Chemical Analysis Report

CEN-DIST-2019-03-14-03

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

Event Description: **Soldier / salt / Black Ham**
Request ID: **RQ-2019-03-11-44**
Customer: **CEN-DIST**
Project ID: **SMP**

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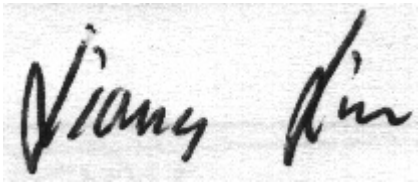
Certified by: Liang Lin, Environmental Administrator

Date Certified: 05-APR-2019 16:04



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: Soldier Creek @ 150m Upstream of SR Hwy 419 Collection Date/Time: 03/13/2019 13:36

Field ID: G2CE0071 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070015	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P360456	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P361007	
		Sulfate	4.7		mg SO4/L	P361012	
	SM 2120 B	Color (true)	140		PCU	P360449	
	SM 2320 B-97	Total Alkalinity	79		mg CaCO3/L	P361098	
	SM 2540 C-97	TDS	166	A	mg/L	P360949	
	SM 2540 D-97	TSS	3	I	mg/L	P360819	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P360987	
2070016	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P360673	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P360713	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.20		mg N/L	P360779	
	EPA 365.1 Rev. 2.0	Total-P	0.094		mg P/L	P360687	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P360905	
2070017	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.065		mg P/L	P360485	
2070027	EPA 8321B	Aldicarb	0.020	U	ug/L	P360341	
		Aldicarb Sulfone	0.0020	U	ug/L	P360341	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P360341	
		Carbaryl	0.0020	U	ug/L	P360341	
		Carbofuran	0.0020	U	ug/L	P360341	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P360341	
		Methiocarb	0.0020	U	ug/L	P360341	
		Methomyl	0.0020	U	ug/L	P360341	
		Oxamyl	0.0020	U	ug/L	P360341	
		Propoxur	0.0020	U	ug/L	P360341	
2070028		Acesulfame K**	0.31	I	ug/L	P360421	
		2,4-D	0.013		ug/L	P360341	
		AMPA**	0.21	I	ug/L	P360421	
		Acetaminophen**	0.0080	U	ug/L	P360341	
		Endothall**	0.25	UJ	ug/L	P360421	CCV
		Glufosinate**	0.10	U	ug/L	P360421	
		Glyphosate**	0.31	I	ug/L	P360421	
		Bentazon	0.081		ug/L	P360341	
		Carbamazepine**	0.0042		ug/L	P360341	
		Sucralose**	0.87		ug/L	P360421	MS
		Diuron	0.0020	U	ug/L	P360341	
		Fenuron	0.016	U	ug/L	P360341	
		Fluridone**	0.018		ug/L	P360341	
		Imazapyr**	0.21		ug/L	P360341	
		Hydrocodone**	0.0020	U	ug/L	P360341	
		Ibuprofen**	0.020	U	ug/L	P360341	
		Imidacloprid	0.0059	I	ug/L	P360341	MS
		Linuron	0.0040	U	ug/L	P360341	
		MCPP	0.0020	U	ug/L	P360341	MS

Field ID: G2CE0071 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070028	EPA 8321B	Naproxen**	0.0080	U	ug/L	P360341	
		Primidone**	0.0064	I	ug/L	P360341	
		Pyraclostrobin**	0.0020	U	ug/L	P360341	
		Triclopyr**	0.0040	U	ug/L	P360341	
2070032	EPA 8270D	Aldrin	4.0	UJ	ng/L	P360471	RPD
		Alpha-BHC	2.0	U	ng/L	P360471	
		Alpha-Chlordane	1.0	U	ng/L	P360471	
		Beta-BHC	10	U	ng/L	P360471	MS
		Bifenthrin**	4.0	U	ng/L	P360471	
		Delta-BHC	10	U	ng/L	P360471	
		Gamma-BHC	10	U	ng/L	P360471	
		Carbophenothion	12	U	ng/L	P360471	
		Chlorothalonil	2.0	UJ	ng/L	P360471	CCV
		Cis-Nonachlor**	1.0	U	ng/L	P360471	
		Cypermethrin	20	U	ng/L	P360471	
		DDD-p,p'	8.0	U	ng/L	P360471	
		DDE-p,p'	8.0	U	ng/L	P360471	
		DDT-p,p'	10	U	ng/L	P360471	
		Dicofol	30	U	ng/L	P360471	
		Dieldrin	4.0	U	ng/L	P360471	
		Endosulfan I	4.0	U	ng/L	P360471	
		Endosulfan II	4.0	U	ng/L	P360471	
		Endosulfan Sulfate	2.0	U	ng/L	P360471	
		Endrin	2.0	U	ng/L	P360471	
		Endrin Aldehyde	2.0	U	ng/L	P360471	
		Endrin Ketone	2.0	U	ng/L	P360471	
		Ethalfluralin**	3.0	U	ng/L	P360471	
		Gamma-Chlordane	1.0	U	ng/L	P360471	
		Heptachlor	1.5	U	ng/L	P360471	
		Heptachlor Epoxide	2.0	U	ng/L	P360471	
		Hexachlorobenzene**	2.0	U	ng/L	P360471	
		Methoxychlor	4.0	U	ng/L	P360471	
		Mirex	2.0	U	ng/L	P360471	
		Permethrin	10	U	ng/L	P360471	
		Trans-Nonachlor**	1.0	U	ng/L	P360471	
		Trifluralin	2.5	U	ng/L	P360471	
	EPA 8276	Chlordane	5.3	U	ng/L	P360471	
		Toxaphene	32	U	ng/L	P360471	
2070033	EPA 8270D	Acetochlor	0.25	U	ng/L	P360553	
		Alachlor	0.25	U	ng/L	P360553	
		Ametryn	0.61	U	ng/L	P360553	
		Atrazine	53		ng/L	P360553	
		Atrazine Desethyl	5.1	I	ng/L	P360553	
		Azinphos Methyl	5.1	U	ng/L	P360553	
		Bromacil	0.51	U	ng/L	P360553	

Field ID: G2CE0071 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070033	EPA 8270D	Butylate	0.41	U	ng/L	P360553	RPD
		Chlorpyrifos Ethyl	0.25	U	ng/L	P360553	
		Chlorpyrifos Methyl	0.10	U	ng/L	P360553	
		Cyanazine	3.3	U	ng/L	P360553	
		Demeton	7.1	U	ng/L	P360553	
		Diazinon	0.13	U	ng/L	P360553	
		Dimethenamid**	0.10	U	ng/L	P360553	
		Disulfoton	0.51	U	ng/L	P360553	
		Dithiopyr**	0.16	I	ng/L	P360553	
		EPTC	1.3	U	ng/L	P360553	RPD
		Ethion	0.15	U	ng/L	P360553	
		Ethoprop	0.10	U	ng/L	P360553	
		Fenamiphos	0.51	U	ng/L	P360553	
		Fipronil	0.25	U	ng/L	P360553	
		Fipronil Desulfinyl**	0.38	I	ng/L	P360553	
		Fipronil Sulfide	0.60	I	ng/L	P360553	
		Fipronil Sulfone	1.1		ng/L	P360553	
		Fonofos	0.20	U	ng/L	P360553	
		Hexazinone	1.3	I	ng/L	P360553	
		Malathion	0.36	U	ng/L	P360553	
		Metalaxyl	0.30	U	ng/L	P360553	
		Metolachlor	0.51	U	ng/L	P360553	
		Metribuzin	0.76	U	ng/L	P360553	
		Mevinphos	0.51	U	ng/L	P360553	
		Molinate	0.30	U	ng/L	P360553	
		Norflurazon	0.51	U	ng/L	P360553	
		Oxadiazon**	1.3		ng/L	P360553	
		Parathion Ethyl	0.25	U	ng/L	P360553	
		Parathion Methyl	0.56	U	ng/L	P360553	
		Pendimethalin	1.0	U	ng/L	P360553	
		Phorate	0.25	U	ng/L	P360553	
		Prodiamine**	0.18	UJ	ng/L	P360553	LCS
		Prometon	0.91	U	ng/L	P360553	
		Prometryn	0.20	U	ng/L	P360553	
		Simazine	1.3	I	ng/L	P360553	
		Tebuconazole**	0.51	UJ	ng/L	P360553	RPD
		Terbufos	0.10	U	ng/L	P360553	
		Terbuthylazine	0.43	U	ng/L	P360553	
2070034	EPA 200.7 Rev. 4.4	Barium	10.8		ug/L	P360680	
		Calcium	31.5		mg/L	P360680	
		Iron	390		ug/L	P360680	
		Magnesium	4.82		mg/L	P360680	
		Potassium	1.8		mg/L	P360680	
		Sodium	16.3		mg/L	P360680	
		Zinc	5.0	U	ug/L	P360680	

Field ID: G2CE0071 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070034	EPA 200.8 Rev. 5.4	Aluminum	180		ug/L	P360680	
		Antimony	0.072	I	ug/L	P360680	
		Arsenic	0.80		ug/L	P360680	
		Boron**	33.3		ug/L	P360680	
		Cadmium	0.020	U	ug/L	P360680	
		Chromium	0.49	I	ug/L	P360680	
		Copper	0.88		ug/L	P360680	
		Lead	0.24	I	ug/L	P360680	
		Nickel	0.50	U	ug/L	P360680	
		Selenium	0.20	U	ug/L	P360680	MS
		Silver	0.010	U	ug/L	P360680	
		Thallium	0.10	U	ug/L	P360680	

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Refer to the narrative for an explanation of QC Codes.
EPA 8270D: Ms accuracies for atrazine, metalaxyl, oxidiazon, fipronil sulfide, fipronil sulfone and fipronil not assessed due to high content of these parameters in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Salt Creek @ Packard Ave **Collection Date/Time: 03/13/2019 11:34**

Field ID: G2CE0088 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070029	EPA 8321B	Acesulfame K**	0.11	I	ug/L	P360421	
		2,4-D	0.0081		ug/L	P360490	
		AMPA**	0.10	UJ	ug/L	P360421	SUR
		Acetaminophen**	0.0080	U	ug/L	P360490	
		Endothall**	0.25	UJ	ug/L	P360421	CCV
		Glufosinate**	0.10	UJ	ug/L	P360421	SUR
		Bentazon	8.0E-04	U	ug/L	P360490	
		Glyphosate**	0.10	UJ	ug/L	P360421	SUR
		Carbamazepine**	8.0E-04	U	ug/L	P360490	
		Sucralose**	0.010	U	ug/L	P360421	MS
		Diuron	0.0020	U	ug/L	P360490	
		Fenuron	0.019	I	ug/L	P360490	
		Fluridone**	0.0010	I	ug/L	P360490	
		Imazapyr**	0.0063	I	ug/L	P360490	
		Hydrocodone**	0.0020	U	ug/L	P360490	
		Ibuprofen**	0.020	U	ug/L	P360490	
		Imidacloprid	0.0020	U	ug/L	P360490	MS
		Linuron	0.0040	U	ug/L	P360490	
		MCPP	0.0020	U	ug/L	P360490	
		Naproxen**	0.0080	U	ug/L	P360490	
		Primidone**	0.0040	U	ug/L	P360490	
		Pyraclostrobin**	0.0020	U	ug/L	P360490	
		Triclopyr**	0.0040	U	ug/L	P360490	

Ref. Method and Comment:
EPA 8321B: Refer to the narrative for an explanation of QC Codes. Surrogate spike recovery exceeding the control limits. Results confirmed in re-extraction.

Sample Location: Sweetwater Creek @ Kansas Ave **Collection Date/Time: 03/13/2019 11:48**

Field ID: G2CE0203 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070030	EPA 8321B	Acesulfame K**	0.18	I	ug/L	P360421	
		2,4-D	0.0032	I	ug/L	P360490	
		AMPA**	0.33	I	ug/L	P360421	
		Acetaminophen**	0.0080	U	ug/L	P360490	
		Endothall**	0.25	UJ	ug/L	P360421	CCV
		Glufosinate**	0.10	U	ug/L	P360421	
		Glyphosate**	3.0		ug/L	P360421	
		Bentazon	0.69		ug/L	P360490	
		Carbamazepine**	0.0038		ug/L	P360490	
		Sucralose**	1.2		ug/L	P360421	MS
		Diuron	0.0049	I	ug/L	P360490	
		Fenuron	0.016	U	ug/L	P360490	
		Fluridone**	0.043		ug/L	P360490	
		Imazapyr**	0.14		ug/L	P360490	
		Hydrocodone**	0.0020	U	ug/L	P360490	
		Ibuprofen**	0.020	U	ug/L	P360490	
		Imidacloprid	0.017		ug/L	P360490	MS
		Linuron	0.0040	U	ug/L	P360490	
		MCPP	0.0066	I	ug/L	P360490	
		Naproxen**	0.0080	U	ug/L	P360490	
		Primidone**	0.012	I	ug/L	P360490	
		Pyraclostrobin**	0.0020	U	ug/L	P360490	
		Triclopyr**	0.0040	U	ug/L	P360490	

Ref. Method and Comment:
EPA 8321B: Refer to the narrative for an explanation of QC Codes.

Sample Location: Sweetwater Creek @ Florida Ave **Collection Date/Time: 03/13/2019 11:54**

Field ID: G2CE0123 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2070031	EPA 8321B	Acesulfame K**	0.21	I	ug/L	P360421	
		2,4-D	0.0020	U	ug/L	P360490	
		AMPA**	0.32	I	ug/L	P360421	
		Acetaminophen**	0.0080	U	ug/L	P360490	
		Endothall**	0.25	UJ	ug/L	P360421	CCV
		Glufosinate**	0.10	U	ug/L	P360421	
		Glyphosate**	2.8		ug/L	P360421	
		Bentazon	0.78		ug/L	P360490	
		Carbamazepine**	0.0041		ug/L	P360490	
		Sucralose**	1.4		ug/L	P360421	MS
		Diuron	0.0056	I	ug/L	P360490	
		Fenuron	0.016	U	ug/L	P360490	
		Fluridone**	0.039		ug/L	P360490	
		Imazapyr**	0.13		ug/L	P360490	
		Hydrocodone**	0.0020	U	ug/L	P360490	
		Ibuprofen**	0.020	U	ug/L	P360490	
		Imidacloprid	0.021		ug/L	P360490	MS
		Linuron	0.0040	U	ug/L	P360490	
		MCPP	0.0065	I	ug/L	P360490	
		Naproxen**	0.0080	U	ug/L	P360490	
		Primidone**	0.015	I	ug/L	P360490	
		Pyraclostrobin**	0.0020	U	ug/L	P360490	
		Triclopyr**	0.0040	U	ug/L	P360490	

Ref. Method and Comment:
EPA 8321B: 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: P360456

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P360680

Component	Result	Code	Units
Barium	1.0	U	ug/L
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: P360680

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	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 Rev. 2.1
Batch ID: P361007

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361012

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360673

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360713

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360779

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360687

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360485

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

Reference Method: EPA 8270D
Batch ID: P360471

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	12	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	8.0	U	ng/L
DDE-p,p'	8.0	U	ng/L
DDT-p,p'	10	U	ng/L
Delta-BHC	10	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
Ethalfluralin	3.0	U	ng/L
Gamma-BHC	10	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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P360471

Component	Result	Code	Units
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 8270D
Batch ID: P360553

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P360553

Component	Result	Code	Units
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P360471

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

Reference Method: EPA 8321B
Batch ID: P360341

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	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
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: EPA 8321B
Batch ID: P360421

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P360490

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P360449

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P361098

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

Reference Method: SM 2540 C-97
Batch ID: P360949

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P360819

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P360987

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P360905

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P360905

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: P360680

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	99.7		P	85 - 115
Calcium	102		P	85 - 115
Iron	104		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	107		P	85 - 115
Sodium	102		P	85 - 115
Zinc	98.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P360680

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.8		P	85 - 115
Antimony	95.1		P	85 - 115
Arsenic	98.7		P	85 - 115
Boron	101		P	85 - 115
Cadmium	93.8		P	85 - 115
Chromium	89.1		P	85 - 115
Copper	101		P	85 - 115
Lead	92.1		P	85 - 115
Nickel	102		P	85 - 115
Selenium	96.0		P	85 - 115
Silver	100		P	85 - 115
Thallium	94.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361007

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361012

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360673

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360713

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	106		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360779

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360687

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.4		P	90 - 110

Reference Method: EPA 8270D
Batch ID: P360471

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.4	36.0	P/P	25 - 92.0
Alpha-BHC	107	102	P/P	49 - 130
Alpha-Chlordane	81.3	76.3	P/P	50 - 115
Beta-BHC	128	133	P/P	43 - 157
Bifenthrin	74.8	60.1	P/P	50 - 130
Carbophenothion	80.2	75.7	P/P	27 - 180
Chlorothalonil	109	102	P/P	10 - 216
Cis-Nonachlor	87.2	83.1	P/P	50 - 130
Cypermethrin	73.3	62.7	P/P	40 - 153
DDD-p,p'	92.2	92.0	P/P	53 - 128
DDE-p,p'	84.7	76.9	P/P	48 - 116
DDT-p,p'	101	89.8	P/P	47 - 128
Delta-BHC	134	135	P/P	51 - 196
Dicofol	101	90.7	P/P	10 - 147
Dieldrin	88.8	87.8	P/P	48 - 128
Endosulfan I	84.5	82.7	P/P	58 - 126
Endosulfan II	95.3	94.9	P/P	50 - 150
Endosulfan Sulfate	84.5	83.4	P/P	56 - 130
Endrin	84.9	81.3	P/P	50 - 126
Endrin Aldehyde	97.4	99.1	P/P	12 - 145
Endrin Ketone	85.4	84.3	P/P	59 - 132
Ethalfluralin	96.2	85.5	P/P	50 - 130
Gamma-BHC	111	118	P/P	50 - 155
Gamma-Chlordane	79.8	74.5	P/P	50 - 112
Heptachlor	68.3	57.7	P/P	41 - 98.0
Heptachlor Epoxide	80.3	79.2	P/P	55 - 117
Hexachlorobenzene	77.7	66.0	P/P	50 - 130
Methoxychlor	113	109	P/P	55 - 133
Mirex	64.0	50.6	P/P	44 - 101
Permethrin	71.7	61.0	P/P	52 - 124
Trans-Nonachlor	79.4	72.8	P/P	50 - 130
Trifluralin	91.1	81.3	P/P	10 - 201

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P360553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	75.7	93.2	P/P	71 - 121
Alachlor	74.5	92.1	P/P	72 - 119
Ametryn	73.9	90.3	P/P	47 - 144
Atrazine	83.0	108	P/P	75 - 123
Atrazine Desethyl	84.0	101	P/P	45 - 133
Azinphos Methyl	104	125	P/P	66 - 165
Bromacil	72.8	95.9	P/P	43 - 123
Butylate	62.2	72.2	P/P	27 - 83.0
Chlorpyrifos Ethyl	86.3	98.7	P/P	70 - 117
Chlorpyrifos Methyl	85.5	100	P/P	71 - 120
Cyanazine	210	237	P/P	34 - 264
Demeton	69.6	73.1	P/P	41 - 122
Diazinon	79.1	99.9	P/P	70 - 127
Dimethenamid	72.6	88.1	P/P	60 - 130
Disulfoton	85.5	102	P/P	56 - 127
Dithiopyr	75.9	96.4	P/P	60 - 130
EPTC	63.7	73.5	P/P	24 - 84.0
Ethion	65.1	79.3	P/P	53 - 132
Ethoprop	87.0	95.9	P/P	57 - 117
Fenamiphos	81.5	97.6	P/P	55 - 136
Fipronil	70.5	91.3	P/P	64 - 126
Fipronil Desulfinyl	68.4	87.9	P/P	60 - 130
Fipronil Sulfide	73.9	86.1	P/P	57 - 120
Fipronil Sulfone	68.0	84.1	P/P	52 - 115
Fonofos	86.4	104	P/P	61 - 121
Hexazinone	83.5	104	P/P	62 - 131
Malathion	79.8	96.4	P/P	67 - 126
Metalaxyl	76.9	95.0	P/P	54 - 128
Metolachlor	75.2	92.0	P/P	71 - 118
Metribuzin	192	205	P/P	42 - 221
Mevinphos	75.0	96.7	P/P	45 - 114
Molinate	70.1	80.2	P/P	33 - 91.0
Norflurazon	78.1	97.0	P/P	60 - 123
Oxadiazon	77.0	95.8	P/P	60 - 130
Parathion Ethyl	81.1	94.8	P/P	73 - 111
Parathion Methyl	85.5	101	P/P	74 - 126
Pendimethalin	88.9	97.7	P/P	63 - 131
Phorate	80.3	93.8	P/P	54 - 115
Prodiamine	41.8	44.3	F/F	60 - 130
Prometon	66.2	81.2	P/P	61 - 120
Prometryn	68.4	84.7	P/P	62 - 126
Simazine	85.8	110	P/P	75 - 126
Tebuconazole	32.5	44.6	P/P	30 - 100
Terbufos	82.3	97.8	P/P	65 - 116
Terbuthylazine	81.9	98.8	P/P	73 - 117

Reference Method: EPA 8276
Batch ID: P360471

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	83.1	85.2	P/P	43 - 128
Toxaphene	95.5	115	P/P	38 - 140

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P360341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.2		P	40 - 150
3-Hydroxycarbofuran	79.5		P	40 - 150
Acetaminophen	93.1		P	30 - 150
Aldicarb	62.5		P	30 - 150
Aldicarb Sulfone	92.1		P	40 - 150
Aldicarb Sulfoxide	94.2		P	40 - 150
Bentazon	90.1		P	30 - 150
Carbamazepine	92.8		P	40 - 150
Carbaryl	70.4		P	40 - 150
Carbofuran	73.1		P	40 - 150
Diuron	70.0		P	40 - 150
Fenuron	118		P	40 - 150
Fluridone	113		P	40 - 150
Hydrocodone	98.4		P	40 - 150
Ibuprofen	64.5		P	40 - 150
Imazapyr	98.5		P	40 - 150
Imidacloprid	97.3		P	40 - 150
Linuron	72.6		P	40 - 150
MCPP	103		P	40 - 150
Methiocarb	65.8		P	40 - 150
Methomyl	78.2		P	40 - 150
Naproxen	43.1		P	40 - 150
Oxamyl	94.6		P	40 - 150
Primidone	90.8		P	40 - 150
Propoxur	57.6		P	40 - 150
Pyraclostrobin	55.9		P	40 - 150
Triclopyr	62.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P360421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	87.5		P	40 - 150
AMPA	89.7		P	40 - 150
Endothall	85.7		P	40 - 150
Glufosinate	91.4		P	40 - 150
Glyphosate	79.4		P	40 - 140
Sucralose	54.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P360490

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	75.9		P	40 - 150
Acetaminophen	111		P	30 - 150
Bentazon	129		P	30 - 150
Carbamazepine	111		P	40 - 150
Diuron	120		P	40 - 150
Fenuron	127		P	40 - 150
Fluridone	127		P	40 - 150
Hydrocodone	98.2		P	40 - 150
Ibuprofen	76.0		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P360490

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imazapyr	99.5		P	40 - 150
Imidacloprid	102		P	40 - 150
Linuron	103		P	40 - 150
MCPP	82.2		P	40 - 150
Naproxen	87.3		P	40 - 150
Primidone	119		P	40 - 150
Pyraclostrobin	82.3		P	40 - 150
Triclopyr	53.8		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P360449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P361098

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P360987

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.8		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.5		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P360680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070118	Barium	102	101	P/P	80 - 120
2070118	Calcium	102		P	80 - 120
2070118	Iron	110	106	P/P	80 - 120
2070118	Magnesium	112	108	P/P	80 - 120
2070118	Potassium	108	108	P/P	80 - 120
2070118	Sodium	102		P	80 - 120
2070118	Zinc	102	101	P/P	80 - 120
2070228	Barium	101		P	80 - 120
2070228	Calcium	100		P	80 - 120
2070228	Iron	108		P	80 - 120
2070228	Magnesium	99.7		P	80 - 120
2070228	Potassium	103		P	80 - 120
2070228	Sodium	103		P	80 - 120
2070228	Zinc	98.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P360680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070118	Aluminum	93.5	92.6	P/P	80 - 120
2070118	Antimony	94.7	94.4	P/P	80 - 120
2070118	Arsenic	94.8	94.3	P/P	80 - 120
2070118	Boron	93.2	93.3	P/P	80 - 120
2070118	Cadmium	96.8	94.3	P/P	80 - 120
2070118	Chromium	89.1	88.6	P/P	80 - 120
2070118	Copper	98.8	97.9	P/P	80 - 120
2070118	Lead	92.6	90.6	P/P	80 - 120
2070118	Nickel	99.1	100	P/P	80 - 120
2070118	Selenium	93.7	93.4	P/P	80 - 120
2070118	Silver	99.0	98.8	P/P	80 - 120
2070118	Thallium	96.8	95.0	P/P	80 - 120
2070228	Aluminum	92.4		P	80 - 120
2070228	Antimony	94.8		P	80 - 120
2070228	Arsenic	96.5		P	80 - 120
2070228	Boron	93.5		P	80 - 120
2070228	Cadmium	94.8		P	80 - 120
2070228	Chromium	88.3		P	80 - 120
2070228	Copper	94.1		P	80 - 120
2070228	Lead	92.2		P	80 - 120
2070228	Nickel	95.4		P	80 - 120
2070228	Selenium	73.0		F	80 - 120
2070228	Silver	98.7		P	80 - 120
2070228	Thallium	96.0		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069795	Chloride	100		P	90 - 110
2069948	Chloride	98.6		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361012

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069795	Sulfate	100		P	90 - 110
2069948	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069950	Ammonia-N	97.6	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360713

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069949	Kjeldahl Nitrogen	106	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360779

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069940	NO2NO3-N	97.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070042	Total-P	103	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070043	O-Phosphate-P	97.7	99.5	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P360471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070169	Aldrin	49.9	50.1	P/P	25 - 92.0
2070169	Alpha-BHC	116	110	P/P	49 - 130
2070169	Alpha-Chlordane	80.0	79.0	P/P	50 - 115
2070169	Beta-BHC	164	149	F/P	43 - 157
2070169	Bifenthrin	68.9	73.9	P/P	50 - 130
2070169	Carbophenothion	79.5	79.6	P/P	27 - 180
2070169	Chlorothalonil	164	145	P/P	10 - 216
2070169	Cis-Nonachlor	89.3	89.0	P/P	50 - 130
2070169	Cypermethrin	65.6	62.7	P/P	40 - 153
2070169	DDD-p,p'	95.8	95.0	P/P	53 - 128
2070169	DDE-p,p'	77.5	85.8	P/P	48 - 116
2070169	DDT-p,p'	96.4	106	P/P	47 - 128
2070169	Delta-BHC	186	153	P/P	51 - 196
2070169	Dicofol	109	98.6	P/P	10 - 147
2070169	Dieldrin	89.1	86.6	P/P	48 - 128

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P360471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070169	Endosulfan I	90.2	86.2	P/P	58 - 126
2070169	Endosulfan II	113	99.7	P/P	50 - 150
2070169	Endosulfan Sulfate	93.7	79.7	P/P	56 - 130
2070169	Endrin	95.1	84.5	P/P	50 - 126
2070169	Endrin Aldehyde	100	94.8	P/P	12 - 145
2070169	Endrin Ketone	89.9	83.2	P/P	59 - 132
2070169	Ethalfluralin	93.8	90.8	P/P	50 - 130
2070169	Gamma-BHC	135	131	P/P	50 - 155
2070169	Gamma-Chlordane	76.8	75.7	P/P	50 - 112
2070169	Heptachlor	62.6	66.9	P/P	41 - 98.0
2070169	Heptachlor Epoxide	82.3	77.9	P/P	55 - 117
2070169	Hexachlorobenzene	67.5	72.1	P/P	50 - 130
2070169	Methoxychlor	114	112	P/P	55 - 133
2070169	Mirex	59.2	61.2	P/P	44 - 101
2070169	Permethrin	66.6	72.7	P/P	52 - 124
2070169	Trans-Nonachlor	77.4	76.5	P/P	50 - 130
2070169	Trifluralin	90.9	91.0	P/P	10 - 201

Reference Method: EPA 8270D
Batch ID: P360553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068903	Acetochlor	75.7	89.8	P/P	63 - 129
2068903	Alachlor	75.1	88.3	P/P	65 - 127
2068903	Ametryn	90.6	110	P/P	40 - 164
2068903	Atrazine Desethyl	65.0	72.4	P/P	14 - 157
2068903	Azinphos Methyl	83.8	95.7	P/P	49 - 180
2068903	Bromacil	73.4	79.6	P/P	48 - 130
2068903	Butylate	39.4	27.8	P/P	10 - 94.0
2068903	Chlorpyrifos Ethyl	79.7	95.5	P/P	58 - 123
2068903	Chlorpyrifos Methyl	74.5	87.3	P/P	58 - 125
2068903	Cyanazine	111	129	P/P	24 - 253
2068903	Demeton	60.3	56.4	P/P	25 - 149
2068903	Diazinon	75.9	90.0	P/P	59 - 144
2068903	Dimethenamid	74.9	87.9	P/P	60 - 130
2068903	Disulfoton	71.4	84.1	P/P	54 - 132
2068903	Dithiopyr	75.0	88.6	P/P	60 - 130
2068903	EPTC	46.2	30.7	P/P	10 - 92.0
2068903	Ethion	80.6	101	P/P	30 - 148
2068903	Ethoprop	76.3	90.1	P/P	50 - 130
2068903	Fenamiphos	98.0	112	P/P	49 - 142
2068903	Fipronil Desulfinyl	79.3	81.3	P/P	60 - 130
2068903	Fonofos	74.9	90.5	P/P	55 - 129
2068903	Hexazinone	91.9	107	P/P	56 - 141
2068903	Malathion	79.7	93.0	P/P	56 - 135
2068903	Metolachlor	76.1	87.8	P/P	51 - 140
2068903	Metribuzin	175	207	P/P	45 - 254
2068903	Mevinphos	72.1	79.7	P/P	33 - 131
2068903	Molinate	56.0	55.9	P/P	14 - 98.0
2068903	Norflurazon	74.7	79.9	P/P	34 - 136
2068903	Parathion Ethyl	77.4	89.2	P/P	66 - 118
2068903	Parathion Methyl	78.8	93.3	P/P	64 - 136

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P360553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068903	Pendimethalin	93.5	112	P/P	59 - 144
2068903	Phorate	71.9	78.6	P/P	42 - 130
2068903	Prodiamine	94.8	98.9	P/P	60 - 130
2068903	Prometon	78.1	91.9	P/P	59 - 134
2068903	Prometryn	68.6	79.1	P/P	54 - 135
2068903	Simazine	86.0	95.9	P/P	53 - 156
2068903	Tebuconazole	52.6	59.1	P/P	30 - 100
2068903	Terbufos	73.3	87.4	P/P	57 - 131
2068903	Terbuthylazine	78.1	91.7	P/P	68 - 125

Reference Method: EPA 8276
Batch ID: P360471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070811	Chlordane	99.0	87.0	P/P	34 - 136
2070811	Toxaphene	121	119	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P360341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069364	3-Hydroxycarbofuran	76.3	75.7	P/P	40 - 150
2069364	Aldicarb	44.2	43.7	P/P	30 - 150
2069364	Aldicarb Sulfone	85.7	101	P/P	40 - 150
2069364	Aldicarb Sulfoxide	44.8	47.3	P/P	40 - 150
2069364	Carbaryl	55.1	56.4	P/P	40 - 150
2069364	Carbofuran	57.5	57.3	P/P	40 - 150
2069364	Methiocarb	51.9	56.7	P/P	40 - 150
2069364	Methomyl	61.0	64.6	P/P	40 - 150
2069364	Oxamyl	68.8	81.2	P/P	40 - 150
2069364	Propoxur	50.6	50.2	P/P	40 - 150
2069366	2,4-D	103	88.8	P/P	40 - 150
2069366	Acetaminophen	90.8	98.1	P/P	30 - 150
2069366	Bentazon	54.8	56.8	P/P	30 - 150
2069366	Carbamazepine	73.5	70.2	P/P	40 - 150
2069366	Diuron	66.0	58.3	P/P	40 - 150
2069366	Fenuron	89.9	88.2	P/P	40 - 150
2069366	Fluridone	114	110	P/P	40 - 150
2069366	Hydrocodone	81.4	82.3	P/P	40 - 150
2069366	Ibuprofen	68.5	75.8	P/P	40 - 150
2069366	Imazapyr	106	110	P/P	40 - 150
2069366	Imidacloprid	182	174	F/F	40 - 150
2069366	Linuron	68.3	66.9	P/P	40 - 150
2069366	MCPP	153	143	F/P	40 - 150
2069366	Naproxen	67.2	65.4	P/P	40 - 150
2069366	Primidone	70.3	85.2	P/P	40 - 150
2069366	Pyraclostrobin	58.4	63.0	P/P	40 - 150
2069366	Triclopyr	90.3	75.6	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P360421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069913	Acesulfame K	103	129	P/P	40 - 150
2069913	AMPA	78.4	83.1	P/P	40 - 150
2069913	Endothall	84.4	94.8	P/P	40 - 150
2069913	Glufosinate	68.3	58.8	P/P	40 - 150
2069913	Glyphosate	74.3	70.7	P/P	40 - 140
2069913	Sucralose	12.2	11.8	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P360490

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069849	2,4-D	94.4	96.9	P/P	40 - 150
2069849	Acetaminophen	103	90.8	P/P	30 - 150
2069849	Bentazon	78.8	75.9	P/P	30 - 150
2069849	Carbamazepine	102	92.4	P/P	40 - 150
2069849	Diuron	92.1	86.4	P/P	40 - 150
2069849	Fenuron	127	128	P/P	40 - 150
2069849	Fluridone	135	107	P/P	40 - 150
2069849	Hydrocodone	94.9	95.5	P/P	40 - 150
2069849	Ibuprofen	78.9	64.6	P/P	40 - 150
2069849	Imazapyr	65.2	55.8	P/P	40 - 150
2069849	Imidacloprid	183	169	F/F	40 - 150
2069849	Linuron	87.4	86.8	P/P	40 - 150
2069849	MCPP	124	110	P/P	40 - 150
2069849	Naproxen	75.2	85.0	P/P	40 - 150
2069849	Primidone	114	102	P/P	40 - 150
2069849	Pyraclostrobin	79.7	67.5	P/P	40 - 150
2069849	Triclopyr	85.9	70.6	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P360987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2070301	Fluoride	97.3	97.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069812	Organic Carbon	95.5	96.5	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070047	Turbidity	5.77	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P360680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070118	Barium	1.30	Spike	P	0 - 20
2070118	Calcium	0.00327	Spike	P	0 - 20
2070118	Iron	2.94	Spike	P	0 - 20
2070118	Magnesium	2.29	Spike	P	0 - 20
2070118	Potassium	0.464	Spike	P	0 - 20
2070118	Sodium	0.471	Spike	P	0 - 20
2070118	Zinc	1.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P360680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070118	Aluminum	0.843	Spike	P	0 - 20
2070118	Antimony	0.359	Spike	P	0 - 20
2070118	Arsenic	0.569	Spike	P	0 - 20
2070118	Boron	0.135	Spike	P	0 - 20
2070118	Cadmium	2.62	Spike	P	0 - 20
2070118	Chromium	0.495	Spike	P	0 - 20
2070118	Copper	0.859	Spike	P	0 - 20
2070118	Lead	2.15	Spike	P	0 - 20
2070118	Nickel	0.938	Spike	P	0 - 20
2070118	Selenium	0.307	Spike	P	0 - 20
2070118	Silver	0.287	Spike	P	0 - 20
2070118	Thallium	1.90	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069795	Chloride	1.21	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P361012

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069795	Sulfate	1.04	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069950	Ammonia-N	3.00	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360713

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069949	Kjeldahl Nitrogen	1.47	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069940	NO2NO3-N	1.97	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070042	Total-P	2.47	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070043	O-Phosphate-P	1.83	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P360471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070169	Aldrin	0.304	Spike	P	0 - 30
2070169	Alpha-BHC	5.26	Spike	P	0 - 30
2070169	Alpha-Chlordane	1.33	Spike	P	0 - 30
2070169	Beta-BHC	10.1	Spike	P	0 - 30
2070169	Bifenthrin	6.99	Spike	P	0 - 30
2070169	Carbophenothion	0.0612	Spike	P	0 - 30
2070169	Chlorothalonil	12.8	Spike	P	0 - 30
2070169	Cis-Nonachlor	0.305	Spike	P	0 - 30
2070169	Cypermethrin	4.48	Spike	P	0 - 30
2070169	DDD-p,p'	0.830	Spike	P	0 - 30
2070169	DDE-p,p'	10.2	Spike	P	0 - 30
2070169	DDT-p,p'	9.23	Spike	P	0 - 30
2070169	Delta-BHC	19.7	Spike	P	0 - 30
2070169	Dicofol	9.79	Spike	P	0 - 30
2070169	Dieldrin	2.88	Spike	P	0 - 30
2070169	Endosulfan I	4.45	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P360471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070169	Endosulfan II	12.7	Spike	P	0 - 30
2070169	Endosulfan Sulfate	16.2	Spike	P	0 - 30
2070169	Endrin	11.8	Spike	P	0 - 30
2070169	Endrin Aldehyde	5.84	Spike	P	0 - 30
2070169	Endrin Ketone	7.76	Spike	P	0 - 30
2070169	Ethalfluralin	3.25	Spike	P	0 - 30
2070169	Gamma-BHC	2.86	Spike	P	0 - 30
2070169	Gamma-Chlordane	1.44	Spike	P	0 - 30
2070169	Heptachlor	6.64	Spike	P	0 - 30
2070169	Heptachlor Epoxide	5.42	Spike	P	0 - 30
2070169	Hexachlorobenzene	6.68	Spike	P	0 - 30
2070169	Methoxychlor	1.95	Spike	P	0 - 30
2070169	Mirex	3.40	Spike	P	0 - 30
2070169	Permethrin	8.73	Spike	P	0 - 30
2070169	Trans-Nonachlor	1.20	Spike	P	0 - 30
2070169	Trifluralin	0.124	Spike	P	0 - 30
LFB	Aldrin	31.2	LCS	F	0 - 30
LFB	Alpha-BHC	4.72	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.28	LCS	P	0 - 30
LFB	Beta-BHC	3.93	LCS	P	0 - 30
LFB	Bifenthrin	21.9	LCS	P	0 - 30
LFB	Carbophenothion	5.79	LCS	P	0 - 30
LFB	Chlorothalonil	7.40	LCS	P	0 - 30
LFB	Cis-Nonachlor	4.88	LCS	P	0 - 30
LFB	Cypermethrin	15.7	LCS	P	0 - 30
LFB	DDD-p,p'	0.203	LCS	P	0 - 30
LFB	DDE-p,p'	9.67	LCS	P	0 - 30
LFB	DDT-p,p'	11.7	LCS	P	0 - 30
LFB	Delta-BHC	0.818	LCS	P	0 - 30
LFB	Dicofol	10.6	LCS	P	0 - 30
LFB	Dieldrin	1.08	LCS	P	0 - 30
LFB	Endosulfan I	2.09	LCS	P	0 - 30
LFB	Endosulfan II	0.446	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.27	LCS	P	0 - 30
LFB	Endrin	4.28	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.70	LCS	P	0 - 30
LFB	Endrin Ketone	1.39	LCS	P	0 - 30
LFB	Ethalfluralin	11.8	LCS	P	0 - 30
LFB	Gamma-BHC	6.41	LCS	P	0 - 30
LFB	Gamma-Chlordane	6.94	LCS	P	0 - 30
LFB	Heptachlor	16.7	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.30	LCS	P	0 - 30
LFB	Hexachlorobenzene	16.3	LCS	P	0 - 30
LFB	Methoxychlor	4.19	LCS	P	0 - 30
LFB	Mirex	23.4	LCS	P	0 - 30
LFB	Permethrin	16.1	LCS	P	0 - 30
LFB	Trans-Nonachlor	8.67	LCS	P	0 - 30
LFB	Trifluralin	11.4	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P360553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068903	Acetochlor	17.1	Spike	P	0 - 30
2068903	Alachlor	16.2	Spike	P	0 - 30
2068903	Ametryn	19.5	Spike	P	0 - 30
2068903	Atrazine	12.9	Spike	P	0 - 30
2068903	Atrazine Desethyl	9.24	Spike	P	0 - 30
2068903	Azinphos Methyl	13.3	Spike	P	0 - 30
2068903	Bromacil	8.08	Spike	P	0 - 30
2068903	Butylate	34.5	Spike	F	0 - 30
2068903	Chlorpyrifos Ethyl	18.1	Spike	P	0 - 30
2068903	Chlorpyrifos Methyl	15.8	Spike	P	0 - 30
2068903	Cyanazine	15.0	Spike	P	0 - 30
2068903	Demeton	6.65	Spike	P	0 - 30
2068903	Diazinon	17.1	Spike	P	0 - 30
2068903	Dimethenamid	15.9	Spike	P	0 - 30
2068903	Disulfoton	16.4	Spike	P	0 - 30
2068903	Dithiopyr	10.4	Spike	P	0 - 30
2068903	EPTC	40.2	Spike	F	0 - 30
2068903	Ethion	22.8	Spike	P	0 - 30
2068903	Ethoprop	16.6	Spike	P	0 - 30
2068903	Fenamiphos	13.1	Spike	P	0 - 30
2068903	Fipronil	0.967	Spike	P	0 - 30
2068903	Fipronil Desulfinyl	1.81	Spike	P	0 - 30
2068903	Fipronil Sulfide	8.94	Spike	P	0 - 30
2068903	Fipronil Sulfone	12.5	Spike	P	0 - 30
2068903	Fonofos	18.9	Spike	P	0 - 30
2068903	Hexazinone	14.1	Spike	P	0 - 30
2068903	Malathion	15.4	Spike	P	0 - 30
2068903	Metalaxyl	17.0	Spike	P	0 - 30
2068903	Metolachlor	14.3	Spike	P	0 - 30
2068903	Metribuzin	2.85	Spike	P	0 - 30
2068903	Mevinphos	10.0	Spike	P	0 - 30
2068903	Molinate	0.305	Spike	P	0 - 30
2068903	Norflurazon	6.64	Spike	P	0 - 30
2068903	Oxadiazon	7.73	Spike	P	0 - 30
2068903	Parathion Ethyl	14.1	Spike	P	0 - 30
2068903	Parathion Methyl	16.9	Spike	P	0 - 30
2068903	Pendimethalin	17.9	Spike	P	0 - 30
2068903	Phorate	8.87	Spike	P	0 - 30
2068903	Prodiamine	3.94	Spike	P	0 - 30
2068903	Prometon	16.3	Spike	P	0 - 30
2068903	Prometryn	14.3	Spike	P	0 - 30
2068903	Simazine	10.8	Spike	P	0 - 30
2068903	Tebuconazole	11.6	Spike	P	0 - 30
2068903	Terbufos	17.5	Spike	P	0 - 30
2068903	Terbuthylazine	16.0	Spike	P	0 - 30
LFB	Acetochlor	20.6	LCS	P	0 - 30
LFB	Alachlor	21.2	LCS	P	0 - 30
LFB	Ametryn	20.0	LCS	P	0 - 30
LFB	Atrazine	26.1	LCS	P	0 - 30
LFB	Atrazine Desethyl	18.3	LCS	P	0 - 30
LFB	Azinphos Methyl	18.9	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P360553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Bromacil	27.4	LCS	P	0 - 30
LFB	Butylate	14.9	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	13.3	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	16.0	LCS	P	0 - 30
LFB	Cyanazine	11.9	LCS	P	0 - 30
LFB	Demeton	4.90	LCS	P	0 - 30
LFB	Diazinon	23.3	LCS	P	0 - 30
LFB	Dimethenamid	19.3	LCS	P	0 - 30
LFB	Disulfoton	17.8	LCS	P	0 - 30
LFB	Dithiopyr	23.8	LCS	P	0 - 30
LFB	EPTC	14.3	LCS	P	0 - 30
LFB	Ethion	19.7	LCS	P	0 - 30
LFB	Ethoprop	9.74	LCS	P	0 - 30
LFB	Fenamiphos	18.0	LCS	P	0 - 30
LFB	Fipronil	25.7	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	24.8	LCS	P	0 - 30
LFB	Fipronil Sulfide	15.3	LCS	P	0 - 30
LFB	Fipronil Sulfone	21.1	LCS	P	0 - 30
LFB	Fonofos	18.8	LCS	P	0 - 30
LFB	Hexazinone	21.4	LCS	P	0 - 30
LFB	Malathion	18.9	LCS	P	0 - 30
LFB	Metalaxyl	21.1	LCS	P	0 - 30
LFB	Metolachlor	20.0	LCS	P	0 - 30
LFB	Metribuzin	6.58	LCS	P	0 - 30
LFB	Mevinphos	25.4	LCS	P	0 - 30
LFB	Molinate	13.4	LCS	P	0 - 30
LFB	Norflurazon	21.5	LCS	P	0 - 30
LFB	Oxadiazon	21.8	LCS	P	0 - 30
LFB	Parathion Ethyl	15.6	LCS	P	0 - 30
LFB	Parathion Methyl	17.1	LCS	P	0 - 30
LFB	Pendimethalin	9.35	LCS	P	0 - 30
LFB	Phorate	15.5	LCS	P	0 - 30
LFB	Prodiamine	5.77	LCS	P	0 - 30
LFB	Prometon	20.4	LCS	P	0 - 30
LFB	Prometryn	21.4	LCS	P	0 - 30
LFB	Simazine	25.1	LCS	P	0 - 30
LFB	Tebuconazole	31.6	LCS	F	0 - 30
LFB	Terbufos	17.2	LCS	P	0 - 30
LFB	Terbuthylazine	18.7	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P360471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070811	Chlordane	13.0	Spike	P	0 - 30
2070811	Toxaphene	2.09	Spike	P	0 - 30
LFB	Chlordane	2.48	LCS	P	0 - 30
LFB	Toxaphene	18.7	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P360341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069364	3-Hydroxycarbofuran	0.810	Spike	P	0 - 30
2069364	Aldicarb	1.03	Spike	P	0 - 30
2069364	Aldicarb Sulfone	16.5	Spike	P	0 - 30
2069364	Aldicarb Sulfoxide	5.47	Spike	P	0 - 30
2069364	Carbaryl	2.41	Spike	P	0 - 30
2069364	Carbofuran	0.332	Spike	P	0 - 30
2069364	Methiocarb	8.89	Spike	P	0 - 30
2069364	Methomyl	5.74	Spike	P	0 - 30
2069364	Oxamyl	16.5	Spike	P	0 - 30
2069364	Propoxur	0.730	Spike	P	0 - 30
2069366	2,4-D	14.6	Spike	P	0 - 30
2069366	Acetaminophen	7.71	Spike	P	0 - 30
2069366	Bentazon	3.23	Spike	P	0 - 30
2069366	Carbamazepine	4.58	Spike	P	0 - 30
2069366	Diuron	9.06	Spike	P	0 - 30
2069366	Fenuron	1.98	Spike	P	0 - 30
2069366	Fluridone	2.19	Spike	P	0 - 30
2069366	Hydrocodone	1.17	Spike	P	0 - 30
2069366	Ibuprofen	10.2	Spike	P	0 - 30
2069366	Imazapyr	3.05	Spike	P	0 - 30
2069366	Imidacloprid	2.01	Spike	P	0 - 30
2069366	Linuron	2.05	Spike	P	0 - 30
2069366	MCPP	6.95	Spike	P	0 - 30
2069366	Naproxen	2.79	Spike	P	0 - 30
2069366	Primidone	19.1	Spike	P	0 - 30
2069366	Pyraclostrobin	7.64	Spike	P	0 - 30
2069366	Triclopyr	17.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P360421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069913	Acesulfame K	22.4	Spike	P	0 - 30
2069913	AMPA	5.79	Spike	P	0 - 30
2069913	Endothall	11.7	Spike	P	0 - 30
2069913	Glufosinate	15.0	Spike	P	0 - 30
2069913	Glyphosate	4.87	Spike	P	0 - 30
2069913	Sucralose	2.41	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P360490

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069849	2,4-D	2.59	Spike	P	0 - 30
2069849	Acetaminophen	12.8	Spike	P	0 - 30
2069849	Bentazon	3.26	Spike	P	0 - 30
2069849	Carbamazepine	9.88	Spike	P	0 - 30
2069849	Diuron	6.16	Spike	P	0 - 30
2069849	Fenuron	0.378	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P360490

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069849	Fluridone	19.7	Spike	P	0 - 30
2069849	Hydrocodone	0.577	Spike	P	0 - 30
2069849	Ibuprofen	19.9	Spike	P	0 - 30
2069849	Imazapyr	10.1	Spike	P	0 - 30
2069849	Imidacloprid	6.91	Spike	P	0 - 30
2069849	Linuron	0.770	Spike	P	0 - 30
2069849	MCPP	11.7	Spike	P	0 - 30
2069849	Naproxen	12.1	Spike	P	0 - 30
2069849	Primidone	11.2	Spike	P	0 - 30
2069849	Pyraclostrobin	16.7	Spike	P	0 - 30
2069849	Triclopyr	19.6	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P360449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070044	Color (true)	0.0510	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P361098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070301	Total Alkalinity	0.430	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P360949

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070015	TDS	0.601	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P360987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070301	Fluoride	0.0	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P360905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069812	Organic Carbon	0.932	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: 2070027
Field Sample ID: G2CE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	41.3	P	30 - 160

Lab Sample ID: 2070028
Field Sample ID: G2CE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	83.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	58.1	P	30 - 160
EPA 8321B	Diuron-d6	49.5	P	30 - 160
EPA 8321B	Endothall-d6	125	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	70.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.5	P	30 - 160
EPA 8321B	Primidone-d5	71.3	P	30 - 160
EPA 8321B	Sucralose-d6	70.5	P	30 - 160

Lab Sample ID: 2070029
Field Sample ID: G2CE0088

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.5	P	30 - 160
EPA 8321B	Diuron-d6	80.7	P	30 - 160
EPA 8321B	Endothall-d6	94.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	11.9	F	30 - 160
EPA 8321B	Ibuprofen-d3	75.9	P	30 - 160
EPA 8321B	Primidone-d5	87.8	P	30 - 160
EPA 8321B	Sucralose-d6	44.7	P	30 - 160

Lab Sample ID: 2070030
Field Sample ID: G2CE0203

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	109	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.4	P	30 - 160
EPA 8321B	Diuron-d6	82.2	P	30 - 160
EPA 8321B	Endothall-d6	91.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	52.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	52.3	P	30 - 160
EPA 8321B	Primidone-d5	74.1	P	30 - 160
EPA 8321B	Sucralose-d6	75.0	P	30 - 160

Lab Sample ID: 2070031
Field Sample ID: G2CE0123

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	79.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.1	P	30 - 160
EPA 8321B	Diuron-d6	85.9	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2070031
Field Sample ID: G2CE0123

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Endothall-d6	91.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	40.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	49.7	P	30 - 160
EPA 8321B	Primidone-d5	91.3	P	30 - 160
EPA 8321B	Sucralose-d6	77.0	P	30 - 160

Lab Sample ID: 2070032
Field Sample ID: G2CE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	83.4	P	39 - 109
EPA 8270D	Tetrachloro-m-xylene	63.3	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	61.6	P	30 - 103
EPA 8276	PCNB	133	P	37 - 143

Lab Sample ID: 2070033
Field Sample ID: G2CE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	81.2	P	68 - 130
EPA 8270D	Terbufos-d10	79.5	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A90016
Included Lab Sample IDs: 2070015

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A90017
Included Lab Sample IDs: 2070015

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A90024
Included Lab Sample IDs: 2070017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	97.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A90071
Included Lab Sample IDs: 2070015

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

Reference Method: EPA 8321B
Run ID: A90083
Included Lab Sample IDs: 2070028, 2070029, 2070030, 2070031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	100	160	P/P	60 - 160
Endothall	93.7	240*	P/F	60 - 160
Sucralose	82.3	106	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A90091
Included Lab Sample IDs: 2070028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	82.8	87.2	P/P	50 - 150
3-Hydroxycarbofuran	86.3	97.0	P/P	60 - 150
Acetaminophen	106	73.1	P/P	60 - 160
Aldicarb	85.6	67.9	P/P	60 - 150
Aldicarb Sulfone	94.5	101	P/P	50 - 150
Aldicarb Sulfoxide	92.6	95.9	P/P	50 - 150
Bentazon	83.3	94.3	P/P	50 - 160
Carbamazepine	101	95.2	P/P	60 - 150
Carbaryl	97.6	102	P/P	60 - 150
Carbofuran	111	109	P/P	50 - 150
Diuron	102	96.3	P/P	60 - 150
Fenuron	104	95.9	P/P	60 - 150
Fluridone	109	108	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A90091
Included Lab Sample IDs: 2070028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hydrocodone	101	79.4	P/P	60 - 150
Ibuprofen	84.4	95.5	P/P	50 - 160
Imazapyr	82.5	90.1	P/P	50 - 150
Imidacloprid	96.6	87.3	P/P	60 - 150
Linuron	110	101	P/P	60 - 150
MCPP	98.3	88.8	P/P	50 - 150
Methiocarb	93.4	97.3	P/P	50 - 150
Methomyl	100	91.2	P/P	50 - 150
Naproxen	103	86.3	P/P	50 - 160
Oxamyl	92.6	88.4	P/P	50 - 150
Primidone	102	83.7	P/P	60 - 150
Propoxur	100	96.5	P/P	50 - 150
Pyraclostrobin	85.7	84.7	P/P	60 - 150
Triclopyr	91.4	99.2	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A90093
Included Lab Sample IDs: 2070028, 2070029, 2070030, 2070031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	117	106	P/P	60 - 160
Glufosinate	99.9	95.8	P/P	60 - 160
Glyphosate	96.5	96.3	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A90097
Included Lab Sample IDs: 2070016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A90128
Included Lab Sample IDs: 2070016

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A90138
Included Lab Sample IDs: 2070016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	98.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A90140
Included Lab Sample IDs: 2070034

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A90140
Included Lab Sample IDs: 2070034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	100	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	100	100	P/P	90 - 110
Sodium	102	103	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A90158
Included Lab Sample IDs: 2070016

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A90170
Included Lab Sample IDs: 2070034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	94.5	95.2	P/P	90 - 110
Arsenic	96.2	93.9	P/P	90 - 110
Boron	91.2	94.3	P/P	90 - 110
Cadmium	94.2	95.7	P/P	90 - 110
Chromium	93.4	94.6	P/P	90 - 110
Lead	93.1	94.0	P/P	90 - 110
Selenium	94.7	95.3	P/P	90 - 110
Silver	100	101	P/P	90 - 110
Thallium	91.2	92.6	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A90186
Included Lab Sample IDs: 2070016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.4	93.7	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A90189
Included Lab Sample IDs: 2070032

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.7		P	80 - 120
Alpha-BHC	96.0		P	80 - 120
Alpha-Chlordane	94.5		P	80 - 120
Beta-BHC	97.2		P	80 - 120
Bifenthrin	92.8		P	80 - 120
Carbophenothion	96.3		P	80 - 120
Chlorothalonil	67.4*		F	80 - 120
Cis-Nonachlor	94.4		P	80 - 120
Cypermethrin	83.7		P	80 - 120
DDD-p,p'	99.9		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A90189
Included Lab Sample IDs: 2070032

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDE-p,p'	98.2		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	91.6		P	80 - 120
Dicofol	97.9		P	80 - 120
Dieldrin	96.7		P	80 - 120
Endosulfan I	89.4		P	80 - 120
Endosulfan II	91.9		P	80 - 120
Endosulfan Sulfate	89.5		P	80 - 120
Endrin	91.3		P	80 - 120
Endrin Aldehyde	93.1		P	80 - 120
Endrin Ketone	92.8		P	80 - 120
Ethalfluralin	93.4		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	93.5		P	80 - 120
Heptachlor	92.5		P	80 - 120
Heptachlor Epoxide	95.9		P	80 - 120
Hexachlorobenzene	100		P	80 - 120
Methoxychlor	102		P	80 - 120
Mirex	91.0		P	80 - 120
Permethrin	92.1		P	80 - 120
Trans-Nonachlor	94.8		P	80 - 120
Trifluralin	95.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A90207
Included Lab Sample IDs: 2070034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	96.8	93.9	P/P	90 - 110
Nickel	97.5	94.2	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A90209
Included Lab Sample IDs: 2070032

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	111		P	80 - 120
Toxaphene	109		P	80 - 120

Reference Method: SM 4500 F-C-97
Run ID: A90218
Included Lab Sample IDs: 2070015

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A90224
Included Lab Sample IDs: 2070034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A90224
Included Lab Sample IDs: 2070034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	99.7	98.6	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A90248
Included Lab Sample IDs: 2070015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.9	102	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A90253
Included Lab Sample IDs: 2070033

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	108		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine Desethyl	92.9		P	80 - 120
Azinphos Methyl	100		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	95.1		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	98.2		P	80 - 120
Cyanazine	91.6		P	80 - 120
Demeton	96.8		P	80 - 120
Diazinon	99.2		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	95.5		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	99.4		P	80 - 120
Ethion	98.8		P	80 - 120
Ethoprop	96.0		P	80 - 120
Fenamiphos	96.9		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	95.7		P	80 - 120
Fipronil Sulfone	94.8		P	80 - 120
Fonofos	95.3		P	80 - 120
Malathion	96.5		P	80 - 120
Metalaxyl	106		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	87.2		P	80 - 120
Mevinphos	98.7		P	80 - 120
Molinate	97.5		P	80 - 120
Norflurazon	101		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	96.5		P	80 - 120
Parathion Methyl	96.7		P	80 - 120
Pendimethalin	99.4		P	80 - 120
Phorate	92.3		P	80 - 120
Prodiamine	104		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A90253
Included Lab Sample IDs: 2070033

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Prometon	103		P	80 - 120
Prometryn	103		P	80 - 120
Simazine	97.9		P	80 - 120
Tebuconazole	98.0		P	80 - 120
Terbufos	95.3		P	80 - 120
Terbuthylazine	99.5		P	80 - 120

Reference Method: EPA 8321B
Run ID: A90274
Included Lab Sample IDs: 2070029, 2070030, 2070031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	75.5	93.3	P/P	50 - 150
Acetaminophen	119	122	P/P	60 - 160
Bentazon	87.5	93.5	P/P	50 - 160
Bentazon	95.9	89.8	P/P	50 - 160
Carbamazepine	108	100	P/P	60 - 150
Diuron	101	114	P/P	60 - 150
Fenuron	112	113	P/P	60 - 150
Fluridone	76.3	66.0	P/P	60 - 160
Hydrocodone	112	121	P/P	60 - 150
Ibuprofen	87.1	92.7	P/P	50 - 160
Imazapyr	88.9	100	P/P	50 - 150
Imidacloprid	106	105	P/P	60 - 150
Linuron	94.7	99.7	P/P	60 - 150
MCPP	90.9	91.5	P/P	50 - 150
Naproxen	107	106	P/P	50 - 160
Primidone	120	138	P/P	60 - 150
Pyraclostrobin	80.6	82.5	P/P	60 - 150
Triclopyr	89.8	96.1	P/P	50 - 150

Reference Method: EPA 8270D
Run ID: A90284
Included Lab Sample IDs: 2070033

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	98.4		P	80 - 120
Hexazinone	100		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			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							5.77	
EPA 200.7 Rev. 4.4	Barium	99.7		102	101	101			1.30
	Calcium	102		102	100				0.0032
	Iron	104		110	106	108			2.94
	Magnesium	109		112	108	99.7			2.29
	Potassium	107		108	108	103			0.464
	Sodium	102		102	103				0.471
	Zinc	98.9		102	101	98.9			1.47
EPA 200.8 Rev. 5.4	Aluminum	93.8		93.5	92.6	92.4			0.843
	Antimony	95.1		94.7	94.4	94.8			0.359
	Arsenic	98.7		94.8	94.3	96.5			0.569
	Boron	101		93.2	93.3	93.5			0.135
	Cadmium	93.8		96.8	94.3	94.8			2.62
	Chromium	89.1		89.1	88.6	88.3			0.495
	Copper	101		98.8	97.9	94.1			0.859
	Lead	92.1		92.2	92.6	90.6			2.15
	Nickel	102		99.1	100	95.4			0.938
	Selenium	96.0		93.7	93.4	73.0			0.307
	Silver	100		99.0	98.8	98.7			0.287
	Thallium	94.9		96.8	95.0	96.0			1.90
EPA 300.0 Rev. 2.1	Chloride	99.5		100	98.6			1.21	
	Sulfate	101		100	100			1.04	
EPA 350.1 Rev. 2.0	Ammonia-N	105		97.6	102				3.00
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106		106	108				1.47
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0		97.5	99.5				1.97
EPA 365.1 Rev. 2.0	Total-P	106		103	106				2.47
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		97.7	99.5				1.83
EPA 8270D	Acetochlor	75.7	93.2	75.7	89.8		20.6		17.1
	Alachlor	74.5	92.1	75.1	88.3		21.2		16.2
	Aldrin	49.4	36.0	50.1	49.9		31.2		0.304
	Alpha-BHC	107	102	110	116		4.72		5.26
	Alpha-Chlordane	81.3	76.3	80.0	79.0		6.28		1.33
	Ametryn	73.9	90.3	90.6	110		20.0		19.5
	Atrazine	83.0	108				26.1		12.9
	Atrazine Desethyl	84.0	101	65.0	72.4		18.3		9.24
	Azinphos Methyl	104	125	83.8	95.7		18.9		13.3
	Beta-BHC	128	133	164	149		3.93		10.1
	Bifenthrin	74.8	60.1	68.9	73.9		21.9		6.99
	Bromacil	72.8	95.9	73.4	79.6		27.4		8.08
	Butylate	62.2	72.2	39.4	27.8		14.9		34.5
	Carbophenothion	80.2	75.7	79.5	79.6		5.79		0.0612
	Chlorothalonil	109	102	164	145		7.40		12.8
	Chlorpyrifos Ethyl	86.3	98.7	79.7	95.5		13.3		18.1
	Chlorpyrifos Methyl	85.5	100	74.5	87.3		16.0		15.8
	Cis-Nonachlor	87.2	83.1	89.0	89.3		4.88		0.305
	Cyanazine	210	237	111	129		11.9		15.0
	Cypermethrin	73.3	62.7	62.7	65.6		15.7		4.48
	DDD-p,p'	92.2	92.0	95.0	95.8		0.203		0.830
	DDE-p,p'	84.7	76.9	85.8	77.5		9.67		10.2
	DDT-p,p'	101	89.8	106	96.4		11.7		9.23
	Delta-BHC	134	135	186	153		0.818		19.7
	Demeton	69.6	73.1	60.3	56.4		4.90		6.65
	Diazinon	79.1	99.9	75.9	90.0		23.3		17.1
	Dicofol	101	90.7	98.6	109		10.6		9.79

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Dieldrin	88.8	87.8	86.6	89.1	1.08		2.88
	Dimethenamid	72.6	88.1	74.9	87.9	19.3		15.9
	Disulfoton	85.5	102	71.4	84.1	17.8		16.4
	Dithiopyr	75.9	96.4	75.0	88.6	23.8		10.4
	Endosulfan I	84.5	82.7	86.2	90.2	2.09		4.45
	Endosulfan II	95.3	94.9	99.7	113	0.446		12.7
	Endosulfan Sulfate	84.5	83.4	79.7	93.7	1.27		16.2
	Endrin	84.9	81.3	84.5	95.1	4.28		11.8
	Endrin Aldehyde	97.4	99.1	94.8	100	1.70		5.84
	Endrin Ketone	85.4	84.3	83.2	89.9	1.39		7.76
	EPTC	63.7	73.5	46.2	30.7	14.3		40.2
	Ethalfluralin	96.2	85.5	90.8	93.8	11.8		3.25
	Ethion	65.1	79.3	80.6	101	19.7		22.8
	Ethoprop	87.0	95.9	76.3	90.1	9.74		16.6
	Fenamiphos	81.5	97.6	98.0	112	18.0		13.1
	Fipronil	70.5	91.3			25.7		0.967
	Fipronil Desulfinyl	68.4	87.9	79.3	81.3	24.8		1.81
	Fipronil Sulfide	73.9	86.1			15.3		8.94
	Fipronil Sulfone	68.0	84.1			21.1		12.5
	Fonofos	86.4	104	74.9	90.5	18.8		18.9
	Gamma-BHC	111	118	135	131	6.41		2.86
	Gamma-Chlordane	79.8	74.5	75.7	76.8	6.94		1.44
	Heptachlor	68.3	57.7	62.6	66.9	16.7		6.64
	Heptachlor Epoxide	80.3	79.2	82.3	77.9	1.30		5.42
	Hexachlorobenzene	77.7	66.0	67.5	72.1	16.3		6.68
	Hexazinone	83.5	104	91.9	107	21.4		14.1
	Malathion	79.8	96.4	79.7	93.0	18.9		15.4
	Metalaxyl	76.9	95.0			21.1		17.0
	Methoxychlor	113	109	114	112	4.19		1.95
	Metolachlor	75.2	92.0	76.1	87.8	20.0		14.3
	Metribuzin	192	205	175	207	6.58		2.85
	Mevinphos	75.0	96.7	72.1	79.7	25.4		10.0
	Mirex	64.0	50.6	59.2	61.2	23.4		3.40
	Molinate	70.1	80.2	56.0	55.9	13.4		0.305
	Norflurazon	78.1	97.0	74.7	79.9	21.5		6.64
	Oxadiazon	77.0	95.8			21.8		7.73
	Parathion Ethyl	81.1	94.8	77.4	89.2	15.6		14.1
	Parathion Methyl	85.5	101	78.8	93.3	17.1		16.9
	Pendimethalin	88.9	97.7	93.5	112	9.35		17.9
	Permethrin	71.7	61.0	66.6	72.7	16.1		8.73
	Phorate	80.3	93.8	71.9	78.6	15.5		8.87
	Prodiamine	41.8	44.3	94.8	98.9	5.77		3.94
	Prometon	66.2	81.2	78.1	91.9	20.4		16.3
	Prometryn	68.4	84.7	68.6	79.1	21.4		14.3
	Simazine	85.8	110	86.0	95.9	25.1		10.8
	Tebuconazole	32.5	44.6	52.6	59.1	31.6		11.6
	Terbufos	82.3	97.8	73.3	87.4	17.2		17.5
	Terbuthylazine	81.9	98.8	78.1	91.7	18.7		16.0
	Trans-Nonachlor	79.4	72.8	77.4	76.5	8.67		1.20
	Trifluralin	91.1	81.3	90.9	91.0	11.4		0.124
EPA 8276	Chlordane	83.1	85.2	99.0	87.0	2.48		13.0
	Toxaphene	95.5	115	121	119	18.7		2.09
EPA 8321B	2,4-D	86.2		103	88.8			14.6
	2,4-D	75.9		94.4	96.9			2.59

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	3-Hydroxycarbofuran	79.5	76.3	75.7			0.810
	Acesulfame K	87.5	103	129			22.4
	Acetaminophen	93.1	90.8	98.1			7.71
	Acetaminophen	111	103	90.8			12.8
	Aldicarb	62.5	44.2	43.7			1.03
	Aldicarb Sulfone	92.1	85.7	101			16.5
	Aldicarb Sulfoxide	94.2	44.8	47.3			5.47
	AMPA	89.7	78.4	83.1			5.79
	Bentazon	90.1	54.8	56.8			3.23
	Bentazon	129	78.8	75.9			3.26
	Carbamazepine	92.8	73.5	70.2			4.58
	Carbamazepine	111	102	92.4			9.88
	Carbaryl	70.4	55.1	56.4			2.41
	Carbofuran	73.1	57.5	57.3			0.332
	Diuron	70.0	66.0	58.3			9.06
	Diuron	120	92.1	86.4			6.16
	Endothall	85.7	84.4	94.8			11.7
	Fenuron	118	89.9	88.2			1.98
	Fenuron	127	127	128			0.378
	Fluridone	113	114	110			2.19
	Fluridone	127	135	107			19.7
	Glufosinate	91.4	68.3	58.8			15.0
	Glyphosate	79.4	74.3	70.7			4.87
	Hydrocodone	98.4	81.4	82.3			1.17
	Hydrocodone	98.2	94.9	95.5			0.577
	Ibuprofen	64.5	68.5	75.8			10.2
	Ibuprofen	76.0	78.9	64.6			19.9
	Imazapyr	98.5	106	110			3.05
	Imazapyr	99.5	65.2	55.8			10.1
	Imidacloprid	97.3	182	174			2.01
	Imidacloprid	102	183	169			6.91
	Linuron	72.6	68.3	66.9			2.05
	Linuron	103	87.4	86.8			0.770
	MCPP	103	153	143			6.95
	MCPP	82.2	124	110			11.7
	Methiocarb	65.8	51.9	56.7			8.89
	Methomyl	78.2	61.0	64.6			5.74
	Naproxen	43.1	67.2	65.4			2.79
	Naproxen	87.3	75.2	85.0			12.1
	Oxamyl	94.6	68.8	81.2			16.5
	Primidone	90.8	70.3	85.2			19.1
	Primidone	119	114	102			11.2
	Propoxur	57.6	50.6	50.2			0.730
	Pyraclostrobin	55.9	58.4	63.0			7.64
	Pyraclostrobin	82.3	79.7	67.5			16.7
	Sucralose	54.7	12.2	11.8			2.41
	Triclopyr	62.8	90.3	75.6			17.6
	Triclopyr	53.8	85.9	70.6			19.6
SM 2120 B	Color (true)	103				0.0510	
SM 2320 B-97	Total Alkalinity	101				0.430	
SM 2540 C-97	TDS					0.601	
SM 4500 F-C-97	Fluoride	97.8	97.3	97.3			0.0
SM 5310 B-00	Organic Carbon	98.5	95.5	96.5			0.932

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2070015
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2070034
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2070034
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2070015
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2070015
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2070016
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2070016
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2070016
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2070016
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2070017
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2070032
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2070033
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2070032
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2070027
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2070028, 2070029, 2070030, 2070031
SM 2120 B / E31780	True Color measured at 450 nm	2070015
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2070015
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2070015
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2070015
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2070015
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2070016

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	03/14/2019			03/14/2019 17:11	Adrian Shelby	2070015
EPA 200.7 Rev. 4.4	03/14/2019	03/19/2019 15:45	Elliott D. Healy	03/20/2019 17:48	Vijayalakshmi Reddy	2070034
EPA 200.8 Rev. 5.4	03/14/2019	03/19/2019 15:45	Elliott D. Healy	03/21/2019 20:11	Robert K Palmer	2070034
	03/14/2019	03/19/2019 15:45	Elliott D. Healy	03/22/2019 15:07	Robert K Palmer	2070034
	03/14/2019	03/19/2019 15:45	Elliott D. Healy	03/25/2019 17:07	Robert K Palmer	2070034
EPA 300.0 Rev. 2.1	03/14/2019			03/22/2019 00:31	Lipi Saha	2070015
EPA 350.1 Rev. 2.0	03/14/2019			03/19/2019 11:37	Ping Hua	2070016
EPA 351.2 Rev. 2.0	03/14/2019	03/19/2019 12:20	Adrian Shelby	03/20/2019 15:17	Joseph Suarez	2070016
EPA 353.2 Rev. 2.0	03/14/2019			03/20/2019 11:42	Lauren Lees	2070016
EPA 365.1 Rev. 2.0	03/14/2019	03/19/2019 13:40	Sima Feizi	03/20/2019 10:40	Beverly Y. Sanders	2070016
EPA 365.1 Rev. 2.0 dissolved	03/14/2019			03/14/2019 17:21	Jhamieka S. Greenwood	2070017
EPA 8270D	03/14/2019	03/18/2019 09:00	Fe-Val Siddell	03/21/2019 22:36	Dinesh Mishra	2070032
	03/14/2019	03/18/2019 09:08	Dinesh Mishra	03/20/2019 19:23	Vandana T. Nagar	2070033
	03/14/2019	03/18/2019 09:08	Dinesh Mishra	03/21/2019 16:15	Vandana T. Nagar	2070033
	03/14/2019	03/18/2019 09:08	Dinesh Mishra	03/21/2019 17:51	Vandana T. Nagar	2070033
EPA 8276	03/14/2019	03/18/2019 09:00	Fe-Val Siddell	03/23/2019 19:51	Arthur Maknenko	2070032
EPA 8321B	03/14/2019	03/15/2019 13:00	Hoor Shaik	03/16/2019 18:59	Juyoung Kim	2070027
	03/14/2019	03/15/2019 13:00	Hoor Shaik	03/17/2019 04:48	Juyoung Kim	2070028
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/18/2019 19:05	Juyoung Kim	2070028
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/18/2019 19:15	Juyoung Kim	2070029
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/18/2019 19:26	Juyoung Kim	2070030
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/18/2019 19:36	Juyoung Kim	2070031
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/19/2019 13:43	Juyoung Kim	2070028
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/19/2019 13:57	Juyoung Kim	2070029
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/19/2019 14:11	Juyoung Kim	2070030
	03/14/2019	03/18/2019 12:00	Hoor Shaik	03/19/2019 14:25	Juyoung Kim	2070031
	03/14/2019	03/19/2019 10:00	Hoor Shaik	03/26/2019 04:14	Juyoung Kim	2070029
	03/14/2019	03/19/2019 10:00	Hoor Shaik	03/26/2019 04:48	Juyoung Kim	2070030
	03/14/2019	03/19/2019 10:00	Hoor Shaik	03/26/2019 05:23	Juyoung Kim	2070031
	03/14/2019	03/19/2019 10:00	Hoor Shaik	03/26/2019 17:06	Juyoung Kim	2070030
	03/14/2019	03/19/2019 10:00	Hoor Shaik	03/26/2019 17:41	Juyoung Kim	2070031
SM 2120 B	03/14/2019			03/14/2019 16:32	Mariam Hanna	2070015
SM 2320 B-97	03/14/2019			03/26/2019 16:57	Dale L. Simmons	2070015
SM 2540 C-97	03/14/2019			03/18/2019 15:10	Mariam Hanna	2070015
SM 2540 D-97	03/14/2019			03/18/2019 14:45	Mariam Hanna	2070015
SM 4500 F-C-97	03/14/2019			03/25/2019 02:04	Dale L. Simmons	2070015
SM 5310 B-00	03/14/2019			03/21/2019 07:01	Julia Storbeck	2070016