

Chemical Analysis Report

CEN-DIST-2018-11-01-02

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

Event Description: **Chain of lakes**
Request ID: **RQ-2018-10-29-39**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Colin Wright, Program Administrator

Date Certified: 28-NOV-2018 11:24

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 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: Three Island Lake @ Center of S Lobe

Collection Date/Time: 10/31/2018 11:00

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038274	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P354073	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P355053	
		Sulfate	5.4		mg SO ₄ /L	P355058	
		Color (true)	220		PCU	P354451	
	SM 2320 B-97	Total Alkalinity	7.2		mg CaCO ₃ /L	P354358	
	SM 2540 C-97	TDS	99		mg/L	P354608	
	SM 2540 D-97	TSS	3	I	mg/L	P354529	
	SM 4500 F-C-97	Fluoride	0.038	I	mg F/L	P354364	
2038275	EPA 350.1 Rev. 2.0	Ammonia-N	0.14		mg N/L	P354510	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P354345	
	EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	0.036		mg N/L	P354297	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P354226	
	SM 5310 B-00	Organic Carbon	23		mg C/L	P354327	
2038276	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P354083	
2038294	EPA 200.7 Rev. 4.4	Calcium	6.59		mg/L	P354281	
		Iron	220		ug/L	P354281	
		Magnesium	1.53		mg/L	P354281	
		Potassium	1.8		mg/L	P354281	
		Sodium	11.5		mg/L	P354281	
		Zinc	5.0	U	ug/L	P354281	
	EPA 200.8 Rev. 5.4	Arsenic	1.21		ug/L	P354281	
		Cadmium	0.020	U	ug/L	P354281	
		Chromium	0.65	I	ug/L	P354281	
		Copper	0.45	I	ug/L	P354281	
		Lead	0.37		ug/L	P354281	
		Nickel	0.37	I	ug/L	P354281	
		Silver	0.010	U	ug/L	P354281	

Ref. Method and Comment:

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

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

Sample Location: Three Island Lake @ Center of S Lobe

Collection Date/Time: 10/31/2018 11:00

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038290	EPA 8321B	Aldicarb	0.020	U	ug/L	P354103	
		Aldicarb Sulfone	0.0020	U	ug/L	P354103	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P354103	
		Carbaryl	0.0020	U	ug/L	P354103	
		Carbofuran	0.0020	U	ug/L	P354103	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P354103	
		Methiocarb	0.0020	U	ug/L	P354103	
		Methomyl	0.0020	U	ug/L	P354103	
		Oxamyl	0.0020	U	ug/L	P354103	
		Propoxur	0.0020	U	ug/L	P354103	
2038291		2,4-D	0.0020	U	ug/L	P354103	
		Sucralose**	1.9		ug/L	P354052	
		Bentazon	0.0037		ug/L	P354103	
		MCP	0.0020	U	ug/L	P354103	MS
		Triclopyr**	0.0040	U	ug/L	P354103	
		Imidacloprid	0.0020	U	ug/L	P354103	MS
		Diuron	0.010		ug/L	P354103	
		Pyraclostrobin**	0.0020	U	ug/L	P354103	
		Primidone**	0.0040	U	ug/L	P354103	
		Linuron	0.0040	U	ug/L	P354103	
		Acetaminophen**	0.0080	U	ug/L	P354103	
		Fenuron	0.016	U	ug/L	P354103	
		Imazapyr**	0.0040	U	ug/L	P354103	
		Carbamazepine**	8.0E-04	U	ug/L	P354103	
		Fluridone**	4.0E-04	U	ug/L	P354103	
		Hydrocodone**	8.0E-04	U	ug/L	P354103	
		Naproxen**	0.0080	U	ug/L	P354103	
		Ibuprofen**	0.020	U	ug/L	P354103	
		Glyphosate**	0.10	U	ug/L	P354052	
		AMPA**	0.10	U	ug/L	P354052	
2038292	EPA 8270D	Endothall**	0.25	U	ug/L	P354052	
		Glufosinate**	0.10	U	ug/L	P354052	
		Acesulfame K**	0.41		ug/L	P354052	
		Aldrin	4.5	U	ng/L	P354276	
		Alpha-BHC	2.2	U	ng/L	P354276	
		Beta-BHC	4.5	U	ng/L	P354276	
		Delta-BHC	4.5	U	ng/L	P354276	MS
		Gamma-BHC	4.5	U	ng/L	P354276	
		Carbophenothion	4.5	U	ng/L	P354276	
		Chlorothalonil	2.2	UJ	ng/L	P354276	LCS, RPD
		Cypermethrin	22	U	ng/L	P354276	
		DDD-p,p'	3.3	U	ng/L	P354276	
		DDE-p,p'	3.3	U	ng/L	P354276	
		DDT-p,p'	3.3	U	ng/L	P354276	

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038292	EPA 8270D	Dieldrin	4.5	U	ng/L	P354276	
		Endosulfan I	4.5	U	ng/L	P354276	
		Endosulfan II	4.5	U	ng/L	P354276	
		Endosulfan Sulfate	2.2	U	ng/L	P354276	
		Endrin	2.2	U	ng/L	P354276	
		Endrin Aldehyde	2.2	U	ng/L	P354276	
		Heptachlor	1.7	U	ng/L	P354276	
		Heptachlor Epoxide	2.2	U	ng/L	P354276	
		Methoxychlor	4.5	U	ng/L	P354276	
		Mirex	2.2	U	ng/L	P354276	
		Permethrin	11	U	ng/L	P354276	
		Trifluralin	1.1	U	ng/L	P354276	
		Alpha-Chlordane	1.1	U	ng/L	P354276	
		Gamma-Chlordane	1.1	U	ng/L	P354276	
		Endrin Ketone	2.2	U	ng/L	P354276	
		Dicofol	33	U	ng/L	P354276	
		Chlordane	4.2	I	ng/L	P354276	
		Toxaphene	33	U	ng/L	P354276	
		Alachlor	0.25	U	ng/L	P354130	
		Ametryn	0.32	U	ng/L	P354130	
2038293	EPA 8270D	Atrazine	1.8	J	ng/L	P354130	MS
		Atrazine Desethyl	1.5	UJ	ng/L	P354130	MS
		Azinphos Methyl	2.2	U	ng/L	P354130	
		Bromacil	0.49	U	ng/L	P354130	
		Butylate	0.40	UJ	ng/L	P354130	RPD
		Chlorpyrifos Ethyl	0.25	U	ng/L	P354130	
		Chlorpyrifos Methyl	0.099	U	ng/L	P354130	
		Demeton	2.0	U	ng/L	P354130	
		Diazinon	0.12	UJ	ng/L	P354130	MS
		Disulfoton	0.49	U	ng/L	P354130	
		EPTC	1.2	UJ	ng/L	P354130	RPD
		Ethion	0.15	UJ	ng/L	P354130	RPD
		Ethoprop	0.099	UJ	ng/L	P354130	LCS
		Fenamiphos	0.25	U	ng/L	P354130	
		Fipronil	0.25	UJ	ng/L	P354130	RPD
		Fipronil Sulfide	0.15	U	ng/L	P354130	
		Fipronil Sulfone	0.18	I	ng/L	P354130	
		Hexazinone	0.49	U	ng/L	P354130	
		Malathion	0.35	U	ng/L	P354130	
		Metribuzin	0.20	UJ	ng/L	P354130	MS, RPD
		Mevinphos	0.49	U	ng/L	P354130	
		Molinate	0.30	U	ng/L	P354130	
		Norflurazon	0.49	U	ng/L	P354130	
		Pendimethalin	0.99	U	ng/L	P354130	
		Phorate	0.25	U	ng/L	P354130	

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2038293	EPA 8270D	Prometon	0.89	U	ng/L	P354130	
		Prometryn	0.20	U	ng/L	P354130	
		Simazine	0.49	U	ng/L	P354130	
		Terbufos	0.099	UJ	ng/L	P354130	RPD
		Terbutylazine	0.42	UJ	ng/L	P354130	MS
		Fonofos	0.20	U	ng/L	P354130	
		Metalaxyl	0.25	U	ng/L	P354130	
		Metolachlor	0.25	U	ng/L	P354130	
		Acetochlor	0.25	U	ng/L	P354130	
		Cyanazine	0.49	U	ng/L	P354130	
		Parathion Ethyl	0.25	U	ng/L	P354130	
		Parathion Methyl	0.25	U	ng/L	P354130	
		Dimethenamid**	0.099	U	ng/L	P354130	
		Fipronil Desulfinyl**	0.19	IJ	ng/L	P354130	
		Dithiopyr**	0.11	I	ng/L	P354130	
		Prodiamine**	0.17	UJ	ng/L	P354130	LCS, RPD
		Oxadiazon**	0.18	I	ng/L	P354130	
		Tebuconazole**	0.82	IJ	ng/L	P354130	LCS, RPD

Ref. Method and Comment:

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

EPA 8270D: Estimated value for Fipronil Desulfinyl due to lack of the second source standard. Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354073

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P354281

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P354281

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354297

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354226

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354083

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

Reference Method: EPA 8270D
Batch ID: P354130

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
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	0.25	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
Metalaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P354130

Component	Result	Code	Units
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
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 8270D
Batch ID: P354276

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	3.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8276
Batch ID: P354276

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P354052

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: P354103

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
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
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	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
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
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P354451

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P354358

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P354608

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P354529

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P354364

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P354327

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: P354281

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	103		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	102		P	85 - 115
Sodium	97.5		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P354281

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	100		P	85 - 115
Copper	97.9		P	85 - 115
Lead	93.0		P	85 - 115
Nickel	97.5		P	85 - 115
Silver	97.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354297

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P354226

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P354083

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

Reference Method: EPA 8270D

Batch ID: P354130

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.5	107	P/P	74 - 119
Alachlor	93.8	96.1	P/P	75 - 118
Ametryn	111	111	P/P	59 - 137
Atrazine	99.1	102	P/P	73 - 120
Atrazine Desethyl	92.4	74.7	P/P	19 - 129
Azinphos Methyl	108	113	P/P	65 - 181
Bromacil	77.6	91.0	P/P	43 - 123
Butylate	44.3	49.1	P/P	28 - 85.0
Chlorpyrifos Ethyl	90.8	94.5	P/P	55 - 112
Chlorpyrifos Methyl	97.2	84.5	P/P	35 - 124
Cyanazine	101	82.0	P/P	26 - 262
Demeton	77.1	63.5	P/P	43 - 122
Diazinon	102	95.8	P/P	72 - 120
Dimethenamid	91.9	105	P/P	60 - 130
Disulfoton	103	77.5	P/P	45 - 137
Dithiopyr	105	107	P/P	60 - 130
EPTC	39.5	46.3	P/P	28 - 95.0
Ethion	69.2	96.2	P/P	63 - 127
Ethoprop	57.6	67.1	F/P	63 - 109
Fenamiphos	75.9	88.4	P/P	66 - 136
Fipronil	79.3	114	P/P	63 - 126
Fipronil Sulfide	81.5	99.6	P/P	59 - 123
Fipronil Sulfone	75.3	97.2	P/P	56 - 122
Fonofos	95.7	79.7	P/P	64 - 114
Hexazinone	94.0	99.1	P/P	49 - 144
Malathion	78.6	101	P/P	68 - 131
Metaxalyl	99.6	94.5	P/P	57 - 126
Metolachlor	80.6	102	P/P	75 - 118
Metribuzin	118	83.1	P/P	46 - 169
Mevinphos	92.1	80.4	P/P	34 - 126
Molinate	52.0	57.3	P/P	37 - 101
Norflurazon	98.1	111	P/P	63 - 127
Oxadiazon	83.9	108	P/P	60 - 130
Parathion Ethyl	83.4	84.6	P/P	78 - 109
Parathion Methyl	111	93.3	P/P	74 - 123
Pendimethalin	82.7	75.1	P/P	51 - 130
Phorate	77.6	63.7	P/P	53 - 116
Prodiamine	110	139	P/F	60 - 130
Prometon	88.0	90.6	P/P	66 - 124
Prometryn	94.8	95.6	P/P	66 - 124

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P354130

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	105	107	P/P	62 - 134
Tebuconazole	43.8	103	P/F	30 - 100
Terbufos	104	72.2	P/P	59 - 115
Terbutylazine	96.8	103	P/P	76 - 113

Reference Method: EPA 8270D

Batch ID: P354276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	66.4	68.3	P/P	24 - 89.0
Alpha-BHC	103	105	P/P	58 - 117
Alpha-Chlordane	94.4	91.8	P/P	56 - 115
Beta-BHC	129	126	P/P	55 - 137
Carbophenothion	88.8	94.1	P/P	37 - 145
Chlorothalonil	63.2	25.5	P/F	26 - 163
Cypermethrin	61.2	71.6	P/P	42 - 156
DDD-p,p'	97.8	99.3	P/P	59 - 129
DDE-p,p'	92.8	89.1	P/P	52 - 117
DDT-p,p'	105	102	P/P	48 - 128
Delta-BHC	135	135	P/P	59 - 158
Dicofol	101	98.0	P/P	19 - 124
Dieldrin	104	98.8	P/P	57 - 126
Endosulfan I	96.9	88.8	P/P	59 - 133
Endosulfan II	80.0	81.3	P/P	58 - 148
Endosulfan Sulfate	83.5	86.5	P/P	56 - 135
Endrin	101	99.8	P/P	50 - 140
Endrin Aldehyde	96.5	95.4	P/P	47 - 141
Endrin Ketone	87.1	89.8	P/P	63 - 123
Gamma-BHC	120	123	P/P	59 - 132
Gamma-Chlordane	91.7	87.8	P/P	55 - 112
Heptachlor	73.8	72.6	P/P	45 - 102
Heptachlor Epoxide	97.0	94.1	P/P	61 - 116
Methoxychlor	106	109	P/P	60 - 133
Mirex	68.8	71.3	P/P	40 - 98.0
Permethrin	66.9	73.2	P/P	45 - 131
Trifluralin	92.0	92.6	P/P	38 - 179

Reference Method: EPA 8276

Batch ID: P354276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	72.9	65.3	P/P	47 - 125
Toxaphene	73.5	68.1	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P354052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	83.2		P	40 - 150
AMPA	104		P	40 - 150
Endothall	106		P	40 - 150
Glufosinate	99.0		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P354052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	94.3		P	40 - 140
Sucralose	88.1		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P354103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	40 - 150
3-Hydroxycarbofuran	107		P	40 - 150
Acetaminophen	131		P	30 - 150
Aldicarb	95.0		P	30 - 150
Aldicarb Sulfone	129		P	40 - 150
Aldicarb Sulfoxide	72.6		P	40 - 150
Bentazon	85.8		P	30 - 150
Carbamazepine	93.3		P	40 - 150
Carbaryl	85.7		P	40 - 150
Carbofuran	81.0		P	40 - 150
Diuron	81.1		P	40 - 150
Fenuron	129		P	40 - 150
Fluridone	113		P	40 - 150
Hydrocodone	124		P	40 - 150
Ibuprofen	86.1		P	40 - 150
Imazapyr	112		P	40 - 150
Imidacloprid	129		P	40 - 160
Linuron	91.7		P	40 - 150
MCPP	118		P	40 - 150
Methiocarb	75.3		P	40 - 150
Methomyl	119		P	40 - 150
Naproxen	80.0		P	40 - 150
Oxamyl	103		P	40 - 150
Primidone	115		P	40 - 150
Propoxur	81.1		P	40 - 150
Pyraclostrobin	82.7		P	40 - 150
Triclopyr	112		P	40 - 150

Reference Method: SM 2120 B

Batch ID: P354451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.0		P	85 - 115

Reference Method: SM 2320 B-97

Batch ID: P354358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97

Batch ID: P354364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	91 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P354327

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P354281

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038195	Iron	99.4		P	80 - 120
2038195	Magnesium	104		P	80 - 120
2038195	Potassium	97.3		P	80 - 120
2038195	Sodium	100		P	80 - 120
2038195	Zinc	102		P	80 - 120
2038694	Calcium	97.3		P	80 - 120
2038694	Iron	107	107	P/P	80 - 120
2038694	Magnesium	101		P	80 - 120
2038694	Potassium	101		P	80 - 120
2038694	Sodium	96.2		P	80 - 120
2038694	Zinc	98.1	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P354281

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038195	Arsenic	105		P	80 - 120
2038195	Cadmium	103		P	80 - 120
2038195	Chromium	98.6		P	80 - 120
2038195	Copper	96.8		P	80 - 120
2038195	Lead	94.5		P	80 - 120
2038195	Nickel	95.5		P	80 - 120
2038195	Silver	95.3		P	80 - 120
2038694	Arsenic	105	105	P/P	80 - 120
2038694	Cadmium	102	103	P/P	80 - 120
2038694	Chromium	99.7	99.5	P/P	80 - 120
2038694	Copper	101	101	P/P	80 - 120
2038694	Lead	97.0	94.8	P/P	80 - 120
2038694	Nickel	99.0	98.5	P/P	80 - 120
2038694	Silver	98.6	98.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2037915	Chloride	99.3		P	90 - 110
2038130	Chloride	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2037915	Sulfate	98.1		P	90 - 110
2038130	Sulfate	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038236	Ammonia-N	99.0	99.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P354345

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038300	Kjeldahl Nitrogen	99.3	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P354297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038203	NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P354226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038299	Total-P	98.6	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P354083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038301	O-Phosphate-P	96.6	98.9	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P354130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038293	Acetochlor	123	118	P/P	67 - 125
2038293	Alachlor	113	111	P/P	69 - 123
2038293	Ametryn	121	128	P/P	52 - 151
2038293	Atrazine	128	113	F/P	71 - 125
2038293	Atrazine Desethyl	133	150	F/F	10 - 129
2038293	Azinphos Methyl	139	157	P/P	48 - 200
2038293	Bromacil	112	106	P/P	46 - 130
2038293	Butylate	32.7	65.3	P/P	10 - 85.0
2038293	Chlorpyrifos Ethyl	96.0	87.2	P/P	54 - 115
2038293	Chlorpyrifos Methyl	89.8	88.7	P/P	44 - 117
2038293	Cyanazine	186	206	P/P	10 - 262
2038293	Demeton	67.3	87.3	P/P	24 - 145
2038293	Diazinon	128	129	P/F	66 - 129
2038293	Dimethenamid	122	115	P/P	60 - 130
2038293	Disulfoton	94.7	105	P/P	45 - 139
2038293	Dithiopyr	122	119	P/P	60 - 130
2038293	EPTC	29.1	50.4	P/P	10 - 86.0
2038293	Ethion	97.6	69.2	P/P	59 - 133
2038293	Ethoprop	80.0	80.2	P/P	54 - 116
2038293	Fenamiphos	95.1	77.0	P/P	55 - 140
2038293	Fipronil	121	117	P/P	37 - 142
2038293	Fipronil Sulfide	94.2	90.3	P/P	37 - 130
2038293	Fipronil Sulfone	83.1	81.5	P/P	18 - 143
2038293	Fonofos	89.4	96.1	P/P	55 - 118
2038293	Hexazinone	123	115	P/P	62 - 140
2038293	Malathion	99.0	98.7	P/P	64 - 132
2038293	Metalaxyl	118	115	P/P	55 - 129
2038293	Metolachlor	116	105	P/P	56 - 137

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P354130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038293	Metribuzin	220	225	F/F	16 - 218
2038293	Mevinphos	89.2	99.6	P/P	34 - 129
2038293	Molinate	42.7	54.9	P/P	16 - 99.0
2038293	Norflurazon	118	122	P/P	43 - 135
2038293	Oxadiazon	113	104	P/P	60 - 130
2038293	Parathion Ethyl	99.6	93.0	P/P	71 - 112
2038293	Parathion Methyl	108	107	P/P	65 - 127
2038293	Pendimethalin	127	122	P/P	35 - 159
2038293	Phorate	81.4	97.5	P/P	41 - 129
2038293	Prodiamine	111	77.3	P/P	60 - 130
2038293	Prometon	119	115	P/P	56 - 140
2038293	Prometryn	115	109	P/P	65 - 130
2038293	Simazine	115	98.9	P/P	54 - 148
2038293	Tebuconazole	96.9	54.2	P/P	30 - 100
2038293	Terbufos	101	112	P/P	53 - 126
2038293	Terbutylazine	123	119	F/F	73 - 114

Reference Method: EPA 8270D
Batch ID: P354276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038799	Aldrin	64.7	61.5	P/P	26 - 96.0
2038799	Alpha-BHC	119	106	P/P	51 - 123
2038799	Alpha-Chlordane	82.1	77.5	P/P	45 - 120
2038799	Beta-BHC	124	121	P/P	43 - 146
2038799	Carbophenothion	106	113	P/P	26 - 179
2038799	Chlorothalonil	79.3	55.7	P/P	10 - 215
2038799	Cypermethrin	91.4	84.6	P/P	35 - 169
2038799	DDD-p,p'	81.9	79.9	P/P	49 - 131
2038799	DDE-p,p'	83.5	79.0	P/P	39 - 127
2038799	DDT-p,p'	106	107	P/P	49 - 120
2038799	Delta-BHC	194	146	F/P	49 - 187
2038799	Dicofol	105	106	P/P	10 - 129
2038799	Dieldrin	87.5	80.9	P/P	46 - 132
2038799	Endosulfan I	94.9	76.8	P/P	57 - 130
2038799	Endosulfan II	98.1	107	P/P	52 - 148
2038799	Endosulfan Sulfate	95.3	91.7	P/P	55 - 129
2038799	Endrin	87.4	77.3	P/P	45 - 133
2038799	Endrin Aldehyde	78.7	68.7	P/P	26 - 140
2038799	Endrin Ketone	95.6	98.7	P/P	60 - 125
2038799	Gamma-BHC	141	135	P/P	50 - 145
2038799	Gamma-Chlordane	80.0	77.1	P/P	44 - 118
2038799	Heptachlor	68.9	61.7	P/P	35 - 106
2038799	Heptachlor Epoxide	84.1	80.8	P/P	52 - 123
2038799	Methoxychlor	104	106	P/P	54 - 132
2038799	Mirex	77.4	74.6	P/P	36 - 107
2038799	Permethrin	87.4	81.1	P/P	47 - 135
2038799	Trifluralin	98.9	99.0	P/P	32 - 228

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P354276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038815	Chlordane	89.0	80.2	P/P	41 - 134
2038815	Toxaphene	70.7	77.6	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P354052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038088	Acesulfame K	106	108	P/P	40 - 150
2038088	AMPA	77.4	72.5	P/P	40 - 150
2038088	Endothall	133	133	P/P	40 - 150
2038088	Glufosinate	80.1	72.6	P/P	40 - 150
2038088	Glyphosate	60.9	55.1	P/P	40 - 140
2038088	Sucralose	81.4	103	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P354103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038087	3-Hydroxycarbofuran	96.4	91.7	P/P	40 - 150
2038087	Aldicarb	73.2	76.6	P/P	30 - 150
2038087	Aldicarb Sulfone	110	109	P/P	40 - 150
2038087	Aldicarb Sulfoxide	43.2	42.6	P/P	40 - 150
2038087	Carbaryl	68.2	69.0	P/P	40 - 150
2038087	Carbofuran	64.0	66.0	P/P	40 - 150
2038087	Methiocarb	59.0	59.6	P/P	40 - 150
2038087	Methomyl	102	101	P/P	40 - 150
2038087	Oxamyl	83.4	85.8	P/P	40 - 150
2038087	Propoxur	63.5	62.8	P/P	40 - 150
2038088	2,4-D	125	138	P/P	40 - 150
2038088	Acetaminophen	131	127	P/P	30 - 150
2038088	Bentazon	48.3	48.5	P/P	30 - 150
2038088	Carbamazepine	73.3	71.8	P/P	40 - 150
2038088	Diuron	58.9	53.6	P/P	40 - 150
2038088	Fenuron	132	122	P/P	40 - 150
2038088	Fluridone	114	106	P/P	40 - 150
2038088	Hydrocodone	120	111	P/P	40 - 150
2038088	Ibuprofen	78.1	79.6	P/P	40 - 150
2038088	Imazapyr	116	108	P/P	40 - 150
2038088	Imidacloprid	204	177	F/F	40 - 160
2038088	Linuron	62.7	64.9	P/P	40 - 150
2038088	MCP	151	145	F/P	40 - 150
2038088	Naproxen	81.8	80.5	P/P	40 - 150
2038088	Primidone	114	107	P/P	40 - 150
2038088	Pyraclostrobin	75.0	73.5	P/P	40 - 150
2038088	Triclopyr	131	132	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P354364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038075	Fluoride	101	101	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P354327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2038205	Organic Carbon	101	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P354073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038223	Turbidity	1.77	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P354281

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038694	Calcium	0.715	Spike	P	0 - 20
2038694	Iron	0.175	Spike	P	0 - 20
2038694	Magnesium	0.881	Spike	P	0 - 20
2038694	Potassium	0.748	Spike	P	0 - 20
2038694	Sodium	0.280	Spike	P	0 - 20
2038694	Zinc	2.82	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P354281

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038694	Arsenic	0.133	Spike	P	0 - 20
2038694	Cadmium	1.26	Spike	P	0 - 20
2038694	Chromium	0.121	Spike	P	0 - 20
2038694	Copper	0.0198	Spike	P	0 - 20
2038694	Lead	2.13	Spike	P	0 - 20
2038694	Nickel	0.420	Spike	P	0 - 20
2038694	Silver	0.0380	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355053

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2037915	Chloride	0.165	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P355058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2037915	Sulfate	0.664	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P354510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038236	Ammonia-N	0.114	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P354345

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038300	Kjeldahl Nitrogen	0.763	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P354297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038203	NO2NO3-N	0.197	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P354226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038299	Total-P	2.68	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P354083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038301	O-Phosphate-P	2.35	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P354130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038293	Acetochlor	3.94	Spike	P	0 - 30
2038293	Alachlor	2.18	Spike	P	0 - 30
2038293	Ametryn	5.12	Spike	P	0 - 30
2038293	Atrazine	9.20	Spike	P	0 - 30
2038293	Atrazine Desethyl	11.8	Spike	P	0 - 30
2038293	Azinphos Methyl	12.1	Spike	P	0 - 30
2038293	Bromacil	5.43	Spike	P	0 - 30
2038293	Butylate	66.6	Spike	F	0 - 30
2038293	Chlorpyrifos Ethyl	9.67	Spike	P	0 - 30
2038293	Chlorpyrifos Methyl	1.16	Spike	P	0 - 30
2038293	Cyanazine	10.4	Spike	P	0 - 30
2038293	Demeton	25.8	Spike	P	0 - 30
2038293	Diazinon	1.01	Spike	P	0 - 30
2038293	Dimethenamid	5.84	Spike	P	0 - 30
2038293	Disulfoton	10.3	Spike	P	0 - 30
2038293	Dithiopyr	2.01	Spike	P	0 - 30
2038293	EPTC	53.6	Spike	F	0 - 30
2038293	Ethion	34.1	Spike	F	0 - 30
2038293	Ethoprop	0.331	Spike	P	0 - 30
2038293	Fenamiphos	21.0	Spike	P	0 - 30
2038293	Fipronil	3.58	Spike	P	0 - 30
2038293	Fipronil Sulfide	4.24	Spike	P	0 - 30
2038293	Fipronil Sulfone	1.77	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P354130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038293	Fonofos	7.21	Spike	P	0 - 30
2038293	Hexazinone	6.61	Spike	P	0 - 30
2038293	Malathion	0.264	Spike	P	0 - 30
2038293	Metalaxyl	2.17	Spike	P	0 - 30
2038293	Metolachlor	9.95	Spike	P	0 - 30
2038293	Metribuzin	2.20	Spike	P	0 - 30
2038293	Mevinphos	10.9	Spike	P	0 - 30
2038293	Molinate	24.9	Spike	P	0 - 30
2038293	Norflurazon	3.26	Spike	P	0 - 30
2038293	Oxadiazon	8.62	Spike	P	0 - 30
2038293	Parathion Ethyl	6.80	Spike	P	0 - 30
2038293	Parathion Methyl	0.640	Spike	P	0 - 30
2038293	Pendimethalin	4.65	Spike	P	0 - 30
2038293	Phorate	18.0	Spike	P	0 - 30
2038293	Prodiamine	36.2	Spike	F	0 - 30
2038293	Prometon	3.05	Spike	P	0 - 30
2038293	Prometryn	5.67	Spike	P	0 - 30
2038293	Simazine	14.6	Spike	P	0 - 30
2038293	Tebuconazole	53.0	Spike	F	0 - 30
2038293	Terbufos	10.4	Spike	P	0 - 30
2038293	Terbutylazine	3.20	Spike	P	0 - 30
LFB	Acetochlor	11.7	LCS	P	0 - 30
LFB	Alachlor	2.50	LCS	P	0 - 30
LFB	Ametryn	0.595	LCS	P	0 - 30
LFB	Atrazine	2.80	LCS	P	0 - 30
LFB	Atrazine Desethyl	21.3	LCS	P	0 - 30
LFB	Azinphos Methyl	3.89	LCS	P	0 - 30
LFB	Bromacil	15.8	LCS	P	0 - 30
LFB	Butylate	10.3	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	4.02	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	13.9	LCS	P	0 - 30
LFB	Cyanazine	20.7	LCS	P	0 - 30
LFB	Demeton	19.3	LCS	P	0 - 30
LFB	Diazinon	6.40	LCS	P	0 - 30
LFB	Dimethenamid	13.3	LCS	P	0 - 30
LFB	Disulfoton	28.4	LCS	P	0 - 30
LFB	Dithiopyr	1.88	LCS	P	0 - 30
LFB	EPTC	15.7	LCS	P	0 - 30
LFB	Ethion	32.7	LCS	F	0 - 30
LFB	Ethoprop	15.2	LCS	P	0 - 30
LFB	Fenamiphos	15.2	LCS	P	0 - 30
LFB	Fipronil	36.1	LCS	F	0 - 30
LFB	Fipronil Sulfide	20.0	LCS	P	0 - 30
LFB	Fipronil Sulfone	25.4	LCS	P	0 - 30
LFB	Fonofos	18.2	LCS	P	0 - 30
LFB	Hexazinone	5.28	LCS	P	0 - 30
LFB	Malathion	24.8	LCS	P	0 - 30
LFB	Metalaxyl	5.31	LCS	P	0 - 30
LFB	Metolachlor	23.6	LCS	P	0 - 30
LFB	Metribuzin	35.0	LCS	F	0 - 30
LFB	Mevinphos	13.6	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P354130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Molinate	9.57	LCS	P	0 - 30
LFB	Norflurazon	12.0	LCS	P	0 - 30
LFB	Oxadiazon	25.3	LCS	P	0 - 30
LFB	Parathion Ethyl	1.51	LCS	P	0 - 30
LFB	Parathion Methyl	17.0	LCS	P	0 - 30
LFB	Pendimethalin	9.63	LCS	P	0 - 30
LFB	Phorate	19.7	LCS	P	0 - 30
LFB	Prodiamine	23.0	LCS	P	0 - 30
LFB	Prometon	2.94	LCS	P	0 - 30
LFB	Prometryn	0.872	LCS	P	0 - 30
LFB	Simazine	1.96	LCS	P	0 - 30
LFB	Tebuconazole	80.8	LCS	F	0 - 30
LFB	Terbufos	36.1	LCS	F	0 - 30
LFB	Terbutylazine	5.81	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P354276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038799	Aldrin	5.06	Spike	P	0 - 30
2038799	Alpha-BHC	11.5	Spike	P	0 - 30
2038799	Alpha-Chlordane	5.82	Spike	P	0 - 30
2038799	Beta-BHC	2.32	Spike	P	0 - 30
2038799	Carbophenothion	7.07	Spike	P	0 - 30
2038799	Chlorothalonil	35.0	Spike	F	0 - 30
2038799	Cypermethrin	7.69	Spike	P	0 - 30
2038799	DDD-p,p'	2.42	Spike	P	0 - 30
2038799	DDE-p,p'	5.50	Spike	P	0 - 30
2038799	DDT-p,p'	0.467	Spike	P	0 - 30
2038799	Delta-BHC	28.7	Spike	P	0 - 30
2038799	Dicofol	0.213	Spike	P	0 - 30
2038799	Dieldrin	7.80	Spike	P	0 - 30
2038799	Endosulfan I	21.1	Spike	P	0 - 30
2038799	Endosulfan II	8.29	Spike	P	0 - 30
2038799	Endosulfan Sulfate	3.83	Spike	P	0 - 30
2038799	Endrin	12.3	Spike	P	0 - 30
2038799	Endrin Aldehyde	13.6	Spike	P	0 - 30
2038799	Endrin Ketone	3.21	Spike	P	0 - 30
2038799	Gamma-BHC	4.61	Spike	P	0 - 30
2038799	Gamma-Chlordane	3.68	Spike	P	0 - 30
2038799	Heptachlor	11.0	Spike	P	0 - 30
2038799	Heptachlor Epoxide	3.94	Spike	P	0 - 30
2038799	Methoxychlor	1.45	Spike	P	0 - 30
2038799	Mirex	3.71	Spike	P	0 - 30
2038799	Permethrin	7.51	Spike	P	0 - 30
2038799	Trifluralin	0.121	Spike	P	0 - 30
LFB	Aldrin	2.81	LCS	P	0 - 30
LFB	Alpha-BHC	1.58	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.85	LCS	P	0 - 30
LFB	Beta-BHC	2.25	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P354276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	5.77	LCS	P	0 - 30
LFB	Chlorothalonil	85.2	LCS	F	0 - 30
LFB	Cypermethrin	15.6	LCS	P	0 - 30
LFB	DDD-p,p'	1.56	LCS	P	0 - 30
LFB	DDE-p,p'	4.07	LCS	P	0 - 30
LFB	DDT-p,p'	2.59	LCS	P	0 - 30
LFB	Delta-BHC	0.00851	LCS	P	0 - 30
LFB	Dicofol	3.05	LCS	P	0 - 30
LFB	Dieldrin	5.43	LCS	P	0 - 30
LFB	Endosulfan I	8.72	LCS	P	0 - 30
LFB	Endosulfan II	1.55	LCS	P	0 - 30
LFB	Endosulfan Sulfate	3.45	LCS	P	0 - 30
LFB	Endrin	0.804	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.11	LCS	P	0 - 30
LFB	Endrin Ketone	3.00	LCS	P	0 - 30
LFB	Gamma-BHC	3.24	LCS	P	0 - 30
LFB	Gamma-Chlordane	4.28	LCS	P	0 - 30
LFB	Heptachlor	1.58	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.08	LCS	P	0 - 30
LFB	Methoxychlor	2.81	LCS	P	0 - 30
LFB	Mirex	3.45	LCS	P	0 - 30
LFB	Permethrin	8.96	LCS	P	0 - 30
LFB	Trifluralin	0.607	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P354276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038815	Chlordane	10.4	Spike	P	0 - 30
2038815	Toxaphene	9.38	Spike	P	0 - 30
LFB	Chlordane	11.0	LCS	P	0 - 30
LFB	Toxaphene	7.55	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P354052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038088	Acesulfame K	0.918	Spike	P	0 - 30
2038088	AMPA	6.60	Spike	P	0 - 30
2038088	Endothall	0.246	Spike	P	0 - 30
2038088	Glufosinate	9.80	Spike	P	0 - 30
2038088	Glyphosate	7.53	Spike	P	0 - 30
2038088	Sucralose	16.7	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P354103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P354103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038087	3-Hydroxycarbofuran	5.00	Spike	P	0 - 30
2038087	Aldicarb	4.58	Spike	P	0 - 30
2038087	Aldicarb Sulfone	1.16	Spike	P	0 - 30
2038087	Aldicarb Sulfoxide	1.44	Spike	P	0 - 30
2038087	Carbaryl	1.24	Spike	P	0 - 30
2038087	Carbofuran	3.01	Spike	P	0 - 30
2038087	Methiocarb	1.05	Spike	P	0 - 30
2038087	Methomyl	0.557	Spike	P	0 - 30
2038087	Oxamyl	2.79	Spike	P	0 - 30
2038087	Propoxur	1.17	Spike	P	0 - 30
2038088	2,4-D	6.27	Spike	P	0 - 30
2038088	Acetaminophen	2.80	Spike	P	0 - 30
2038088	Bentazon	0.207	Spike	P	0 - 30
2038088	Carbamazepine	1.63	Spike	P	0 - 30
2038088	Diuron	5.85	Spike	P	0 - 30
2038088	Fenuron	7.71	Spike	P	0 - 30
2038088	Fluridone	7.93	Spike	P	0 - 30
2038088	Hydrocodone	8.07	Spike	P	0 - 30
2038088	Ibuprofen	1.97	Spike	P	0 - 30
2038088	Imazapyr	6.30	Spike	P	0 - 30
2038088	Imidacloprid	12.1	Spike	P	0 - 30
2038088	Linuron	3.45	Spike	P	0 - 30
2038088	MCPP	2.76	Spike	P	0 - 30
2038088	Naproxen	1.51	Spike	P	0 - 30
2038088	Primidone	5.94	Spike	P	0 - 30
2038088	Pyraclostrobin	2.10	Spike	P	0 - 30
2038088	Triclopyr	1.01	Spike	P	0 - 30

Reference Method: SM 2120 B

Batch ID: P354451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038223	Color (true)	2.60	Sample	P	0 - 20

Reference Method: SM 2320 B-97

Batch ID: P354358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038075	Total Alkalinity	0.592	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97

Batch ID: P354608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038235	TDS	1.70	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P354364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038075	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P354327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038205	Organic Carbon	0.742	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2038290
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	51.7	P	30 - 160

Lab Sample ID: 2038291
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	81.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	128	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.5	P	30 - 160
EPA 8321B	Diuron-d6	78.2	P	30 - 160
EPA 8321B	Endothall-d6	135	P	40 - 160
EPA 8321B	Endothall-d6	135	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	97.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	97.2	P	40 - 160
EPA 8321B	Ibuprofen-d3	79.0	P	30 - 160
EPA 8321B	Primidone-d5	85.0	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	40 - 160
EPA 8321B	Sucralose-d6	115	P	40 - 160

Lab Sample ID: 2038292
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	73.3	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	72.1	P	34 - 101
EPA 8276	Decachlorobiphenyl	63.6	P	31 - 108
EPA 8276	PCNB	97.8	P	62 - 142

Lab Sample ID: 2038293
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	92.2	P	71 - 126
EPA 8270D	Terbufos-d10	105	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A87461

Included Lab Sample IDs: 2038274

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A87463

Included Lab Sample IDs: 2038276

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	99.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A87510

Included Lab Sample IDs: 2038291

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	82.4	79.9	P/P	60 - 160
Endothall	105	118	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A87521

Included Lab Sample IDs: 2038291

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	142	132	P/P	60 - 160
Glufosinate	117	120	P/P	60 - 160
Glyphosate	120	130	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A87535

Included Lab Sample IDs: 2038291

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	85.5	80.8	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A87560

Included Lab Sample IDs: 2038275

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A87578

Included Lab Sample IDs: 2038275

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00
Run ID: A87585
Included Lab Sample IDs: 2038275

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	97.6	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A87599
Included Lab Sample IDs: 2038274

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

Reference Method: SM 4500 F-C-97
Run ID: A87599
Included Lab Sample IDs: 2038274

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

Reference Method: EPA 8321B
Run ID: A87626
Included Lab Sample IDs: 2038291

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.5	101	P/P	50 - 150
3-Hydroxycarbofuran	112	109	P/P	50 - 150
Acetaminophen	97.7	122	P/P	60 - 160
Aldicarb	88.8	100	P/P	60 - 150
Aldicarb Sulfone	114	112	P/P	50 - 150
Aldicarb Sulfoxide	110	101	P/P	50 - 150
Bentazon	98.4	106	P/P	50 - 160
Carbamazepine	111	116	P/P	60 - 160
Carbaryl	121	118	P/P	60 - 150
Carbofuran	112	111	P/P	50 - 150
Diuron	99.8	109	P/P	60 - 150
Fenuron	118	115	P/P	60 - 150
Fluridone	128	123	P/P	60 - 160
Hydrocodone	109	110	P/P	60 - 150
Ibuprofen	76.0	106	P/P	50 - 160
Imazapyr	104	109	P/P	50 - 150
Imidacloprid	113	101	P/P	60 - 160
Linuron	116	127	P/P	60 - 150
MCPP	100	99.3	P/P	50 - 150
Methiocarb	113	111	P/P	50 - 150
Methomyl	102	108	P/P	50 - 150
Naproxen	95.9	96.8	P/P	50 - 160
Oxamyl	103	93.6	P/P	50 - 150
Primidone	107	111	P/P	60 - 160
Propoxur	107	108	P/P	50 - 150
Pyraclostrobin	92.3	97.2	P/P	60 - 150
Triclopyr	98.7	99.2	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
 Run ID: A87642
 Included Lab Sample IDs: 2038274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	90 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A87648
 Included Lab Sample IDs: 2038294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	101	P/P	90 - 110
Cadmium	101	98.9	P/P	90 - 110
Copper	100	101	P/P	90 - 110
Lead	95.8	96.1	P/P	90 - 110
Nickel	100	99.8	P/P	90 - 110
Silver	95.0	93.9	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
 Run ID: A87652
 Included Lab Sample IDs: 2038294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.9	100	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	103	104	P/P	90 - 110
Potassium	98.2	97.8	P/P	90 - 110
Sodium	97.7	99.6	P/P	90 - 110
Zinc	103	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A87660
 Included Lab Sample IDs: 2038275

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

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A87674
 Included Lab Sample IDs: 2038275

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	97.6	P/P	90 - 110

Reference Method: EPA 8270D
 Run ID: A87724
 Included Lab Sample IDs: 2038292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	89.7		P	80 - 120
Alpha-BHC	92.1		P	80 - 120
Alpha-Chlordane	93.2		P	80 - 120
Beta-BHC	91.6		P	80 - 120
Carbophenothion	116		P	80 - 120
Chlorothalonil	82.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A87724

Included Lab Sample IDs: 2038292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cypermethrin	91.9		P	80 - 120
DDD-p,p'	94.3		P	80 - 120
DDE-p,p'	93.0		P	80 - 120
DDT-p,p'	98.6		P	80 - 120
Delta-BHC	90.1		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	96.9		P	80 - 120
Endosulfan I	88.8		P	80 - 120
Endosulfan II	96.7		P	80 - 120
Endosulfan Sulfate	94.3		P	80 - 120
Endrin	92.2		P	80 - 120
Endrin Aldehyde	88.8		P	80 - 120
Endrin Ketone	96.0		P	80 - 120
Gamma-BHC	92.3		P	80 - 120
Gamma-Chlordane	92.3		P	80 - 120
Heptachlor	86.8		P	80 - 120
Heptachlor Epoxide	91.2		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	91.1		P	80 - 120
Permethrin	91.0		P	80 - 120
Trifluralin	88.8		P	80 - 120

Reference Method: EPA 8276

Run ID: A87764

Included Lab Sample IDs: 2038292

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	93.5		P	80 - 120
Toxaphene	95.6		P	80 - 120

Reference Method: EPA 8270D

Run ID: A87841

Included Lab Sample IDs: 2038293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.4		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	95.1		P	80 - 120
Atrazine	102		P	80 - 120
Atrazine Desethyl	107		P	80 - 120
Azinphos Methyl	99.1		P	80 - 120
Bromacil	94.1		P	80 - 120
Butylate	99.2		P	80 - 120
Chlorpyrifos Ethyl	98.3		P	80 - 120
Chlorpyrifos Methyl	97.5		P	80 - 120
Cyanazine	113		P	80 - 120
Demeton	98.8		P	80 - 120
Diazinon	97.9		P	80 - 120
Dimethenamid	98.7		P	80 - 120
Disulfoton	96.2		P	80 - 120
Dithiopyr	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A87841
Included Lab Sample IDs: 2038293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
EPTC	102		P	80 - 120
Ethion	96.9		P	80 - 120
Ethoprop	106		P	80 - 120
Fenamiphos	95.9		P	80 - 120
Fipronil	97.5		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	97.0		P	80 - 120
Fipronil Sulfone	98.0		P	80 - 120
Fonofos	98.0		P	80 - 120
Hexazinone	97.2		P	80 - 120
Malathion	96.8		P	80 - 120
Metaxyl	99.5		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	100		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	97.4		P	80 - 120
Norflurazon	93.0		P	80 - 120
Oxadiazon	102		P	80 - 120
Parathion Ethyl	96.1		P	80 - 120
Parathion Methyl	96.7		P	80 - 120
Pendimethalin	102		P	80 - 120
Phorate	93.5		P	80 - 120
Prodiamine	101		P	80 - 120
Prometon	97.5		P	80 - 120
Prometryn	97.8		P	80 - 120
Simazine	101		P	80 - 120
Tebuconazole	98.2		P	80 - 120
Terbufos	96.0		P	80 - 120
Terbutylazine	98.6		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A87873
Included Lab Sample IDs: 2038294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	98.9	98.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A87936
Included Lab Sample IDs: 2038274

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

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.77	
EPA 200.7 Rev. 4.4	Calcium	100		97.3					0.715
	Iron	103		99.4	107	107			0.175
	Magnesium	104		104	101				0.881
	Potassium	102		97.3	101				0.748
	Sodium	97.5		100	96.2				0.280
	Zinc	103		102	98.1	102			2.82
EPA 200.8 Rev. 5.4	Arsenic	102		105	105	105			0.133
	Cadmium	102		103	102	103			1.26
	Chromium	100		98.6	99.7	99.5			0.121
	Copper	97.9		96.8	101	101			0.0198
	Lead	93.0		94.5	97.0	94.8			2.13
	Nickel	97.5		95.5	99.0	98.5			0.420
	Silver	97.6		95.3	98.6	98.7			0.0380
EPA 300.0 Rev. 2.1	Chloride	102		99.3	98.0			0.165	
	Sulfate	101		98.1	95.4			0.664	
EPA 350.1 Rev. 2.0	Ammonia-N	101		99.0	99.1				0.114
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		99.3	98.4				0.763
EPA 353.2 Rev. 2.0	NO2NO3-N	103		101					0.197
EPA 365.1 Rev. 2.0	Total-P	103		98.6	101				2.68
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103		96.6	98.9				2.35
EPA 8270D	Acetochlor	95.5	107	123	118		11.7		3.94
	Alachlor	93.8	96.1	113	111		2.50		2.18
	Aldrin	66.4	68.3	64.7	61.5		2.81		5.06
	Alpha-BHC	103	105	119	106		1.58		11.5
	Alpha-Chlordane	94.4	91.8	82.1	77.5		2.85		5.82
	Ametryn	111	111	121	128		0.595		5.12
	Atrazine	99.1	102	128	113		2.80		9.20
	Atrazine Desethyl	92.4	74.7	133	150		21.3		11.8
	Azinphos Methyl	108	113	139	157		3.89		12.1
	Beta-BHC	129	126	124	121		2.25		2.32
	Bromacil	77.6	91.0	112	106		15.8		5.43
	Butylate	44.3	49.1	32.7	65.3		10.3		66.6
	Carbophenothion	88.8	94.1	106	113		5.77		7.07
	Chlorothalonil	63.2	25.5	79.3	55.7		85.2		35.0
	Chlorpyrifos Ethyl	90.8	94.5	96.0	87.2		4.02		9.67
	Chlorpyrifos Methyl	97.2	84.5	89.8	88.7		13.9		1.16
	Cyanazine	101	82.0	186	206		20.7		10.4
	Cypermethrin	61.2	71.6	91.4	84.6		15.6		7.69
	DDD-p,p'	97.8	99.3	81.9	79.9		1.56		2.42
	DDE-p,p'	92.8	89.1	83.5	79.0		4.07		5.50
	DDT-p,p'	105	102	106	107		2.59		0.467
	Delta-BHC	135	135	194	146		0.0085		28.7
	Demeton	77.1	63.5	67.3	87.3		19.3		25.8
	Diazinon	102	95.8	128	129		6.40		1.01
	Dicofol	101	98.0	105	106		3.05		0.213
	Dieldrin	104	98.8	87.5	80.9		5.43		7.80
	Dimethenamid	91.9	105	122	115		13.3		5.84
	Disulfoton	103	77.5	94.7	105		28.4		10.3
	Dithiopyr	105	107	122	119		1.88		2.01
	Endosulfan I	96.9	88.8	94.9	76.8		8.72		21.1
	Endosulfan II	80.0	81.3	98.1	107		1.55		8.29
	Endosulfan Sulfate	83.5	86.5	95.3	91.7		3.45		3.83
	Endrin	101	99.8	87.4	77.3		0.804		12.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Endrin Aldehyde	96.5	95.4	78.7	68.7	1.11	13.6
	Endrin Ketone	87.1	89.8	95.6	98.7	3.00	3.21
	EPTC	39.5	46.3	29.1	50.4	15.7	53.6
	Ethion	69.2	96.2	97.6	69.2	32.7	34.1
	Ethoprop	57.6	67.1	80.0	80.2	15.2	0.331
	Fenamiphos	75.9	88.4	95.1	77.0	15.2	21.0
	Fipronil	79.3	114	121	117	36.1	3.58
	Fipronil Sulfide	81.5	99.6	94.2	90.3	20.0	4.24
	Fipronil Sulfone	75.3	97.2	83.1	81.5	25.4	1.77
	Fonofos	95.7	79.7	89.4	96.1	18.2	7.21
	Gamma-BHC	120	123	141	135	3.24	4.61
	Gamma-Chlordane	91.7	87.8	80.0	77.1	4.28	3.68
	Heptachlor	73.8	72.6	68.9	61.7	1.58	11.0
	Heptachlor Epoxide	97.0	94.1	84.1	80.8	3.08	3.94
	Hexazinone	94.0	99.1	123	115	5.28	6.61
	Malathion	78.6	101	99.0	98.7	24.8	0.264
	Metalaxyl	99.6	94.5	118	115	5.31	2.17
	Methoxychlor	106	109	104	106	2.81	1.45
	Metolachlor	80.6	102	116	105	23.6	9.95
	Metribuzin	118	83.1	220	225	35.0	2.20
	Mevinphos	92.1	80.4	89.2	99.6	13.6	10.9
	Mirex	68.8	71.3	77.4	74.6	3.45	3.71
	Molinate	52.0	57.3	42.7	54.9	9.57	24.9
	Norflurazon	98.1	111	118	122	12.0	3.26
	Oxadiazon	83.9	108	113	104	25.3	8.62
	Parathion Ethyl	83.4	84.6	99.6	93.0	1.51	6.80
	Parathion Methyl	111	93.3	108	107	17.0	0.640
	Pendimethalin	82.7	75.1	127	122	9.63	4.65
	Permethrin	66.9	73.2	87.4	81.1	8.96	7.51
	Phorate	77.6	63.7	81.4	97.5	19.7	18.0
	Prodiamine	110	139	111	77.3	23.0	36.2
	Prometon	88.0	90.6	119	115	2.94	3.05
	Prometryn	94.8	95.6	115	109	0.872	5.67
	Simazine	105	107	115	98.9	1.96	14.6
	Tebuconazole	43.8	103	96.9	54.2	80.8	53.0
	Terbufos	104	72.2	101	112	36.1	10.4
	Terbutylazine	96.8	103	123	119	5.81	3.20
	Trifluralin	92.0	92.6	98.9	99.0	0.607	0.121
EPA 8276	Chlordane	72.9	65.3	89.0	80.2	11.0	10.4
	Toxaphene	73.5	68.1	70.7	77.6	7.55	9.38
EPA 8321B	2,4-D	105		125	138		6.27
	3-Hydroxycarbofuran	107		96.4	91.7		5.00
	Acesulfame K	83.2		106	108		0.918
	Acetaminophen	131		131	127		2.80
	Aldicarb	95.0		73.2	76.6		4.58
	Aldicarb Sulfone	129		110	109		1.16
	Aldicarb Sulfoxide	72.6		43.2	42.6		1.44
	AMPA	104		77.4	72.5		6.60
	Bentazon	85.8		48.3	48.5		0.207
	Carbamazepine	93.3		73.3	71.8		1.63
	Carbaryl	85.7		68.2	69.0		1.24
	Carbofuran	81.0		64.0	66.0		3.01
	Diuron	81.1		58.9	53.6		5.85
	Endothall	106		133	133		0.246

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Fenuron	129	132	122			7.71
	Fluridone	113	114	106			7.93
	Glufosinate	99.0	80.1	72.6			9.80
	Glyphosate	94.3	60.9	55.1			7.53
	Hydrocodone	124	120	111			8.07
	Ibuprofen	86.1	78.1	79.6			1.97
	Imazapyr	112	116	108			6.30
	Imidacloprid	129	204	177			12.1
	Linuron	91.7	62.7	64.9			3.45
	MCPP	118	151	145			2.76
	Methiocarb	75.3	59.0	59.6			1.05
	Methomyl	119	102	101			0.557
	Naproxen	80.0	81.8	80.5			1.51
	Oxamyl	103	83.4	85.8			2.79
	Primidone	115	114	107			5.94
	Propoxur	81.1	63.5	62.8			1.17
	Pyraclostrobin	82.7	75.0	73.5			2.10
	Sucralose	88.1	81.4	103			16.7
	Triclopyr	112	131	132			1.01
SM 2120 B	Color (true)	98.0				2.60	
SM 2320 B-97	Total Alkalinity	103				0.592	
SM 2540 C-97	TDS					1.70	
SM 4500 F-C-97	Fluoride	102	101	101			0.0
SM 5310 B-00	Organic Carbon	95.2	101	100			0.742

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2038274
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2038294
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2038294
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2038274
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2038274
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2038275
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2038275
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2038275
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2038275
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2038276
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2038292
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2038293
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2038292
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2038290
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2038291
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2038291

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 2120 B / E31780	True Color measured at 450 nm	2038274
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2038274
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2038274
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2038274
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2038274
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2038275

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	11/01/2018			11/01/2018 16:10	Megan Treadwell	2038274
EPA 200.7 Rev. 4.4	11/01/2018	11/06/2018 14:45	Elliott D. Healy	11/08/2018 16:46	Betina Topolski	2038294
EPA 200.8 Rev. 5.4	11/01/2018	11/06/2018 14:45	Elliott D. Healy	11/08/2018 18:39	Robert K Palmer	2038294
	11/01/2018	11/06/2018 14:45	Elliott D. Healy	11/19/2018 19:07	Robert K Palmer	2038294
EPA 300.0 Rev. 2.1	11/01/2018			11/21/2018 23:48	Lipi Saha	2038274
EPA 350.1 Rev. 2.0	11/01/2018			11/08/2018 13:13	Ping Hua	2038275
EPA 351.2 Rev. 2.0	11/01/2018	11/07/2018 11:50	Adrian Shelby	11/09/2018 10:03	Joseph Suarez	2038275
EPA 353.2 Rev. 2.0	11/01/2018			11/06/2018 13:19	Lauren Bottorf	2038275
EPA 365.1 Rev. 2.0	11/01/2018	11/05/2018 11:55	Sima Feizi	11/06/2018 16:56	Beverly Y. Sanders	2038275
EPA 365.1 Rev. 2.0 dissolved	11/01/2018			11/01/2018 15:28	Julia Storbeck	2038276
EPA 8270D	11/01/2018	11/05/2018 08:30	Fe-Val Siddell	11/06/2018 17:08	Vandana T. Nagar	2038293
	11/01/2018	11/06/2018 08:00	Fe-Val Siddell	11/10/2018 02:15	Arthur Maknenko	2038292
EPA 8276	11/01/2018	11/06/2018 08:00	Fe-Val Siddell	11/14/2018 19:43	Dinesh Mishra	2038292
EPA 8321B	11/01/2018	11/02/2018 10:15	Rebecca Ware	11/02/2018 11:00	Rebecca Ware	2038291
	11/01/2018	11/02/2018 12:30	Rebecca Ware	11/02/2018 16:00	Rebecca Ware	2038291
	11/01/2018	11/02/2018 12:30	Rebecca Ware	11/05/2018 15:48	Mohammad Ghaffari	2038291
	11/01/2018	11/06/2018 10:00	Hoor Shaik	11/06/2018 20:57	Juyoung Kim	2038290
	11/01/2018	11/06/2018 10:00	Hoor Shaik	11/07/2018 07:54	Juyoung Kim	2038291
	11/01/2018	11/06/2018 10:00	Hoor Shaik	11/08/2018 15:01	Juyoung Kim	2038291
SM 2120 B	11/01/2018			11/01/2018 16:00	Chelsea Hernandez	2038274
SM 2320 B-97	11/01/2018			11/07/2018 09:54	Dale L. Simmons	2038274
SM 2540 C-97	11/01/2018			11/06/2018 15:10	Yijie Li	2038274
SM 2540 D-97	11/01/2018			11/06/2018 15:10	Yijie Li	2038274
SM 4500 F-C-97	11/01/2018			11/07/2018 09:54	Dale L. Simmons	2038274
SM 5310 B-00	11/01/2018			11/06/2018 09:34	Megan Treadwell	2038275