54 - 135
2146171	Metalaxyl	109	104	P/P	46 - 136
2146171	Metolachlor	88.0	92.2	P/P	62 - 126
2146171	Mevinphos	99.8	95.9	P/P	44 - 135
2146171	Molinate	94.2	96.0	P/P	31 - 104
2146171	Norflurazon	89.4	89.2	P/P	32 - 134
2146171	Oxadiazon	80.7	83.4	P/P	55 - 123
2146171	Parathion Ethyl	105	105	P/P	67 - 120
2146171	Parathion Methyl	126	124	P/P	70 - 140
2146171	Phorate	98.2	95.9	P/P	52 - 127
2146171	Prodiamine	36.8	38.9	P/P	11 - 157
2146171	Prometon	99.7	104	P/P	55 - 130
2146171	Prometryn	110	120	P/P	55 - 127
2146171	Tebuconazole	26.4	26.9	P/P	10 - 122
2146171	Terbufos	108	104	P/P	65 - 131
2146171	Terbutylazine	102	98.2	P/P	63 - 131

Reference Method: EPA 8276
 Batch ID: P376523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146170	Chlordane	80.9		P	34 - 129
2146170	Toxaphene	94.5		P	26 - 123

Reference Method: EPA 8321B
 Batch ID: P376470

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146168	3-Hydroxycarbofuran	93.7	77.2	P/P	40 - 160
2146168	Aldicarb	60.5	64.4	P/P	30 - 160
2146168	Aldicarb Sulfone	97.9	91.0	P/P	40 - 160
2146168	Aldicarb Sulfoxide	43.3	40.6	P/P	40 - 160
2146168	Carbaryl	52.2	59.9	P/P	40 - 160
2146168	Carbofuran	54.6	51.2	P/P	40 - 160
2146168	Methiocarb	54.6	54.8	P/P	40 - 160
2146168	Methomyl	61.7	66.8	P/P	40 - 160
2146168	Oxamyl	76.2	77.9	P/P	40 - 160
2146168	Propoxur	50.5	50.8	P/P	40 - 160
2146169	2,4-D	113	82.9	P/P	40 - 160
2146169	Acetaminophen	84.7	97.4	P/P	30 - 160
2146169	Acetamiprid	94.4	89.0	P/P	40 - 160
2146169	Afidopyropen	92.7	86.4	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P376470

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146169	Bentazon	26.7	44.1	F/P	30 - 160
2146169	Benzovindiflupyr	91.5	91.2	P/P	40 - 160
2146169	Carbamazepine	78.0	83.4	P/P	40 - 160
2146169	Clothianidin	108	81.6	P/P	40 - 160
2146169	Dinotefuran	103	103	P/P	40 - 160
2146169	Diuron	66.3	69.2	P/P	40 - 160
2146169	Fenuron	69.9	61.3	P/P	40 - 160
2146169	Fluridone	77.0	77.4	P/P	40 - 160
2146169	Hydrocodone	101	103	P/P	40 - 160
2146169	Ibuprofen	70.2	64.4	P/P	30 - 160
2146169	Imidacloprid	139	131	P/P	40 - 160
2146169	Linuron	57.0	56.7	P/P	40 - 160
2146169	Mandestrobin	78.8	82.7	P/P	40 - 160
2146169	MCP	118	109	P/P	40 - 160
2146169	Naproxen	76.5	80.7	P/P	40 - 160
2146169	Primidone	55.6	75.9	P/P	40 - 160
2146169	Pyraclostrobin	74.1	70.9	P/P	30 - 160
2146169	Thiamethoxam	134	139	P/P	40 - 160
2146169	Tolfenpyrad	51.1	48.8	P/P	40 - 160
2146169	Triclopyr	103	84.4	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P376543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146150	Acesulfame K	52.9	53.1	P/P	40 - 150
2146150	AMPA	99.5	90.5	P/P	40 - 150
2146150	Endothall	83.3	102	P/P	40 - 150
2146150	Glufosinate	118	111	P/P	40 - 150
2146150	Glyphosate	111	92.6	P/P	40 - 140
2146150	Sucralose	101	96.8	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P376672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146437	Fluoride	99.1	99.1	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P376571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2146159	Organic Carbon	97.8	97.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146158	Turbidity	0.829	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P376573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145468	Iron	0.554	Spike	P	0 - 20
2145468	Manganese	1.52	Spike	P	0 - 20
2145468	Zinc	1.30	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P376573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145468	Aluminum	2.81	Spike	P	0 - 20
2145468	Antimony	2.85	Spike	P	0 - 20
2145468	Arsenic	2.57	Spike	P	0 - 20
2145468	Cadmium	2.88	Spike	P	0 - 20
2145468	Chromium	1.31	Spike	P	0 - 20
2145468	Copper	2.47	Spike	P	0 - 20
2145468	Lead	2.64	Spike	P	0 - 20
2145468	Nickel	3.70	Spike	P	0 - 20
2145468	Selenium	2.73	Spike	P	0 - 20
2145468	Silver	0.0133	Spike	P	0 - 20
2145468	Thallium	3.31	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P376633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145253	Bromide	1.42	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P376739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145996	Ammonia-N	0.216	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P376666

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2145996	Kjeldahl Nitrogen	5.64	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P376595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146159	NO2NO3-N	0.255	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P376657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146487	Total-P	3.12	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P376484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146288	O-Phosphate-P	5.01	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P376523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Aldrin	2.21	LCS	P	0 - 30
LFB	Alpha-BHC	3.14	LCS	P	0 - 30
LFB	Alpha-Chlordane	0.673	LCS	P	0 - 30
LFB	Beta-BHC	9.33	LCS	P	0 - 30
LFB	Bifenthrin	3.54	LCS	P	0 - 30
LFB	Carbophenothion	4.10	LCS	P	0 - 30
LFB	Chlorothalonil	22.2	LCS	P	0 - 30
LFB	Cis-Nonachlor	3.13	LCS	P	0 - 30
LFB	Cypermethrin	0.265	LCS	P	0 - 30
LFB	DDD-p,p'	3.39	LCS	P	0 - 30
LFB	DDE-p,p'	1.91	LCS	P	0 - 30
LFB	DDT-p,p'	0.255	LCS	P	0 - 30
LFB	Delta-BHC	8.96	LCS	P	0 - 30
LFB	Dicofol	3.01	LCS	P	0 - 30
LFB	Dieldrin	2.29	LCS	P	0 - 30
LFB	Endosulfan I	1.60	LCS	P	0 - 30
LFB	Endosulfan II	1.34	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.38	LCS	P	0 - 30
LFB	Endrin	3.60	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.87	LCS	P	0 - 30
LFB	Endrin Ketone	0.694	LCS	P	0 - 30
LFB	Ethalfuralin	1.26	LCS	P	0 - 30
LFB	Gamma-BHC	25.5	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.791	LCS	P	0 - 30
LFB	Heptachlor	0.349	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.83	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.96	LCS	P	0 - 30
LFB	Methoxychlor	2.25	LCS	P	0 - 30
LFB	Mirex	1.43	LCS	P	0 - 30
LFB	Permethrin	2.80	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P376523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Trans-Nonachlor	2.12	LCS	P	0 - 30
LFB	Trifluralin	2.96	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P376550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146171	Acetochlor	0.495	Spike	P	0 - 30
2146171	Alachlor	11.9	Spike	P	0 - 30
2146171	Ametryn	0.440	Spike	P	0 - 30
2146171	Atrazine	13.9	Spike	P	0 - 30
2146171	Atrazine Desethyl	3.11	Spike	P	0 - 30
2146171	Azinphos Methyl	9.61	Spike	P	0 - 30
2146171	Bromacil	14.3	Spike	P	0 - 30
2146171	Butylate	4.22	Spike	P	0 - 30
2146171	Chlorpyrifos Ethyl	0.516	Spike	P	0 - 30
2146171	Chlorpyrifos Methyl	2.60	Spike	P	0 - 30
2146171	Cyanazine	3.04	Spike	P	0 - 30
2146171	Demeton	4.95	Spike	P	0 - 30
2146171	Diazinon	1.33	Spike	P	0 - 30
2146171	Dimethenamid	3.55	Spike	P	0 - 30
2146171	Disulfoton	2.48	Spike	P	0 - 30
2146171	Dithiopyr	0.811	Spike	P	0 - 30
2146171	EPTC	0.248	Spike	P	0 - 30
2146171	Ethion	3.79	Spike	P	0 - 30
2146171	Ethoprop	0.142	Spike	P	0 - 30
2146171	Fenamiphos	22.0	Spike	P	0 - 30
2146171	Fipronil	0.511	Spike	P	0 - 30
2146171	Fipronil Desulfinyl	0.809	Spike	P	0 - 30
2146171	Fipronil Sulfide	1.48	Spike	P	0 - 30
2146171	Fipronil Sulfone	1.14	Spike	P	0 - 30
2146171	Fonofos	5.54	Spike	P	0 - 30
2146171	Hexazinone	3.84	Spike	P	0 - 30
2146171	Malathion	4.86	Spike	P	0 - 30
2146171	Metalaxyl	4.79	Spike	P	0 - 30
2146171	Metolachlor	3.38	Spike	P	0 - 30
2146171	Metribuzin	3.55	Spike	P	0 - 30
2146171	Mevinphos	4.01	Spike	P	0 - 30
2146171	Molinate	1.96	Spike	P	0 - 30
2146171	Norflurazon	0.208	Spike	P	0 - 30
2146171	Oxadiazon	1.99	Spike	P	0 - 30
2146171	Parathion Ethyl	0.257	Spike	P	0 - 30
2146171	Parathion Methyl	1.63	Spike	P	0 - 30
2146171	Pendimethalin	1.80	Spike	P	0 - 30
2146171	Phorate	2.30	Spike	P	0 - 30
2146171	Prodiamine	4.60	Spike	P	0 - 30
2146171	Prometon	4.07	Spike	P	0 - 30
2146171	Prometryn	9.22	Spike	P	0 - 30
2146171	Simazine	2.93	Spike	P	0 - 30
2146171	Tebuconazole	1.06	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P376550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146171	Terbufos	3.82	Spike	P	0 - 30
2146171	Terbuthylazine	3.58	Spike	P	0 - 30
LFB	Acetochlor	10.5	LCS	P	0 - 30
LFB	Alachlor	9.30	LCS	P	0 - 30
LFB	Ametryn	4.64	LCS	P	0 - 30
LFB	Atrazine	5.89	LCS	P	0 - 30
LFB	Atrazine Desethyl	7.31	LCS	P	0 - 30
LFB	Azinphos Methyl	7.39	LCS	P	0 - 30
LFB	Bromacil	5.24	LCS	P	0 - 30
LFB	Butylate	4.78	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	12.2	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	10.3	LCS	P	0 - 30
LFB	Cyanazine	8.31	LCS	P	0 - 30
LFB	Demeton	14.7	LCS	P	0 - 30
LFB	Diazinon	10.6	LCS	P	0 - 30
LFB	Dimethenamid	7.85	LCS	P	0 - 30
LFB	Disulfoton	8.89	LCS	P	0 - 30
LFB	Dithiopyr	9.47	LCS	P	0 - 30
LFB	EPTC	5.97	LCS	P	0 - 30
LFB	Ethion	9.20	LCS	P	0 - 30
LFB	Ethoprop	6.47	LCS	P	0 - 30
LFB	Fenamiphos	18.2	LCS	P	0 - 30
LFB	Fipronil	9.84	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	7.16	LCS	P	0 - 30
LFB	Fipronil Sulfide	12.0	LCS	P	0 - 30
LFB	Fipronil Sulfone	10.5	LCS	P	0 - 30
LFB	Fonofos	12.7	LCS	P	0 - 30
LFB	Hexazinone	24.1	LCS	P	0 - 30
LFB	Malathion	7.92	LCS	P	0 - 30
LFB	Metalaxyl	13.2	LCS	P	0 - 30
LFB	Metolachlor	9.35	LCS	P	0 - 30
LFB	Metribuzin	10.7	LCS	P	0 - 30
LFB	Mevinphos	1.42	LCS	P	0 - 30
LFB	Molinate	3.63	LCS	P	0 - 30
LFB	Norflurazon	1.27	LCS	P	0 - 30
LFB	Oxadiazon	11.4	LCS	P	0 - 30
LFB	Parathion Ethyl	7.06	LCS	P	0 - 30
LFB	Parathion Methyl	4.47	LCS	P	0 - 30
LFB	Pendimethalin	7.34	LCS	P	0 - 30
LFB	Phorate	6.12	LCS	P	0 - 30
LFB	Prodiamine	8.68	LCS	P	0 - 30
LFB	Prometon	11.1	LCS	P	0 - 30
LFB	Prometryn	8.54	LCS	P	0 - 30
LFB	Simazine	6.65	LCS	P	0 - 30
LFB	Tebuconazole	6.86	LCS	P	0 - 30
LFB	Terbufos	12.5	LCS	P	0 - 30
LFB	Terbuthylazine	9.48	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P376523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	12.6	LCS	P	0 - 30
LFB	Toxaphene	14.6	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P376470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146168	3-Hydroxycarbofuran	19.3	Spike	P	0 - 30
2146168	Aldicarb	6.19	Spike	P	0 - 30
2146168	Aldicarb Sulfone	7.25	Spike	P	0 - 30
2146168	Aldicarb Sulfoxide	6.38	Spike	P	0 - 30
2146168	Carbaryl	13.8	Spike	P	0 - 30
2146168	Carbofuran	6.29	Spike	P	0 - 30
2146168	Methiocarb	0.398	Spike	P	0 - 30
2146168	Methomyl	8.00	Spike	P	0 - 30
2146168	Oxamyl	2.29	Spike	P	0 - 30
2146168	Propoxur	0.550	Spike	P	0 - 30
2146169	2,4-D	22.4	Spike	P	0 - 30
2146169	Acetaminophen	14.0	Spike	P	0 - 30
2146169	Acetamiprid	5.86	Spike	P	0 - 30
2146169	Afidopyropen	7.06	Spike	P	0 - 30
2146169	Bentazon	13.6	Spike	P	0 - 30
2146169	Benzovindiflupyr	0.247	Spike	P	0 - 30
2146169	Carbamazepine	6.71	Spike	P	0 - 30
2146169	Clothianidin	26.3	Spike	P	0 - 30
2146169	Dinotefuran	0.229	Spike	P	0 - 30
2146169	Diuron	3.54	Spike	P	0 - 30
2146169	Fenuron	13.1	Spike	P	0 - 30
2146169	Fluridone	0.295	Spike	P	0 - 30
2146169	Hydrocodone	1.67	Spike	P	0 - 30
2146169	Ibuprofen	8.64	Spike	P	0 - 30
2146169	Imazapyr	1.13	Spike	P	0 - 30
2146169	Imidacloprid	5.07	Spike	P	0 - 30
2146169	Linuron	0.426	Spike	P	0 - 30
2146169	Mandestrobin	4.77	Spike	P	0 - 30
2146169	MCPP	7.45	Spike	P	0 - 30
2146169	Naproxen	5.40	Spike	P	0 - 30
2146169	Primidone	30.8	Spike	F	0 - 30
2146169	Pyraclostrobin	4.40	Spike	P	0 - 30
2146169	Thiamethoxam	3.74	Spike	P	0 - 30
2146169	Tolfenpyrad	4.68	Spike	P	0 - 30
2146169	Triclopyr	19.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P376543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146150	Acesulfame K	0.331	Spike	P	0 - 30
2146150	AMPA	7.44	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P376543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146150	Endothall	20.4	Spike	P	0 - 30
2146150	Glufosinate	6.42	Spike	P	0 - 30
2146150	Glyphosate	15.3	Spike	P	0 - 30
2146150	Sucralose	1.34	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P376671

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146437	Total Alkalinity	0.201	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P376672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146437	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P376571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2146159	Organic Carbon	0.120	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2146168
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	58.9	P	30 - 160

Lab Sample ID: 2146169
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	136	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.0	P	30 - 160
EPA 8321B	Diuron-d6	52.5	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	45.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	45.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.9	P	30 - 160
EPA 8321B	Primidone-d5	104	P	30 - 160
EPA 8321B	Sucralose-d6	20.6	F	30 - 160
EPA 8321B	Sucralose-d6	20.6	F	30 - 160

Lab Sample ID: 2146170
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	73.6	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	54.6	P	34 - 106
EPA 8276	Decachlorobiphenyl	61.0	P	26 - 97.0
EPA 8276	PCNB	111	P	38 - 141

Lab Sample ID: 2146171
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	99.4	P	72 - 135
EPA 8270E	Terbufos-d10	91.5	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A96592

Included Lab Sample IDs: 2146160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.5	97.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A96639

Included Lab Sample IDs: 2146159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96640

Included Lab Sample IDs: 2146169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	109	P/P	50 - 150
3-Hydroxycarbofuran	110	108	P/P	60 - 150
Acetaminophen	114	112	P/P	60 - 160
Acetamiprid	112	102	P/P	50 - 150
Afidopyropen	113	112	P/P	50 - 150
Aldicarb	85.4	137	P/P	60 - 150
Aldicarb Sulfone	94.6	101	P/P	50 - 150
Aldicarb Sulfoxide	92.8	93.5	P/P	50 - 150
Bentazon	104	96.0	P/P	50 - 160
Benzovindiflupyr	113	106	P/P	50 - 150
Carbamazepine	114	95.8	P/P	60 - 150
Carbaryl	80.2	113	P/P	60 - 150
Carbofuran	98.5	106	P/P	50 - 150
Clothianidin	100	84.3	P/P	60 - 150
Dinotefuran	102	94.7	P/P	50 - 150
Diuron	97.2	109	P/P	60 - 150
Fenuron	110	73.6	P/P	60 - 150
Fluridone	109	116	P/P	60 - 160
Hydrocodone	98.0	110	P/P	60 - 150
Ibuprofen	95.2	88.3	P/P	50 - 160
Imazapyr	108	112	P/P	50 - 150
Imidacloprid	98.5	110	P/P	60 - 150
Linuron	91.7	94.9	P/P	60 - 150
Mandestrobin	107	113	P/P	50 - 150
MCPP	92.5	110	P/P	50 - 150
Methiocarb	102	97.9	P/P	50 - 150
Methomyl	113	104	P/P	50 - 150
Naproxen	101	102	P/P	50 - 160
Oxamyl	104	98.8	P/P	50 - 150
Primidone	89.2	104	P/P	60 - 150
Propoxur	98.2	99.1	P/P	50 - 150
Pyraclostrobin	101	104	P/P	60 - 150
Thiamethoxam	84.8	118	P/P	50 - 150
Tolfenpyrad	106	105	P/P	60 - 150
Triclopyr	111	111	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A96653
Included Lab Sample IDs: 2146169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	119	112	P/P	60 - 160
Endothall	80.0	88.5	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A96666
Included Lab Sample IDs: 2146159

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

Reference Method: EPA 8321B
Run ID: A96676
Included Lab Sample IDs: 2146169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	61.8	63.8	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A96677
Included Lab Sample IDs: 2146169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glufosinate	106	102	P/P	60 - 160
Glyphosate	85.8	92.4	P/P	60 - 160

Reference Method: EPA 300.0
Run ID: A96678
Included Lab Sample IDs: 2146158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	110	109	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A96698
Included Lab Sample IDs: 2146169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	88.9	91.6	P/P	60 - 160

Reference Method: EPA 8276
Run ID: A96701
Included Lab Sample IDs: 2146170

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.9		P	80 - 120
Toxaphene	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A96710

Included Lab Sample IDs: 2146172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	103	102	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Zinc	99.6	101	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A96714

Included Lab Sample IDs: 2146158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A96714

Included Lab Sample IDs: 2146158

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

Reference Method: EPA 8270E

Run ID: A96724

Included Lab Sample IDs: 2146170

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	94.0		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	93.9		P	80 - 120
Beta-BHC	105		P	80 - 120
Bifenthrin	95.3		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorothalonil	79.4*		F	80 - 120
Cis-Nonachlor	91.7		P	80 - 120
Cypermethrin	87.6		P	80 - 120
DDD-p,p'	97.1		P	80 - 120
DDE-p,p'	95.8		P	80 - 120
DDT-p,p'	99.0		P	80 - 120
Delta-BHC	98.3		P	80 - 120
Dicofol	98.4		P	80 - 120
Dieldrin	91.3		P	80 - 120
Endosulfan I	91.2		P	80 - 120
Endosulfan II	93.7		P	80 - 120
Endosulfan Sulfate	96.1		P	80 - 120
Endrin	95.6		P	80 - 120
Endrin Aldehyde	88.3		P	80 - 120
Endrin Ketone	96.2		P	80 - 120
Ethalfuralin	96.4		P	80 - 120
Gamma-BHC	111		P	80 - 120
Gamma-Chlordane	93.3		P	80 - 120
Heptachlor	87.9		P	80 - 120
Heptachlor Epoxide	93.2		P	80 - 120
Hexachlorobenzene	102		P	80 - 120
Methoxychlor	99.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A96724

Included Lab Sample IDs: 2146170

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	97.6		P	80 - 120
Permethrin	92.8		P	80 - 120
Trans-Nonachlor	93.3		P	80 - 120
Trifluralin	99.0		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A96743

Included Lab Sample IDs: 2146159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	108	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96755

Included Lab Sample IDs: 2146159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96767

Included Lab Sample IDs: 2146172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Antimony	101	102	P/P	90 - 110
Arsenic	102	103	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Chromium	104	104	P/P	90 - 110
Copper	102	104	P/P	90 - 110
Lead	102	104	P/P	90 - 110
Nickel	103	104	P/P	90 - 110
Selenium	101	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A96794

Included Lab Sample IDs: 2146172

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	103	101	P/P	90 - 110
Thallium	95.2	92.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A96849

Included Lab Sample IDs: 2146159

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A96892

Included Lab Sample IDs: 2146158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: EPA 8270E

Run ID: A96906

Included Lab Sample IDs: 2146171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.7		P	80 - 120
Alachlor	98.2		P	80 - 120
Ametryn	94.3		P	80 - 120
Atrazine Desethyl	90.3		P	80 - 120
Azinphos Methyl	90.5		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	110		P	80 - 120
Chlorpyrifos Ethyl	97.0		P	80 - 120
Chlorpyrifos Methyl	105		P	80 - 120
Cyanazine	98.1		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	98.1		P	80 - 120
Dimethenamid	99.2		P	80 - 120
Disulfoton	103		P	80 - 120
Dithiopyr	98.7		P	80 - 120
EPTC	101		P	80 - 120
Ethion	97.4		P	80 - 120
Ethoprop	104		P	80 - 120
Fenamiphos	99.0		P	80 - 120
Fipronil	99.4		P	80 - 120
Fipronil Desulfinyl	99.2		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	100		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	98.0		P	80 - 120
Malathion	97.3		P	80 - 120
Metaxyl	104		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	106		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	102		P	80 - 120
Norflurazon	97.5		P	80 - 120
Oxadiazon	96.4		P	80 - 120
Parathion Ethyl	97.8		P	80 - 120
Parathion Methyl	95.7		P	80 - 120
Pendimethalin	97.7		P	80 - 120
Phorate	102		P	80 - 120
Prodiamine	94.4		P	80 - 120
Prometon	94.3		P	80 - 120
Prometryn	96.7		P	80 - 120
Simazine	96.2		P	80 - 120
Tebuconazole	94.1		P	80 - 120
Terbufos	100		P	80 - 120
Terbutylazine	98.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A96917

Included Lab Sample IDs: 2146171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	101		P	80 - 120

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.829	
EPA 200.7 Rev. 4.4	Iron	106		103	103			0.554
	Manganese	101		97.0	95.4			1.52
	Zinc	97.3		96.3	95.1			1.30
EPA 200.8 Rev. 5.4	Aluminum	99.6		95.3	98.0			2.81
	Antimony	102		103	106			2.85
	Arsenic	98.8		99.7	102			2.57
	Cadmium	97.7		99.6	103			2.88
	Chromium	98.8		97.8	99.1			1.31
	Copper	97.7		92.2	94.6			2.47
	Lead	101		102	105			2.64
	Nickel	99.4		93.0	96.6			3.70
	Selenium	98.3		96.2	98.9			2.73
	Silver	106		106	106			0.0133
	Thallium	107		110	114			3.31
EPA 300.0	Bromide	107		102	104	103		1.42
EPA 350.1 Rev. 2.0	Ammonia-N	98.0		99.1	99.5			0.216
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	110						5.64
EPA 353.2 Rev. 2.0	NO2NO3-N	100		98.0	98.5			0.255
EPA 365.1 Rev. 2.0	Total-P	97.0		98.0	94.4			3.12
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8		91.4	96.1			5.01
EPA 8270E	Acetochlor	118	106	102	103	10.5		0.495
	Alachlor	118	108	99.7	112	9.30		11.9
	Aldrin	64.2	65.6	78.9		2.21		
	Alpha-BHC	95.0	92.1	97.0		3.14		
	Alpha-Chlordane	75.8	76.3	65.2		0.673		
	Ametryn	117	112	129	130	4.64		0.440
	Atrazine	116	109			5.89		13.9
	Atrazine Desethyl	122	113	138	132	7.31		3.11
	Azinphos Methyl	108	101	124	113	7.39		9.61
	Beta-BHC	101	92.1	62.5		9.33		
	Bifenthrin	113	109	122		3.54		
	Bromacil	111	117	160	139	5.24		14.3
	Butylate	101	96.7	92.4	88.5	4.78		4.22
	Carbophenothion	88.9	85.3	101		4.10		
	Chlorothalonil	110	88.0	172		22.2		
	Chlorpyrifos Ethyl	123	109	81.5	81.9	12.2		0.516
	Chlorpyrifos Methyl	115	104	90.5	88.2	10.3		2.60
	Cis-Nonachlor	72.1	74.4	63.3		3.13		
	Cyanazine	115	106	149	144	8.31		3.04
	Cypermethrin	116	116	190		0.265		
	DDD-p,p'	78.4	81.1	68.9		3.39		
	DDE-p,p'	74.2	75.6	64.0		1.91		
	DDT-p,p'	89.8	90.1	87.4		0.255		
	Delta-BHC	112	103	76.5		8.96		
	Demeton	106	91.2	91.2	86.8	14.7		4.95
	Diazinon	118	106	117	116	10.6		1.33
	Dicofol	92.7	90.0	92.4		3.01		
	Dieldrin	77.5	79.3	66.1		2.29		
	Dimethenamid	121	112	91.7	95.5	7.85		3.55
	Disulfoton	111	102	109	106	8.89		2.48
	Dithiopyr	121	110	101	101	9.47		0.811
	Endosulfan I	86.5	85.1	74.4		1.60		
	Endosulfan II	86.9	88.1	83.7		1.34		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	SMP MS
EPA 8270E	Endosulfan Sulfate	101	99.6	107		1.38	
	Endrin	76.6	79.4	65.7		3.60	
	Endrin Aldehyde	76.7	78.1	61.8		1.87	
	Endrin Ketone	96.6	97.3	102		0.694	
	EPTC	102	96.2	79.7	79.9	5.97	0.248
	Ethalfuralin	82.8	81.8	79.5		1.26	
	Ethion	124	113	42.6	44.3	9.20	3.79
	Ethoprop	118	110	80.0	79.9	6.47	0.142
	Fenamiphos	121	101	93.5	75.0	18.2	22.0
	Fipronil	121	110	107	108	9.84	0.511
	Fipronil Desulfinyl	113	105	116	115	7.16	0.809
	Fipronil Sulfide	125	111	84.8	82.9	12.0	1.48
	Fipronil Sulfone	122	109	79.9	77.9	10.5	1.14
	Fonofos	118	104	103	97.0	12.7	5.54
	Gamma-BHC	132	102	122		25.5	
	Gamma-Chlordane	74.5	73.9	65.4		0.791	
	Heptachlor	78.9	78.7	96.9		0.349	
	Heptachlor Epoxide	77.4	78.8	74.8		1.83	
	Hexachlorobenzene	80.5	78.9	65.5		1.96	
	Hexazinone	172	135	109	101	24.1	3.84
	Malathion	126	116	62.4	65.5	7.92	4.86
	Metalaxyl	130	114	109	104	13.2	4.79
	Methoxychlor	102	100	89.8		2.25	
	Metolachlor	115	105	88.0	92.2	9.35	3.38
	Metribuzin	113	102			10.7	3.55
	Mevinphos	111	110	99.8	95.9	1.42	4.01
	Mirex	82.5	81.3	80.5		1.43	
	Molinate	107	103	94.2	96.0	3.63	1.96
	Norflurazon	111	110	89.4	89.2	1.27	0.208
	Oxadiazon	116	103	80.7	83.4	11.4	1.99
	Parathion Ethyl	111	104	105	105	7.06	0.257
	Parathion Methyl	109	104	126	124	4.47	1.63
	Pendimethalin	108	100			7.34	1.80
	Permethrin	108	105	121		2.80	
	Phorate	105	98.9	98.2	95.9	6.12	2.30
	Prodiamine	116	106	36.8	38.9	8.68	4.60
	Prometon	117	105	99.7	104	11.1	4.07
	Prometryn	112	103	110	120	8.54	9.22
	Simazine	114	107			6.65	2.93
	Tebuconazole	109	102	26.4	26.9	6.86	1.06
	Terbufos	118	104	108	104	12.5	3.82
	Terbuthylazine	115	104	102	98.2	9.48	3.58
	Trans-Nonachlor	70.3	71.8	59.7		2.12	
	Trifluralin	87.8	85.2	83.3		2.96	
EPA 8276	Chlordane	101	89.3	80.9		12.6	
	Toxaphene	92.5	79.9	94.5		14.6	
EPA 8321B	2,4-D	150		113	82.9		22.4
	3-Hydroxycarbofuran	83.7		93.7	77.2		19.3
	Acesulfame K	108		52.9	53.1		0.331
	Acetaminophen	94.9		84.7	97.4		14.0
	Acetamiprid	90.8		94.4	89.0		5.86
	Afidopyropen	93.4		92.7	86.4		7.06
	Aldicarb	62.5		60.5	64.4		6.19
	Aldicarb Sulfone	84.3		97.9	91.0		7.25

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Aldicarb Sulfoxide	88.5	43.3	40.6			6.38
	AMPA	92.5	99.5	90.5			7.44
	Bentazon	75.4	26.7	44.1			13.6
	Benzovindiflupyr	102	91.5	91.2			0.247
	Carbamazepine	78.8	78.0	83.4			6.71
	Carbaryl	68.7	59.9	52.2			13.8
	Carbofuran	65.8	54.6	51.2			6.29
	Clothianidin	84.8	108	81.6			26.3
	Dinotefuran	88.7	103	103			0.229
	Diuron	75.9	66.3	69.2			3.54
	Endothall	68.8	83.3	102			20.4
	Fenuron	87.5	69.9	61.3			13.1
	Fluridone	92.6	77.0	77.4			0.295
	Glufosinate	133	118	111			6.42
	Glyphosate	105	111	92.6			15.3
	Hydrocodone	90.1	101	103			1.67
	Ibuprofen	85.3	70.2	64.4			8.64
	Imazapyr	116					1.13
	Imidacloprid	97.9	139	131			5.07
	Linuron	65.4	57.0	56.7			0.426
	Mandestrobin	92.1	78.8	82.7			4.77
	MCPP	139	118	109			7.45
	Methiocarb	62.7	54.8	54.6			0.398
	Methomyl	72.4	61.7	66.8			8.00
	Naproxen	92.7	76.5	80.7			5.40
	Oxamyl	85.0	76.2	77.9			2.29
	Primidone	87.3	55.6	75.9			30.8
	Propoxur	65.6	50.5	50.8			0.550
	Pyraclostrobin	79.8	74.1	70.9			4.40
	Sucralose	103	101	96.8			1.34
	Thiamethoxam	97.6	134	139			3.74
	Tolfenpyrad	51.4	51.1	48.8			4.68
	Triclopyr	105	103	84.4			19.6
SM 2320 B-2011	Total Alkalinity	103				0.201	
SM 4500 F-C-2011	Fluoride	98.5	99.1	99.1			0.0
SM 5310 B-2011	Organic Carbon	98.2	97.8	97.6			0.120

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2146158
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2146172
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2146172
EPA 300.0 / E31780	Bromide in aqueous matrices	2146158
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2146159
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2146159
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2146159

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	2146159
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2146160
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2146170
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2146171
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2146170
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2146168
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2146169
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2146169
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2146158
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2146158
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2146158
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2146159

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	12/27/2019			12/27/2019 15:08	Yen Ta	2146158
EPA 200.7 Rev. 4.4	12/27/2019	01/02/2020 13:10	Elliott D. Healy	01/06/2020 13:41	Betina Topolski	2146172
EPA 200.8 Rev. 5.4	12/27/2019	01/02/2020 13:10	Elliott D. Healy	01/09/2020 05:04	Alexander Thompson	2146172
	12/27/2019	01/02/2020 13:10	Elliott D. Healy	01/10/2020 00:16	Alexander Thompson	2146172
EPA 300.0	12/27/2019			01/03/2020 20:16	Jhamieka S. Greenwood	2146158
EPA 350.1 Rev. 2.0	12/27/2019			01/07/2020 12:49	Ping Hua	2146159
EPA 351.2 Rev. 2.0	12/27/2019	01/06/2020 17:22	Jhamieka S. Greenwood	01/07/2020 14:41	Virginia P. Brown	2146159
EPA 353.2 Rev. 2.0	12/27/2019			01/03/2020 08:15	Beverly Y. Sanders	2146159
EPA 365.1 Rev. 2.0	12/27/2019	01/06/2020 14:41	Yen Ta	01/13/2020 17:23	Benjamin T. Nordmann	2146159
EPA 365.1 Rev. 2.0 dissolved	12/27/2019			12/27/2019 15:11	Samantha Davila	2146160
EPA 8270E	12/27/2019	12/30/2019 08:30	Rasheda Ghaffari	01/06/2020 15:14	Vandana T. Nagar	2146171
	12/27/2019	12/30/2019 08:30	Rasheda Ghaffari	12/30/2019 20:59	Vandana T. Nagar	2146171
	12/27/2019	12/30/2019 09:00	Fe-Val Siddell	01/03/2020 20:08	Arthur Maknenko	2146170
EPA 8276	12/27/2019	12/30/2019 09:00	Fe-Val Siddell	01/03/2020 23:15	Michael Poppell	2146170
EPA 8321B	12/27/2019	12/30/2019 09:00	Hoor Shaik	12/31/2019 00:14	Juyoung Kim	2146168
	12/27/2019	12/30/2019 09:00	Hoor Shaik	12/31/2019 01:58	Juyoung Kim	2146169
	12/27/2019	12/30/2019 12:30	Mohammad Ghaffari	01/03/2020 13:57	Rebecca Ware	2146169
	12/27/2019	12/30/2019 12:30	Mohammad Ghaffari	12/30/2019 18:33	Rebecca Ware	2146169
	12/27/2019	12/30/2019 12:30	Mohammad Ghaffari	12/31/2019 16:04	Rebecca Ware	2146169
SM 2320 B-2011	12/27/2019			01/06/2020 23:11	Dale L. Simmons	2146158
SM 2540 D-2011	12/27/2019			12/30/2019 14:10	Yijie Li	2146158
SM 4500 F-C-2011	12/27/2019			01/06/2020 23:11	Dale L. Simmons	2146158
SM 5310 B-2011	12/27/2019			12/30/2019 17:54	Madeline Funaro	2146159