Chemical Analysis Report

NE-DIST-2019-04-18-03

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

Event Description: **ICW Boat**
Request ID: **RQ-2019-04-15-24**
Customer: **NE-DIST**
Project ID: **SMP**

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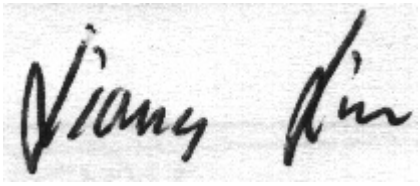
Certified by: Liang Lin, Environmental Administrator

Date Certified: 10-MAY-2019 13:55



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

A - Value reported is the mean of two or more determinations.
B - Results based on colony counts outside the acceptable range.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J - Estimated value and/or the analysis did not meet established quality control criteria.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
V - Analyte was detected in both sample and method blank.
X - Too few individuals to calculate SCI value.
Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Open creek 0.5 mi upstream of mouth **Collection Date/Time: 04/17/2019 09:50**

Field ID: G2NE1186 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079433	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P362456	
	EPA 300.0	Bromide	41		mg Br/L	P362742	
	SM 2320 B-97	Total Alkalinity	107		mg CaCO3/L	P363131	
	SM 2540 D-97	TSS	17		mg/L	P362755	
	SM 4500 F-C-97	Fluoride	0.78		mg F/L	P363132	
2079434	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P362694	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P363092	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.023		mg N/L	P362649	
	EPA 365.1 Rev. 2.0	Total-P	0.061		mg P/L	P362687	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P362592	
2079435	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P362465	
2079445	EPA 200.7 Rev. 4.4	Iron	110	I	ug/L	P362810	
		Manganese	23		ug/L	P362810	
		Zinc	15	U	ug/L	P362810	
	EPA 200.8 Rev. 5.4	Aluminum	97		ug/L	P362810	
		Antimony	0.20	U	ug/L	P362810	
		Arsenic	2.60		ug/L	P362810	
		Cadmium	0.080	U	ug/L	P362810	
		Chromium	4.0	U	ug/L	P362810	
		Copper	1.6	U	ug/L	P362810	
		Lead	0.80	U	ug/L	P362810	
		Nickel	2.0	U	ug/L	P362810	
		Selenium	0.80	U	ug/L	P362810	
		Silver	0.040	U	ug/L	P362810	
		Thallium	0.40	U	ug/L	P362810	

Sample Location: Open creek 200 meters above mouth **Collection Date/Time: 04/17/2019 09:25**

Field ID: G2NE1178 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079430	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P362456	
	EPA 300.0	Bromide	41		mg Br/L	P362742	
	SM 2320 B-97	Total Alkalinity	104		mg CaCO3/L	P363131	
	SM 2540 D-97	TSS	18		mg/L	P362755	
	SM 4500 F-C-97	Fluoride	0.78		mg F/L	P363132	
2079431	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P362694	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P363092	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.037		mg N/L	P362649	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P362687	
	SM 5310 B-00	Organic Carbon	8.5		mg C/L	P362592	
2079432	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.041		mg P/L	P362465	
2079440	EPA 8321B	Aldicarb	0.020	U	ug/L	P362343	
		Aldicarb Sulfone	0.0020	U	ug/L	P362343	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P362343	
		Carbaryl	0.0020	U	ug/L	P362343	
		Carbofuran	0.0020	U	ug/L	P362343	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P362343	
		Methiocarb	0.0020	U	ug/L	P362343	
		Methomyl	0.0020	U	ug/L	P362343	
		Oxamyl	0.0020	U	ug/L	P362343	
		Propoxur	0.0020	U	ug/L	P362343	
2079441		2,4-D	0.0066	I	ug/L	P362343	
		Acesulfame K**	0.10	UJ	ug/L	P362544	MS, SUR
		AMPA**	1.0	U	ug/L	P362544	
		Sucralose**	0.41		ug/L	P362544	
		Acetaminophen**	0.0080	U	ug/L	P362343	
		Endothall**	0.25	UJ	ug/L	P362544	SUR
		Glufosinate**	1.0	U	ug/L	P362544	
		Bentazon	0.0071		ug/L	P362343	
		Glyphosate**	1.0	U	ug/L	P362544	
		Carbamazepine**	0.0010	I	ug/L	P362343	
		Diuron	0.0057	I	ug/L	P362343	
		Fenuron	0.016	U	ug/L	P362343	
		Fluridone**	0.019		ug/L	P362343	
		Imazapyr**	0.043		ug/L	P362343	
		Hydrocodone**	0.0020	U	ug/L	P362343	
		Ibuprofen**	0.020	U	ug/L	P362343	
		Imidacloprid	0.023	J	ug/L	P362343	MS
		Linuron	0.0040	U	ug/L	P362343	
		MCPP	0.0020	U	ug/L	P362343	
		Naproxen**	0.0080	U	ug/L	P362343	
		Primidone**	0.0040	U	ug/L	P362343	
		Pyraclostrobin**	0.0020	U	ug/L	P362343	

Field ID: G2NE1178 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079441	EPA 8321B	Triclopyr**	0.0040	U	ug/L	P362343	
2079442	EPA 8270D	Aldrin	4.2	U	ng/L	P362502	
		Alpha-BHC	2.1	U	ng/L	P362502	
		Alpha-Chlordane	1.0	U	ng/L	P362502	
		Beta-BHC	10	U	ng/L	P362502	
		Bifenthrin**	4.2	U	ng/L	P362502	
		Delta-BHC	10	U	ng/L	P362502	
		Gamma-BHC	10	U	ng/L	P362502	MS
		Carbophenothion	13	U	ng/L	P362502	
		Chlorothalonil	2.1	U	ng/L	P362502	
		Cis-Nonachlor**	1.0	U	ng/L	P362502	
		Cypermethrin	21	U	ng/L	P362502	
		DDD-p,p'	8.4	U	ng/L	P362502	MS
		DDE-p,p'	8.4	U	ng/L	P362502	
		DDT-p,p'	10	U	ng/L	P362502	
		Dicofol	31	U	ng/L	P362502	
		Dieldrin	4.2	U	ng/L	P362502	
		Endosulfan I	4.2	U	ng/L	P362502	
		Endosulfan II	4.2	U	ng/L	P362502	MS
		Endosulfan Sulfate	2.1	U	ng/L	P362502	
		Endrin	2.1	U	ng/L	P362502	
		Endrin Aldehyde	2.1	U	ng/L	P362502	
		Endrin Ketone	2.1	U	ng/L	P362502	MS
		Ethalfluralin**	3.1	U	ng/L	P362502	
		Gamma-Chlordane	1.0	U	ng/L	P362502	
		Heptachlor	1.6	U	ng/L	P362502	
		Heptachlor Epoxide	2.1	U	ng/L	P362502	
		Hexachlorobenzene**	2.1	U	ng/L	P362502	
		Methoxychlor	4.2	U	ng/L	P362502	
		Mirex	2.1	U	ng/L	P362502	
		Permethrin	10	U	ng/L	P362502	
		Trans-Nonachlor**	1.0	U	ng/L	P362502	
		Trifluralin	2.6	U	ng/L	P362502	
	EPA 8276	Chlordane	5.2	U	ng/L	P362502	
		Toxaphene	31	U	ng/L	P362502	
2079443	EPA 8270D	Acetochlor	0.25	U	ng/L	P362397	
		Alachlor	0.25	U	ng/L	P362397	
		Ametryn	0.78	IJ	ng/L	P362397	RPD
		Atrazine	19		ng/L	P362397	
		Atrazine Desethyl	1.8	I	ng/L	P362397	
		Azinphos Methyl	5.0	U	ng/L	P362397	
		Bromacil	0.50	UJ	ng/L	P362397	RPD
		Butylate	0.40	U	ng/L	P362397	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P362397	
		Chlorpyrifos Methyl	0.10	U	ng/L	P362397	

Field ID: G2NE1178 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079443	EPA 8270D	Cyanazine	3.2	U	ng/L	P362397	
		Demeton	7.0	U	ng/L	P362397	
		Diazinon	0.12	U	ng/L	P362397	
		Dimethenamid**	0.10	U	ng/L	P362397	
		Disulfoton	0.50	U	ng/L	P362397	
		Dithiopyr**	0.11	I	ng/L	P362397	
		EPTC	1.2	U	ng/L	P362397	
		Ethion	0.15	U	ng/L	P362397	
		Ethoprop	0.35	I	ng/L	P362397	
		Fenamiphos	0.50	UJ	ng/L	P362397	LCS, RPD
		Fipronil	0.25	U	ng/L	P362397	
		Fipronil Desulfinyl**	0.22	I	ng/L	P362397	
		Fipronil Sulfide	0.20	I	ng/L	P362397	
		Fipronil Sulfone	0.43	I	ng/L	P362397	
		Fonofos	0.20	U	ng/L	P362397	
		Hexazinone	1.6	IJ	ng/L	P362397	LCS, MS, RPD
		Malathion	0.35	U	ng/L	P362397	
		Metalaxyl	0.65	IJ	ng/L	P362397	LCS, RPD
		Metolachlor	8.7		ng/L	P362397	
		Metribuzin	66	J	ng/L	P362397	CCV
		Mevinphos	0.50	UJ	ng/L	P362397	LCS, RPD
		Molinate	0.30	U	ng/L	P362397	
		Norflurazon	0.50	U	ng/L	P362397	
		Oxadiazon**	4.1		ng/L	P362397	
		Parathion Ethyl	0.25	U	ng/L	P362397	
		Parathion Methyl	0.55	U	ng/L	P362397	
		Pendimethalin	1.0	U	ng/L	P362397	
		Phorate	0.25	U	ng/L	P362397	
		Prodiamine**	0.17	U	ng/L	P362397	
		Prometon	0.90	UJ	ng/L	P362397	LCS
		Prometryn	0.20	UJ	ng/L	P362397	LCS, RPD
		Simazine	8.1		ng/L	P362397	
		Tebuconazole**	1.7	IJ	ng/L	P362397	LCS, RPD
		Terbufos	0.10	U	ng/L	P362397	
		Terbuthylazine	0.42	U	ng/L	P362397	
2079444	EPA 200.7 Rev. 4.4	Iron	120	I	ug/L	P362810	
		Manganese	18		ug/L	P362810	
		Zinc	15	U	ug/L	P362810	
	EPA 200.8 Rev. 5.4	Aluminum	145		ug/L	P362810	
		Antimony	0.20	U	ug/L	P362810	
		Arsenic	2.39		ug/L	P362810	
		Cadmium	0.080	U	ug/L	P362810	
		Chromium	4.0	U	ug/L	P362810	
		Copper	1.6	U	ug/L	P362810	

Field ID: G2NE1178 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2079444	EPA 200.8 Rev. 5.4	Lead	0.80	U	ug/L	P362810	
		Nickel	2.0	U	ug/L	P362810	
		Selenium	0.80	U	ug/L	P362810	
		Silver	0.040	U	ug/L	P362810	
		Thallium	0.40	U	ug/L	P362810	

Ref. Method and Comment:
EPA 8321B: Refer to the narrative for an explanation of QC Codes.
EPA 8321B: Refer to the narrative for an explanation of QC Codes. Surrogate spike recovery exceeding the control limits. Results confirmed in re-extraction. MDL for some parameters elevated due to matrix interference.
EPA 8270D: MS accuracies for atrazine, simazine, metribuzin, and bromacil not assessed due to high content of these parameters in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362456

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362810

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

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

Reference Method: EPA 300.0
Batch ID: P362742

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362694

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P363092

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362649

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362687

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362465

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

Reference Method: EPA 8270D
Batch ID: P362397

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P362397

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

Reference Method: EPA 8270D
Batch ID: P362502

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
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P362502

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P362343

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: P362544

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

Reference Method: SM 2320 B-97
Batch ID: P363131

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

Reference Method: SM 2540 D-97
Batch ID: P362755

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P363132

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P362592

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: P362810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115
Manganese	102		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.7		P	85 - 115
Antimony	98.4		P	85 - 115
Arsenic	101		P	85 - 115
Cadmium	99.9		P	85 - 115
Chromium	90.5		P	85 - 115
Copper	98.4		P	85 - 115
Lead	91.9		P	85 - 115
Nickel	99.5		P	85 - 115
Selenium	101		P	85 - 115
Silver	95.4		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P362742

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362694

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P363092

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362649

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362687

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362465

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

Reference Method: EPA 8270D
Batch ID: P362397

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	104	101	P/P	71 - 121
Alachlor	102	99.7	P/P	72 - 119
Ametryn	47.4	75.9	P/P	47 - 144
Atrazine	96.6	97.2	P/P	75 - 123
Atrazine Desethyl	52.1	49.3	P/P	45 - 133
Azinphos Methyl	101	96.4	P/P	66 - 165
Bromacil	62.2	43.8	P/P	43 - 123
Butylate	58.1	58.5	P/P	27 - 83.0
Chlorpyrifos Ethyl	98.7	97.0	P/P	70 - 117
Chlorpyrifos Methyl	90.9	84.9	P/P	71 - 120
Cyanazine	72.2	70.5	P/P	34 - 264
Demeton	61.0	65.0	P/P	41 - 122
Diazinon	98.2	94.8	P/P	70 - 127
Dimethenamid	103	99.2	P/P	66 - 123
Disulfoton	84.5	81.5	P/P	56 - 127
Dithiopyr	107	104	P/P	67 - 125
EPTC	61.0	58.3	P/P	24 - 84.0
Ethion	103	104	P/P	53 - 132
Ethoprop	88.1	84.3	P/P	57 - 117
Fenamiphos	32.9	15.2	F/F	55 - 136
Fipronil	103	91.4	P/P	64 - 126
Fipronil Desulfinyl	101	94.3	P/P	47 - 114
Fipronil Sulfide	102	96.2	P/P	57 - 120
Fipronil Sulfone	97.7	86.9	P/P	52 - 115
Fonofos	82.4	82.7	P/P	61 - 121
Hexazinone	48.4	16.9	F/F	62 - 131
Malathion	101	97.5	P/P	67 - 126
Metalaxyl	13.7	9.41	F/F	54 - 128
Metolachlor	104	100	P/P	71 - 118
Metribuzin	73.1	72.4	P/P	42 - 221
Mevinphos	51.2	26.7	P/F	45 - 114
Molinate	67.5	70.4	P/P	33 - 91.0
Norflurazon	92.6	81.4	P/P	60 - 123
Oxadiazon	110	109	P/P	66 - 121
Parathion Ethyl	90.2	89.3	P/P	73 - 111
Parathion Methyl	91.2	89.4	P/P	74 - 126
Pendimethalin	103	109	P/P	63 - 131
Phorate	73.7	72.0	P/P	54 - 115
Prodiamine	115	114	P/P	38 - 140
Prometon	22.6	27.6	F/F	61 - 120
Prometryn	59.8	88.9	F/P	62 - 126
Simazine	101	92.6	P/P	75 - 126
Tebuconazole	56.4	14.6	P/F	21 - 115
Terbufos	85.6	83.3	P/P	65 - 116
Terbuthylazine	100	97.6	P/P	73 - 117

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P362502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	56.3	47.3	P/P	20 - 93.0
Alpha-BHC	105	91.5	P/P	57 - 119
Alpha-Chlordane	78.7	82.3	P/P	58 - 112
Beta-BHC	116	114	P/P	56 - 149
Bifenthrin	92.4	101	P/P	50 - 130
Carbophenothion	72.5	77.4	P/P	26 - 147
Chlorothalonil	154	120	P/P	20 - 155
Cis-Nonachlor	72.8	83.2	P/P	50 - 130
Cypermethrin	91.6	105	P/P	40 - 137
DDD-p,p'	89.9	97.6	P/P	65 - 129
DDE-p,p'	108	112	P/P	57 - 116
DDT-p,p'	91.9	97.0	P/P	53 - 133
Delta-BHC	122	122	P/P	59 - 163
Dicofol	96.8	94.9	P/P	24 - 138
Dieldrin	81.7	88.1	P/P	60 - 120
Endosulfan I	81.7	85.0	P/P	64 - 118
Endosulfan II	93.7	87.1	P/P	58 - 142
Endosulfan Sulfate	111	113	P/P	60 - 127
Endrin	86.0	89.3	P/P	59 - 122
Endrin Aldehyde	106	121	P/P	49 - 132
Endrin Ketone	109	110	P/P	64 - 121
Ethalfluralin	92.5	86.3	P/P	50 - 130
Gamma-BHC	118	110	P/P	56 - 141
Gamma-Chlordane	106	109	P/P	56 - 110
Heptachlor	80.8	73.0	P/P	46 - 96.0
Heptachlor Epoxide	109	110	P/P	61 - 112
Hexachlorobenzene	70.8	54.8	P/P	50 - 130
Methoxychlor	116	122	P/P	63 - 134
Mirex	62.9	67.2	P/P	45 - 100
Permethrin	77.4	84.9	P/P	53 - 115
Trans-Nonachlor	106	106	P/P	50 - 130
Trifluralin	87.9	85.1	P/P	39 - 142

Reference Method: EPA 8276
Batch ID: P362502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	78.8	72.4	P/P	43 - 128
Toxaphene	83.2	76.7	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P362343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.2		P	40 - 150
3-Hydroxycarbofuran	78.6		P	40 - 150
Acetaminophen	83.1		P	30 - 150
Aldicarb	76.9		P	30 - 150
Aldicarb Sulfone	96.8		P	40 - 150
Aldicarb Sulfoxide	103		P	40 - 150
Bentazon	83.4		P	30 - 150
Carbamazepine	81.0		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P362343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbaryl	77.9		P	40 - 150
Carbofuran	76.8		P	40 - 150
Diuron	82.1		P	40 - 150
Fenuron	93.8		P	40 - 150
Fluridone	120		P	40 - 150
Hydrocodone	110		P	40 - 150
Ibuprofen	83.3		P	40 - 150
Imazapyr	85.5		P	40 - 150
Imidacloprid	97.9		P	40 - 150
Linuron	75.2		P	40 - 150
MCPP	97.9		P	40 - 150
Methiocarb	70.2		P	40 - 150
Methomyl	93.2		P	40 - 150
Naproxen	76.6		P	40 - 150
Oxamyl	75.6		P	40 - 150
Primidone	95.6		P	40 - 150
Propoxur	77.3		P	40 - 150
Pyraclostrobin	70.0		P	40 - 150
Triclopyr	75.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362544

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	110		P	40 - 150
AMPA	120		P	40 - 150
Endothall	118		P	40 - 150
Glufosinate	128		P	40 - 150
Glyphosate	125		P	40 - 140
Sucralose	98.7		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P363131

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P363132

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

Reference Method: SM 5310 B-00
Batch ID: P362592

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079824	Iron	104		P	70 - 130
2079824	Manganese	96.5		P	70 - 130
2079824	Zinc	102		P	70 - 130
2080086	Iron	104	105	P/P	80 - 120
2080086	Manganese	97.6	97.9	P/P	80 - 120
2080086	Zinc	100	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079824	Aluminum	94.9		P	70 - 130
2079824	Antimony	101		P	70 - 130
2079824	Arsenic	109		P	70 - 130
2079824	Cadmium	96.9		P	70 - 130
2079824	Chromium	88.5		P	70 - 130
2079824	Copper	95.5		P	70 - 130
2079824	Lead	96.8		P	70 - 130
2079824	Nickel	99.4		P	70 - 130
2079824	Selenium	103		P	70 - 130
2079824	Silver	90.3		P	70 - 130
2079824	Thallium	106		P	70 - 130
2080086	Aluminum	96.6	94.5	P/P	70 - 130
2080086	Antimony	105	103	P/P	70 - 130
2080086	Arsenic	112	110	P/P	70 - 130
2080086	Cadmium	101	97.9	P/P	70 - 130
2080086	Chromium	88.6	91.4	P/P	70 - 130
2080086	Copper	97.0	96.3	P/P	70 - 130
2080086	Lead	98.0	97.2	P/P	70 - 130
2080086	Nickel	98.9	97.0	P/P	70 - 130
2080086	Selenium	103	104	P/P	70 - 130
2080086	Silver	90.0	89.1	P/P	70 - 130
2080086	Thallium	106	106	P/P	70 - 130

Reference Method: EPA 300.0
Batch ID: P362742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079290	Bromide	98.4		P	90 - 110
2079303	Bromide	99.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079431	Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P363092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079304	Kjeldahl Nitrogen	99.4	96.4	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079292	NO2NO3-N	94.9	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079305	Total-P	99.5	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079417	O-Phosphate-P	99.0	101	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P362397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078905	Acetochlor	93.2	94.2	P/P	63 - 129
2078905	Alachlor	89.9	89.6	P/P	65 - 127
2078905	Ametryn	92.4	94.3	P/P	40 - 164
2078905	Atrazine Desethyl	63.2	58.8	P/P	14 - 157
2078905	Azinphos Methyl	94.5	90.1	P/P	49 - 180
2078905	Butylate	46.5	47.6	P/P	10 - 94.0
2078905	Chlorpyrifos Ethyl	97.4	98.2	P/P	58 - 123
2078905	Chlorpyrifos Methyl	92.9	91.1	P/P	58 - 125
2078905	Cyanazine	108	97.0	P/P	24 - 253
2078905	Demeton	85.6	82.4	P/P	25 - 149
2078905	Diazinon	98.9	98.1	P/P	59 - 144
2078905	Dimethenamid	93.0	91.7	P/P	46 - 139
2078905	Disulfoton	90.9	84.6	P/P	54 - 132
2078905	Dithiopyr	95.9	96.5	P/P	64 - 130
2078905	EPTC	48.7	51.9	P/P	10 - 92.0
2078905	Ethion	101	98.2	P/P	30 - 148
2078905	Ethoprop	91.4	90.1	P/P	50 - 130
2078905	Fenamiphos	89.0	92.4	P/P	49 - 142
2078905	Fipronil	80.1	75.2	P/P	46 - 140
2078905	Fipronil Desulfinyl	68.7	66.3	P/P	30 - 121
2078905	Fipronil Sulfide	71.4	65.1	P/P	31 - 136
2078905	Fipronil Sulfone	52.7	45.4	P/P	16 - 136
2078905	Fonofos	93.1	91.2	P/P	55 - 129
2078905	Hexazinone	100	172	P/F	56 - 141
2078905	Malathion	95.6	92.3	P/P	56 - 135
2078905	Metalaxyl	90.4	82.6	P/P	54 - 135
2078905	Metolachlor	90.3	92.5	P/P	51 - 140
2078905	Mevinphos	77.1	83.1	P/P	33 - 131
2078905	Molinate	65.9	66.6	P/P	14 - 98.0
2078905	Norflurazon	77.6	72.3	P/P	34 - 136
2078905	Oxadiazon	94.8	94.8	P/P	67 - 116
2078905	Parathion Ethyl	95.5	92.5	P/P	66 - 118
2078905	Parathion Methyl	99.7	96.5	P/P	64 - 136
2078905	Pendimethalin	120	119	P/P	59 - 144

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P362397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078905	Phorate	82.3	79.2	P/P	42 - 130
2078905	Prodiamine	124	123	P/P	42 - 148
2078905	Prometon	93.7	121	P/P	59 - 134
2078905	Prometryn	95.0	92.9	P/P	54 - 135
2078905	Tebuconazole	78.9	75.2	P/P	10 - 131
2078905	Terbufos	99.5	92.6	P/P	57 - 131
2078905	Terbuthylazine	96.7	94.8	P/P	68 - 125

Reference Method: EPA 8270D
Batch ID: P362502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2078861	Aldrin	68.6	66.2	P/P	25 - 92.0
2078861	Alpha-BHC	106	110	P/P	49 - 130
2078861	Alpha-Chlordane	98.9	94.3	P/P	50 - 115
2078861	Beta-BHC	104	108	P/P	43 - 157
2078861	Bifenthrin	101	97.8	P/P	50 - 130
2078861	Carbophenothion	125	123	P/P	27 - 180
2078861	Chlorothalonil	157	149	P/P	10 - 216
2078861	Cis-Nonachlor	110	101	P/P	50 - 130
2078861	Cypermethrin	118	113	P/P	40 - 153
2078861	DDD-p,p'	131	110	F/P	53 - 128
2078861	DDE-p,p'	89.7	83.0	P/P	48 - 116
2078861	DDT-p,p'	92.1	88.7	P/P	47 - 128
2078861	Delta-BHC	146	139	P/P	51 - 196
2078861	Dicofol	98.8	92.4	P/P	10 - 147
2078861	Dieldrin	102	98.3	P/P	48 - 128
2078861	Endosulfan I	113	114	P/P	58 - 126
2078861	Endosulfan II	339	337	F/F	50 - 150
2078861	Endosulfan Sulfate	112	116	P/P	56 - 130
2078861	Endrin	109	103	P/P	50 - 126
2078861	Endrin Aldehyde	135	112	P/P	12 - 145
2078861	Endrin Ketone	125	133	P/F	59 - 132
2078861	Ethalfluralin	94.3	89.9	P/P	50 - 130
2078861	Gamma-BHC	204	193	F/F	50 - 155
2078861	Gamma-Chlordane	93.6	88.9	P/P	50 - 112
2078861	Heptachlor	88.8	86.7	P/P	41 - 98.0
2078861	Heptachlor Epoxide	102	102	P/P	55 - 117
2078861	Hexachlorobenzene	74.4	64.8	P/P	50 - 130
2078861	Methoxychlor	133	116	P/P	55 - 133
2078861	Mirex	67.5	66.5	P/P	44 - 101
2078861	Permethrin	78.5	77.0	P/P	52 - 124
2078861	Trans-Nonachlor	87.1	80.9	P/P	50 - 130
2078861	Trifluralin	87.9	86.4	P/P	10 - 201

Reference Method: EPA 8276
Batch ID: P362502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079240	Chlordane	93.6	76.7	P/P	34 - 136
2079240	Toxaphene	81.4	83.0	P/P	22 - 152

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P362343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079440	3-Hydroxycarbofuran	85.8	95.0	P/P	40 - 150
2079440	Aldicarb	84.0	86.1	P/P	30 - 150
2079440	Aldicarb Sulfone	92.1	86.9	P/P	40 - 150
2079440	Aldicarb Sulfoxide	50.3	57.3	P/P	40 - 150
2079440	Carbaryl	75.0	78.1	P/P	40 - 150
2079440	Carbofuran	74.4	75.7	P/P	40 - 150
2079440	Methiocarb	68.0	65.4	P/P	40 - 150
2079440	Methomyl	81.0	92.0	P/P	40 - 150
2079440	Oxamyl	92.3	94.3	P/P	40 - 150
2079440	Propoxur	77.1	74.2	P/P	40 - 150
2079441	2,4-D	98.0	81.8	P/P	40 - 150
2079441	Acetaminophen	80.9	79.6	P/P	30 - 150
2079441	Bentazon	56.9	52.0	P/P	30 - 150
2079441	Carbamazepine	92.7	85.8	P/P	40 - 150
2079441	Diuron	72.6	71.6	P/P	40 - 150
2079441	Fenuron	116	111	P/P	40 - 150
2079441	Fluridone	117	122	P/P	40 - 150
2079441	Hydrocodone	107	102	P/P	40 - 150
2079441	Ibuprofen	87.2	78.2	P/P	40 - 150
2079441	Imazapyr	92.8	85.9	P/P	40 - 150
2079441	Imidacloprid	154	122	F/P	40 - 150
2079441	Linuron	79.6	81.1	P/P	40 - 150
2079441	MCPP	107	99.0	P/P	40 - 150
2079441	Naproxen	62.2	66.5	P/P	40 - 150
2079441	Primidone	89.6	90.7	P/P	40 - 150
2079441	Pyraclostrobin	65.5	68.2	P/P	40 - 150
2079441	Triclopyr	75.4	62.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P362544

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079736	Acesulfame K	187	184	F/F	40 - 150
2079736	AMPA	134	131	P/P	40 - 150
2079736	Endothall	97.9	96.2	P/P	40 - 150
2079736	Glufosinate	130	128	P/P	40 - 150
2079736	Glyphosate	118	117	P/P	40 - 140
2079736	Sucralose	102	104	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P363132

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2080079	Fluoride	97.9	99.6	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P362592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2079272	Organic Carbon	101	100	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P362456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079303	Turbidity	1.71	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P362810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080086	Iron	0.149	Spike	P	0 - 20
2080086	Manganese	0.321	Spike	P	0 - 20
2080086	Zinc	0.0135	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P362810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080086	Aluminum	2.06	Spike	P	0 - 20
2080086	Antimony	1.42	Spike	P	0 - 20
2080086	Arsenic	1.09	Spike	P	0 - 20
2080086	Cadmium	2.65	Spike	P	0 - 20
2080086	Chromium	3.10	Spike	P	0 - 20
2080086	Copper	0.732	Spike	P	0 - 20
2080086	Lead	0.799	Spike	P	0 - 20
2080086	Nickel	1.92	Spike	P	0 - 20
2080086	Selenium	1.48	Spike	P	0 - 20
2080086	Silver	1.02	Spike	P	0 - 20
2080086	Thallium	0.296	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P362742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079290	Bromide	0.988	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P362694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079431	Ammonia-N	0.102	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P363092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079304	Kjeldahl Nitrogen	2.35	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P362649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079292	NO2NO3-N	0.528	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P362687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079305	Total-P	0.0606	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P362465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079417	O-Phosphate-P	1.32	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P362397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078905	Acetochlor	1.11	Spike	P	0 - 30
2078905	Alachlor	0.334	Spike	P	0 - 30
2078905	Ametryn	1.55	Spike	P	0 - 30
2078905	Atrazine	1.89	Spike	P	0 - 30
2078905	Atrazine Desethyl	5.13	Spike	P	0 - 30
2078905	Azinphos Methyl	4.78	Spike	P	0 - 30
2078905	Bromacil	4.83	Spike	P	0 - 30
2078905	Butylate	2.38	Spike	P	0 - 30
2078905	Chlorpyrifos Ethyl	0.884	Spike	P	0 - 30
2078905	Chlorpyrifos Methyl	1.94	Spike	P	0 - 30
2078905	Cyanazine	10.9	Spike	P	0 - 30
2078905	Demeton	3.78	Spike	P	0 - 30
2078905	Diazinon	0.864	Spike	P	0 - 30
2078905	Dimethenamid	1.46	Spike	P	0 - 30
2078905	Disulfoton	7.18	Spike	P	0 - 30
2078905	Dithiopyr	0.549	Spike	P	0 - 30
2078905	EPTC	6.41	Spike	P	0 - 30
2078905	Ethion	2.36	Spike	P	0 - 30
2078905	Ethoprop	1.10	Spike	P	0 - 30
2078905	Fenamiphos	3.79	Spike	P	0 - 30
2078905	Fipronil	5.70	Spike	P	0 - 30
2078905	Fipronil Desulfinyl	2.99	Spike	P	0 - 30
2078905	Fipronil Sulfide	7.15	Spike	P	0 - 30
2078905	Fipronil Sulfone	8.46	Spike	P	0 - 30
2078905	Fonofos	2.08	Spike	P	0 - 30
2078905	Hexazinone	46.0	Spike	F	0 - 30
2078905	Malathion	3.47	Spike	P	0 - 30
2078905	Metalaxyl	8.69	Spike	P	0 - 30
2078905	Metolachlor	1.40	Spike	P	0 - 30
2078905	Metribuzin	7.82	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P362397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078905	Mevinphos	7.50	Spike	P	0 - 30
2078905	Molinate	1.09	Spike	P	0 - 30
2078905	Norflurazon	7.07	Spike	P	0 - 30
2078905	Oxadiazon	0.00932	Spike	P	0 - 30
2078905	Parathion Ethyl	3.23	Spike	P	0 - 30
2078905	Parathion Methyl	3.21	Spike	P	0 - 30
2078905	Pendimethalin	1.32	Spike	P	0 - 30
2078905	Phorate	3.83	Spike	P	0 - 30
2078905	Prodiamine	0.994	Spike	P	0 - 30
2078905	Prometon	25.4	Spike	P	0 - 30
2078905	Prometryn	2.21	Spike	P	0 - 30
2078905	Simazine	0.137	Spike	P	0 - 30
2078905	Tebuconazole	4.00	Spike	P	0 - 30
2078905	Terbufos	7.11	Spike	P	0 - 30
2078905	Terbuthylazine	2.03	Spike	P	0 - 30
LFB	Acetochlor	3.46	LCS	P	0 - 30
LFB	Alachlor	2.74	LCS	P	0 - 30
LFB	Ametryn	46.1	LCS	F	0 - 30
LFB	Atrazine	0.615	LCS	P	0 - 30
LFB	Atrazine Desethyl	5.45	LCS	P	0 - 30
LFB	Azinphos Methyl	4.94	LCS	P	0 - 30
LFB	Bromacil	34.7	LCS	F	0 - 30
LFB	Butylate	0.548	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.69	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.83	LCS	P	0 - 30
LFB	Cyanazine	2.41	LCS	P	0 - 30
LFB	Demeton	6.40	LCS	P	0 - 30
LFB	Diazinon	3.46	LCS	P	0 - 30
LFB	Dimethenamid	3.42	LCS	P	0 - 30
LFB	Disulfoton	3.61	LCS	P	0 - 30
LFB	Dithiopyr	2.59	LCS	P	0 - 30
LFB	EPTC	4.42	LCS	P	0 - 30
LFB	Ethion	1.22	LCS	P	0 - 30
LFB	Ethoprop	4.42	LCS	P	0 - 30
LFB	Fenamiphos	74.0	LCS	F	0 - 30
LFB	Fipronil	12.0	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	6.75	LCS	P	0 - 30
LFB	Fipronil Sulfide	5.39	LCS	P	0 - 30
LFB	Fipronil Sulfone	11.8	LCS	P	0 - 30
LFB	Fonofos	0.370	LCS	P	0 - 30
LFB	Hexazinone	96.3	LCS	F	0 - 30
LFB	Malathion	3.35	LCS	P	0 - 30
LFB	Metalaxyl	37.0	LCS	F	0 - 30
LFB	Metolachlor	3.58	LCS	P	0 - 30
LFB	Metribuzin	0.906	LCS	P	0 - 30
LFB	Mevinphos	63.1	LCS	F	0 - 30
LFB	Molinate	4.11	LCS	P	0 - 30
LFB	Norflurazon	12.9	LCS	P	0 - 30
LFB	Oxadiazon	1.35	LCS	P	0 - 30
LFB	Parathion Ethyl	1.04	LCS	P	0 - 30
LFB	Parathion Methyl	2.08	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P362397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Pendimethalin	6.04	LCS	P	0 - 30
LFB	Phorate	2.36	LCS	P	0 - 30
LFB	Prodiamine	0.668	LCS	P	0 - 30
LFB	Prometon	20.0	LCS	P	0 - 30
LFB	Prometryn	39.2	LCS	F	0 - 30
LFB	Simazine	8.61	LCS	P	0 - 30
LFB	Tebuconazole	118	LCS	F	0 - 30
LFB	Terbufos	2.69	LCS	P	0 - 30
LFB	Terbuthylazine	2.59	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P362502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2078861	Aldrin	3.53	Spike	P	0 - 30
2078861	Alpha-BHC	3.90	Spike	P	0 - 30
2078861	Alpha-Chlordane	4.77	Spike	P	0 - 30
2078861	Beta-BHC	4.03	Spike	P	0 - 30
2078861	Bifenthrin	2.86	Spike	P	0 - 30
2078861	Carbophenothion	1.71	Spike	P	0 - 30
2078861	Chlorothalonil	4.84	Spike	P	0 - 30
2078861	Cis-Nonachlor	9.26	Spike	P	0 - 30
2078861	Cypermethrin	4.01	Spike	P	0 - 30
2078861	DDD-p,p'	17.7	Spike	P	0 - 30
2078861	DDE-p,p'	7.76	Spike	P	0 - 30
2078861	DDT-p,p'	3.81	Spike	P	0 - 30
2078861	Delta-BHC	4.94	Spike	P	0 - 30
2078861	Dicofol	6.69	Spike	P	0 - 30
2078861	Dieldrin	3.98	Spike	P	0 - 30
2078861	Endosulfan I	1.30	Spike	P	0 - 30
2078861	Endosulfan II	0.680	Spike	P	0 - 30
2078861	Endosulfan Sulfate	3.52	Spike	P	0 - 30
2078861	Endrin	5.86	Spike	P	0 - 30
2078861	Endrin Aldehyde	17.9	Spike	P	0 - 30
2078861	Endrin Ketone	6.07	Spike	P	0 - 30
2078861	Ethalfluralin	4.83	Spike	P	0 - 30
2078861	Gamma-BHC	5.89	Spike	P	0 - 30
2078861	Gamma-Chlordane	5.20	Spike	P	0 - 30
2078861	Heptachlor	2.40	Spike	P	0 - 30
2078861	Heptachlor Epoxide	0.573	Spike	P	0 - 30
2078861	Hexachlorobenzene	13.8	Spike	P	0 - 30
2078861	Methoxychlor	13.2	Spike	P	0 - 30
2078861	Mirex	1.45	Spike	P	0 - 30
2078861	Permethrin	1.91	Spike	P	0 - 30
2078861	Trans-Nonachlor	7.45	Spike	P	0 - 30
2078861	Trifluralin	1.65	Spike	P	0 - 30
LFB	Aldrin	17.4	LCS	P	0 - 30
LFB	Alpha-BHC	13.8	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.47	LCS	P	0 - 30
LFB	Beta-BHC	2.02	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270D
Batch ID: P362502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Bifenthrin	8.92	LCS	P	0 - 30
LFB	Carbophenothion	6.60	LCS	P	0 - 30
LFB	Chlorothalonil	24.7	LCS	P	0 - 30
LFB	Cis-Nonachlor	13.3	LCS	P	0 - 30
LFB	Cypermethrin	14.1	LCS	P	0 - 30
LFB	DDD-p,p'	8.22	LCS	P	0 - 30
LFB	DDE-p,p'	3.34	LCS	P	0 - 30
LFB	DDT-p,p'	5.40	LCS	P	0 - 30
LFB	Delta-BHC	0.0336	LCS	P	0 - 30
LFB	Dicofol	1.99	LCS	P	0 - 30
LFB	Dieldrin	7.54	LCS	P	0 - 30
LFB	Endosulfan I	3.97	LCS	P	0 - 30
LFB	Endosulfan II	7.27	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.93	LCS	P	0 - 30
LFB	Endrin	3.77	LCS	P	0 - 30
LFB	Endrin Aldehyde	13.4	LCS	P	0 - 30
LFB	Endrin Ketone	1.05	LCS	P	0 - 30
LFB	Ethalfluralin	6.96	LCS	P	0 - 30
LFB	Gamma-BHC	6.75	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.77	LCS	P	0 - 30
LFB	Heptachlor	10.1	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.550	LCS	P	0 - 30
LFB	Hexachlorobenzene	25.5	LCS	P	0 - 30
LFB	Methoxychlor	4.82	LCS	P	0 - 30
LFB	Mirex	6.54	LCS	P	0 - 30
LFB	Permethrin	9.25	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.0148	LCS	P	0 - 30
LFB	Trifluralin	3.20	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P362502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079240	Chlordane	19.9	Spike	P	0 - 30
2079240	Toxaphene	1.98	Spike	P	0 - 30
LFB	Chlordane	8.34	LCS	P	0 - 30
LFB	Toxaphene	8.15	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P362343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079440	3-Hydroxycarbofuran	10.2	Spike	P	0 - 30
2079440	Aldicarb	2.51	Spike	P	0 - 30
2079440	Aldicarb Sulfone	5.81	Spike	P	0 - 30
2079440	Aldicarb Sulfoxide	13.2	Spike	P	0 - 30
2079440	Carbaryl	3.93	Spike	P	0 - 30
2079440	Carbofuran	1.68	Spike	P	0 - 30
2079440	Methiocarb	3.97	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P362343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079440	Methomyl	12.8	Spike	P	0 - 30
2079440	Oxamyl	2.14	Spike	P	0 - 30
2079440	Propoxur	3.79	Spike	P	0 - 30
2079441	2,4-D	16.6	Spike	P	0 - 30
2079441	Acetaminophen	1.65	Spike	P	0 - 30
2079441	Bentazon	5.47	Spike	P	0 - 30
2079441	Carbamazepine	7.29	Spike	P	0 - 30
2079441	Diuron	1.36	Spike	P	0 - 30
2079441	Fenuron	3.79	Spike	P	0 - 30
2079441	Fluridone	2.62	Spike	P	0 - 30
2079441	Hydrocodone	4.57	Spike	P	0 - 30
2079441	Ibuprofen	10.9	Spike	P	0 - 30
2079441	Imazapyr	4.83	Spike	P	0 - 30
2079441	Imidacloprid	19.3	Spike	P	0 - 30
2079441	Linuron	1.78	Spike	P	0 - 30
2079441	MCPP	7.34	Spike	P	0 - 30
2079441	Naproxen	6.69	Spike	P	0 - 30
2079441	Primidone	1.16	Spike	P	0 - 30
2079441	Pyraclostrobin	4.04	Spike	P	0 - 30
2079441	Triclopyr	18.6	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P362544

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079736	Acesulfame K	1.51	Spike	P	0 - 30
2079736	AMPA	2.13	Spike	P	0 - 30
2079736	Endothall	1.79	Spike	P	0 - 30
2079736	Glufosinate	1.06	Spike	P	0 - 30
2079736	Glyphosate	0.940	Spike	P	0 - 30
2079736	Sucralose	2.24	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P363131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080079	Total Alkalinity	0.508	Sample	P	0 - 2.8

Reference Method: SM 2540 D-97
Batch ID: P362755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079177	TSS	4.17	Sample	P	0 - 10

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-97
Batch ID: P363132

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2080079	Fluoride	0.940	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P362592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2079272	Organic Carbon	0.522	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: 2079440
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	76.1	P	30 - 160

Lab Sample ID: 2079441
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	105	P	30 - 160
EPA 8321B	Diuron-d6	85.9	P	30 - 160
EPA 8321B	Endothall-d6	663	F	30 - 160
EPA 8321B	Endothall-d6	663	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	90.7	P	30 - 160
EPA 8321B	Primidone-d5	79.6	P	30 - 160
EPA 8321B	Sucralose-d6	91.0	P	30 - 160
EPA 8321B	Sucralose-d6	91.0	P	30 - 160

Lab Sample ID: 2079442
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	41.7	P	39 - 109
EPA 8270D	Tetrachloro-m-xylene	30.9	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	32.9	P	30 - 103
EPA 8276	PCNB	48.8	P	37 - 143

Lab Sample ID: 2079443
Field Sample ID: G2NE1178

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	94.4	P	68 - 130
EPA 8270D	Terbufos-d10	79.3	P	61 - 136

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A90832
Included Lab Sample IDs: 2079430, 2079433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A90833
Included Lab Sample IDs: 2079432, 2079435

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

Reference Method: SM 5310 B-00
Run ID: A90876
Included Lab Sample IDs: 2079431, 2079434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	108	P/P	90 - 110

Reference Method: EPA 300.0
Run ID: A90903
Included Lab Sample IDs: 2079430, 2079433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	98.4	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A90917
Included Lab Sample IDs: 2079441

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	128	105	P/P	60 - 160
Glufosinate	117	112	P/P	60 - 160
Glyphosate	115	109	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A90918
Included Lab Sample IDs: 2079431, 2079434

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A90940
Included Lab Sample IDs: 2079431, 2079434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	104	P/P	90 - 110
Ammonia-N	104	103	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A90953
Included Lab Sample IDs: 2079441

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	110	78.3	P/P	50 - 150
3-Hydroxycarbofuran	90.4	110	P/P	60 - 150
Acetaminophen	112	114	P/P	60 - 160
Aldicarb	102	117	P/P	60 - 150
Aldicarb Sulfone	101	96.2	P/P	50 - 150
Aldicarb Sulfoxide	103	101	P/P	50 - 150
Bentazon	82.4	101	P/P	50 - 160
Carbamazepine	102	109	P/P	60 - 150
Carbaryl	101	104	P/P	60 - 150
Carbofuran	99.3	105	P/P	50 - 150
Diuron	104	102	P/P	60 - 150
Fenuron	111	104	P/P	60 - 150
Fluridone	104	97.5	P/P	60 - 160
Hydrocodone	110	102	P/P	60 - 150
Ibuprofen	101	107	P/P	50 - 160
Imazapyr	106	102	P/P	50 - 150
Imidacloprid	111	109	P/P	60 - 150
Linuron	99.2	100	P/P	60 - 150
MCPP	89.6	94.8	P/P	50 - 150
Methiocarb	101	97.2	P/P	50 - 150
Methomyl	95.4	99.9	P/P	50 - 150
Naproxen	80.6	133	P/P	50 - 160
Oxamyl	102	97.9	P/P	50 - 150
Primidone	96.5	101	P/P	60 - 150
Propoxur	104	102	P/P	50 - 150
Pyraclostrobin	106	96.3	P/P	60 - 150
Triclopyr	94.1	97.9	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A90964
Included Lab Sample IDs: 2079441

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	126	144	P/P	60 - 160
Endothall	103	120	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A90985
Included Lab Sample IDs: 2079441

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	98.7	98.3	P/P	60 - 160

Reference Method: EPA 8276
Run ID: A91002
Included Lab Sample IDs: 2079442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.7		P	80 - 120
Toxaphene	90.1		P	80 - 120

Quality Assurance Report
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Reference Method: EPA 200.7 Rev. 4.4
Run ID: A91009
Included Lab Sample IDs: 2079444, 2079445

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A91017
Included Lab Sample IDs: 2079431, 2079434

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A91019
Included Lab Sample IDs: 2079444, 2079445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	92.7	93.1	P/P	90 - 110
Antimony	99.1	99.9	P/P	90 - 110
Arsenic	99.2	99.7	P/P	90 - 110
Cadmium	97.3	97.2	P/P	90 - 110
Copper	98.4	98.1	P/P	90 - 110
Lead	90.6	91.4	P/P	90 - 110
Nickel	97.7	98.4	P/P	90 - 110
Selenium	97.3	99.8	P/P	90 - 110
Silver	95.9	95.7	P/P	90 - 110
Thallium	96.2	96.4	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A91053
Included Lab Sample IDs: 2079443

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	105		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine	99.3		P	80 - 120
Atrazine Desethyl	86.9		P	80 - 120
Azinphos Methyl	96.9		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	97.0		P	80 - 120
Chlorpyrifos Ethyl	99.0		P	80 - 120
Chlorpyrifos Methyl	97.9		P	80 - 120
Cyanazine	86.5		P	80 - 120
Demeton	80.2		P	80 - 120
Diazinon	101		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	96.7		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	101		P	80 - 120
Ethion	95.9		P	80 - 120
Ethoprop	97.8		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A91053
Included Lab Sample IDs: 2079443

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenamiphos	95.6		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	96.6		P	80 - 120
Fipronil Sulfone	96.4		P	80 - 120
Fonofos	101		P	80 - 120
Hexazinone	99.1		P	80 - 120
Malathion	96.5		P	80 - 120
Metalaxyl	107		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	73.0*		F	80 - 120
Mevinphos	98.2		P	80 - 120
Molinate	94.9		P	80 - 120
Norflurazon	103		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	95.4		P	80 - 120
Parathion Methyl	96.2		P	80 - 120
Pendimethalin	97.0		P	80 - 120
Phorate	95.6		P	80 - 120
Prodiamine	99.7		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	105		P	80 - 120
Simazine	99.9		P	80 - 120
Tebuconazole	103		P	80 - 120
Terbufos	94.7		P	80 - 120
Terbuthylazine	96.2		P	80 - 120

Reference Method: EPA 8270D
Run ID: A91082
Included Lab Sample IDs: 2079442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	92.6		P	80 - 120
Alpha-BHC	96.9		P	80 - 120
Alpha-Chlordane	96.6		P	80 - 120
Beta-BHC	103		P	80 - 120
Bifenthrin	94.0		P	80 - 120
Carbophenothion	82.3		P	80 - 120
Chlorothalonil	85.2		P	80 - 120
Cis-Nonachlor	91.0		P	80 - 120
Cypermethrin	88.0		P	80 - 120
DDD-p,p'	91.8		P	80 - 120
DDE-p,p'	91.8		P	80 - 120
DDT-p,p'	97.7		P	80 - 120
Delta-BHC	98.6		P	80 - 120
Dicofol	97.4		P	80 - 120
Dieldrin	91.9		P	80 - 120
Endosulfan I	94.9		P	80 - 120
Endosulfan II	88.1		P	80 - 120
Endosulfan Sulfate	88.0		P	80 - 120
Endrin	91.5		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A91082
Included Lab Sample IDs: 2079442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Aldehyde	82.3		P	80 - 120
Endrin Ketone	94.0		P	80 - 120
Ethalfluralin	95.3		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	98.8		P	80 - 120
Heptachlor	90.3		P	80 - 120
Heptachlor Epoxide	93.7		P	80 - 120
Hexachlorobenzene	95.2		P	80 - 120
Methoxychlor	102		P	80 - 120
Mirex	96.1		P	80 - 120
Permethrin	95.1		P	80 - 120
Trans-Nonachlor	94.4		P	80 - 120
Trifluralin	94.8		P	80 - 120

Reference Method: SM 2320 B-97
Run ID: A91108
Included Lab Sample IDs: 2079430, 2079433

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A91108
Included Lab Sample IDs: 2079430, 2079433

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: A91145
Included Lab Sample IDs: 2079444, 2079445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	93.2	94.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A91156
Included Lab Sample IDs: 2079431, 2079434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.7	92.0	P/P	90 - 110
Kjeldahl Nitrogen	96.6	95.7	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			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.71	
EPA 200.7 Rev. 4.4	Iron	105		104	104	105			0.149
	Manganese	102		96.5	97.6	97.9			0.321
	Zinc	102		102	100	100			0.0135
EPA 200.8 Rev. 5.4	Aluminum	95.7		94.9	96.6	94.5			2.06
	Antimony	98.4		101	105	103			1.42
	Arsenic	101		109	112	110			1.09
	Cadmium	99.9		96.9	101	97.9			2.65
	Chromium	90.5		88.6	91.4	88.5			3.10
	Copper	98.4		95.5	97.0	96.3			0.732
	Lead	91.9		96.8	98.0	97.2			0.799
	Nickel	99.5		99.4	98.9	97.0			1.92
	Selenium	101		103	103	104			1.48
	Silver	95.4		90.3	90.0	89.1			1.02
	Thallium	102		106	106	106			0.296
EPA 300.0	Bromide	101		98.4	99.0			0.988	
EPA 350.1 Rev. 2.0	Ammonia-N	104		105	105				0.102
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.7		99.4	96.4				2.35
EPA 353.2 Rev. 2.0	NO2NO3-N	100		94.9	94.4				0.528
EPA 365.1 Rev. 2.0	Total-P	99.0		99.5	99.6				0.0606
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		99.0	101				1.32
EPA 8270D	Acetochlor	101	104	93.2	94.2		3.46		1.11
	Alachlor	102	99.7	89.9	89.6		2.74		0.334
	Aldrin	56.3	47.3	68.6	66.2		17.4		3.53
	Alpha-BHC	105	91.5	106	110		13.8		3.90
	Alpha-Chlordane	78.7	82.3	98.9	94.3		4.47		4.77
	Ametryn	47.4	75.9	92.4	94.3		46.1		1.55
	Atrazine	96.6	97.2				0.615		1.89
	Atrazine Desethyl	52.1	49.3	63.2	58.8		5.45		5.13
	Azinphos Methyl	101	96.4	94.5	90.1		4.94		4.78
	Beta-BHC	116	114	104	108		2.02		4.03
	Bifenthrin	92.4	101	101	97.8		8.92		2.86
	Bromacil	62.2	43.8				34.7		4.83
	Butylate	58.1	58.5	46.5	47.6		0.548		2.38
	Carbophenothion	72.5	77.4	125	123		6.60		1.71
	Chlorothalonil	154	120	157	149		24.7		4.84
	Chlorpyrifos Ethyl	98.7	97.0	97.4	98.2		1.69		0.884
	Chlorpyrifos Methyl	90.9	84.9	92.9	91.1		6.83		1.94
	Cis-Nonachlor	72.8	83.2	110	101		13.3		9.26
	Cyanazine	72.2	70.5	108	97.0		2.41		10.9
	Cypermethrin	91.6	105	118	113		14.1		4.01
	DDD-p,p'	89.9	97.6	131	110		8.22		17.7
	DDE-p,p'	108	112	89.7	83.0		3.34		7.76
	DDT-p,p'	91.9	97.0	92.1	88.7		5.40		3.81
	Delta-BHC	122	122	146	139		0.0336		4.94
	Demeton	61.0	65.0	85.6	82.4		6.40		3.78
	Diazinon	98.2	94.8	98.9	98.1		3.46		0.864
	Dicofol	96.8	94.9	98.8	92.4		1.99		6.69
	Dieldrin	81.7	88.1	102	98.3		7.54		3.98
	Dimethenamid	103	99.2	93.0	91.7		3.42		1.46
	Disulfoton	84.5	81.5	90.9	84.6		3.61		7.18
	Dithiopyr	107	104	95.9	96.5		2.59		0.549
	Endosulfan I	81.7	85.0	113	114		3.97		1.30
	Endosulfan II	93.7	87.1	339	337		7.27		0.680

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Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270D	Endosulfan Sulfate	111	113	112	116	1.93		3.52
	Endrin	86.0	89.3	109	103	3.77		5.86
	Endrin Aldehyde	106	121	135	112	13.4		17.9
	Endrin Ketone	109	110	125	133	1.05		6.07
	EPTC	61.0	58.3	48.7	51.9	4.42		6.41
	Ethalfluralin	92.5	86.3	94.3	89.9	6.96		4.83
	Ethion	103	104	101	98.2	1.22		2.36
	Ethoprop	88.1	84.3	91.4	90.1	4.42		1.10
	Fenamiphos	32.9	15.2	89.0	92.4	74.0		3.79
	Fipronil	103	91.4	80.1	75.2	12.0		5.70
	Fipronil Desulfinyl	101	94.3	68.7	66.3	6.75		2.99
	Fipronil Sulfide	102	96.2	71.4	65.1	5.39		7.15
	Fipronil Sulfone	97.7	86.9	52.7	45.4	11.8		8.46
	Fonofos	82.4	82.7	93.1	91.2	0.370		2.08
	Gamma-BHC	118	110	204	193	6.75		5.89
	Gamma-Chlordane	106	109	93.6	88.9	2.77		5.20
	Heptachlor	80.8	73.0	88.8	86.7	10.1		2.40
	Heptachlor Epoxide	109	110	102	102	0.550		0.573
	Hexachlorobenzene	70.8	54.8	74.4	64.8	25.5		13.8
	Hexazinone	48.4	16.9	100	172	96.3		46.0
	Malathion	101	97.5	95.6	92.3	3.35		3.47
	Metalaxyl	13.7	9.41	90.4	82.6	37.0		8.69
	Methoxychlor	116	122	133	116	4.82		13.2
	Metolachlor	104	100	90.3	92.5	3.58		1.40
	Metribuzin	73.1	72.4			0.906		7.82
	Mevinphos	51.2	26.7	77.1	83.1	63.1		7.50
	Mirex	62.9	67.2	67.5	66.5	6.54		1.45
	Molinate	67.5	70.4	65.9	66.6	4.11		1.09
	Norflurazon	92.6	81.4	77.6	72.3	12.9		7.07
	Oxadiazon	110	109	94.8	94.8	1.35		0.0093
	Parathion Ethyl	90.2	89.3	95.5	92.5	1.04		3.23
	Parathion Methyl	91.2	89.4	99.7	96.5	2.08		3.21
	Pendimethalin	103	109	120	119	6.04		1.32
	Permethrin	77.4	84.9	78.5	77.0	9.25		1.91
	Phorate	73.7	72.0	82.3	79.2	2.36		3.83
	Prodiamine	115	114	124	123	0.668		0.994
	Prometon	22.6	27.6	93.7	121	20.0		25.4
	Prometryn	59.8	88.9	95.0	92.9	39.2		2.21
	Simazine	101	92.6			8.61		0.137
	Tebuconazole	56.4	14.6	78.9	75.2	118		4.00
	Terbufos	85.6	83.3	99.5	92.6	2.69		7.11
	Terbuthylazine	100	97.6	96.7	94.8	2.59		2.03
	Trans-Nonachlor	106	106	87.1	80.9	0.0148		7.45
	Trifluralin	87.9	85.1	87.9	86.4	3.20		1.65
EPA 8276	Chlordane	78.8	72.4	93.6	76.7	8.34		19.9
	Toxaphene	83.2	76.7	81.4	83.0	8.15		1.98
EPA 8321B	2,4-D	86.2		98.0	81.8			16.6
	3-Hydroxycarbofuran	78.6		85.8	95.0			10.2
	Acesulfame K	110		187	184			1.51
	Acetaminophen	83.1		80.9	79.6			1.65
	Aldicarb	76.9		84.0	86.1			2.51
	Aldicarb Sulfone	96.8		92.1	86.9			5.81
	Aldicarb Sulfoxide	103		50.3	57.3			13.2
	AMPA	120		134	131			2.13

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Bentazon	83.4	56.9	52.0			5.47
	Carbamazepine	81.0	92.7	85.8			7.29
	Carbaryl	77.9	75.0	78.1			3.93
	Carbofuran	76.8	74.4	75.7			1.68
	Diuron	82.1	72.6	71.6			1.36
	Endothall	118	97.9	96.2			1.79
	Fenuron	93.8	116	111			3.79
	Fluridone	120	117	122			2.62
	Glufosinate	128	130	128			1.06
	Glyphosate	125	118	117			0.940
	Hydrocodone	110	107	102			4.57
	Ibuprofen	83.3	87.2	78.2			10.9
	Imazapyr	85.5	92.8	85.9			4.83
	Imidacloprid	97.9	154	122			19.3
	Linuron	75.2	79.6	81.1			1.78
	MCPP	97.9	107	99.0			7.34
	Methiocarb	70.2	68.0	65.4			3.97
	Methomyl	93.2	81.0	92.0			12.8
	Naproxen	76.6	62.2	66.5			6.69
	Oxamyl	75.6	92.3	94.3			2.14
	Primidone	95.6	89.6	90.7			1.16
	Propoxur	77.3	77.1	74.2			3.79
	Pyraclostrobin	70.0	65.5	68.2			4.04
	Sucralose	98.7	102	104			2.24
	Triclopyr	75.1	75.4	62.5			18.6
SM 2320 B-97	Total Alkalinity	100				0.508	
SM 2540 D-97	TSS					4.17	
SM 4500 F-C-97	Fluoride	96.6	97.9	99.6			0.940
SM 5310 B-00	Organic Carbon	101	101	100			0.522

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2079430, 2079433
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2079444, 2079445
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2079444, 2079445
EPA 300.0 / E31780	Bromide in aqueous matrices	2079430, 2079433
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2079431, 2079434
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2079431, 2079434
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2079431, 2079434
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2079431, 2079434
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2079432, 2079435
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2079442
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2079443
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2079442
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2079440

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2079441
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2079441
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2079430, 2079433
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2079430, 2079433
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2079430, 2079433
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2079431, 2079434

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	04/18/2019			04/18/2019 16:29	Adrian Shelby	2079430, 2079433
EPA 200.7 Rev. 4.4	04/18/2019	04/24/2019 17:30	Elliott D. Healy	04/25/2019 15:05	Betina Topolski	2079444
	04/18/2019	04/24/2019 17:30	Elliott D. Healy	04/25/2019 15:14	Betina Topolski	2079445
EPA 200.8 Rev. 5.4	04/18/2019	04/24/2019 17:30	Elliott D. Healy	04/26/2019 06:05	Martin Acosta	2079444
	04/18/2019	04/24/2019 17:30	Elliott D. Healy	04/26/2019 06:14	Martin Acosta	2079445
	04/18/2019	04/24/2019 17:30	Elliott D. Healy	05/01/2019 18:03	Martin Acosta	2079444
	04/18/2019	04/24/2019 17:30	Elliott D. Healy	05/01/2019 18:10	Martin Acosta	2079445
EPA 300.0	04/18/2019			04/23/2019 19:05	Lipi Saha	2079430
	04/18/2019			04/23/2019 19:22	Lipi Saha	2079433
EPA 350.1 Rev. 2.0	04/18/2019			04/23/2019 15:04	Julia Storbeck	2079431
	04/18/2019			04/23/2019 15:33	Julia Storbeck	2079434
EPA 351.2 Rev. 2.0	04/18/2019	04/30/2019 12:15	Adrian Shelby	05/02/2019 12:52	Joseph Suarez	2079431
	04/18/2019	04/30/2019 12:15	Adrian Shelby	05/02/2019 12:57	Joseph Suarez	2079434
EPA 353.2 Rev. 2.0	04/18/2019			04/23/2019 11:31	Beverly Y. Sanders	2079431
	04/18/2019			04/23/2019 11:32	Beverly Y. Sanders	2079434
EPA 365.1 Rev. 2.0	04/18/2019	04/24/2019 15:26	Sima Feizi	04/25/2019 19:14	Rosalyn Ballman	2079431
	04/18/2019	04/24/2019 15:26	Sima Feizi	04/25/2019 19:15	Rosalyn Ballman	2079434
EPA 365.1 Rev. 2.0 dissolved	04/18/2019			04/18/2019 17:18	Julia Storbeck	2079432
	04/18/2019			04/18/2019 17:19	Julia Storbeck	2079435
EPA 8270D	04/18/2019	04/19/2019 08:30	Rasheda Ghaffari	04/30/2019 01:53	Arthur Maknenko	2079442
	04/18/2019	04/19/2019 09:00	Fe-Val Siddell	04/23/2019 19:10	Vandana T. Nagar	2079443
EPA 8276	04/18/2019	04/19/2019 08:30	Rasheda Ghaffari	04/24/2019 11:02	Dinesh Mishra	2079442
EPA 8321B	04/18/2019	04/22/2019 10:30	Rebecca Ware	04/22/2019 15:49	Rebecca Ware	2079441
	04/18/2019	04/22/2019 10:30	Rebecca Ware	04/23/2019 11:54	Rebecca Ware	2079441
	04/18/2019	04/22/2019 10:30	Rebecca Ware	04/24/2019 22:50	Rebecca Ware	2079441
	04/18/2019	04/22/2019 14:00	Hoor Shaik	04/23/2019 22:02	Juyoung Kim	2079440
	04/18/2019	04/22/2019 14:00	Hoor Shaik	04/24/2019 01:30	Juyoung Kim	2079441
SM 2320 B-97	04/18/2019			05/01/2019 00:48	Dale L. Simmons	2079430
	04/18/2019			05/01/2019 01:01	Dale L. Simmons	2079433
SM 2540 D-97	04/18/2019			04/22/2019 18:35	Mariam Hanna	2079430, 2079433
SM 4500 F-C-97	04/18/2019			04/30/2019 18:55	Dale L. Simmons	2079430
	04/18/2019			04/30/2019 18:59	Dale L. Simmons	2079433
SM 5310 B-00	04/18/2019			04/20/2019 07:54	Julia Storbeck	2079431
	04/18/2019			04/20/2019 08:06	Julia Storbeck	2079434