Chemical Analysis Report

TLH-ROC-2021-06-03-02

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

Event Description: **Run 9**
Request ID: **RQ-2021-05-31-17**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 28-JUN-2021 10:48

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: Fort Gadsden Creek near SR65 **Collection Date/Time: 06/03/2021 11:15**

Field ID: G2TLHR0012 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2252066	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P399251	
	EPA 300.0 Rev. 2.1	Chloride	4.6		mg Cl/L	P399478	
		Sulfate	0.47	I	mg SO4/L	P399481	
	SM 2120 B-2011	Color (true)	140		PCU	P399263	
	SM 2320 B-2011	Total Alkalinity	3.8		mg CaCO3/L	P399338	
	SM 2540 C-2011	TDS	39		mg/L	P399751	
	SM 2540 D-2011	TSS	3	I	mg/L	P399648	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P399342	
2252067	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P399515	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P399465	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P399219	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P399287	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P399730	
2252068	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P399172	
2252077	EPA 8321B	2,4-D	0.0020	U	ug/L	P399076	
		Acesulfame K	0.10	U	ug/L	P399276	
		2,4,5-T	0.0040	U	ug/L	P399076	
		AMPA	0.10	U	ug/L	P399276	
		Acetaminophen	0.0080	U	ug/L	P399076	
		Acetamiprid	0.0020	U	ug/L	P399076	
		Endothall	0.25	U	ug/L	P399276	
		Glufosinate	0.10	U	ug/L	P399276	
		Glyphosate	0.10	U	ug/L	P399276	
		Afidopyropen	0.0020	U	ug/L	P399076	
		Bentazon	8.0E-04	U	ug/L	P399076	
		Sucralose	0.084		ug/L	P399276	
		Benzovindiflupyr	0.0020	U	ug/L	P399076	
		Carbamazepine	8.0E-04	U	ug/L	P399076	
		Clothianidin	0.0020	U	ug/L	P399076	
		Dinotefuran	0.0020	U	ug/L	P399076	
		Diuron	0.0020	U	ug/L	P399076	
		Fenuron	0.016	U	ug/L	P399076	
		Fluridone	8.0E-04	U	ug/L	P399076	
		Imazapyr	0.0045	I	ug/L	P399076	
		Hydrocodone	0.0020	U	ug/L	P399076	
		Ibuprofen	0.020	U	ug/L	P399076	
		Imidacloprid	0.0020	U	ug/L	P399076	
		Linuron	0.0040	U	ug/L	P399076	
		Mandestrobin	0.0020	U	ug/L	P399076	
		MCPP	0.0020	U	ug/L	P399076	
		Naproxen	0.0080	U	ug/L	P399076	
		Primidone	0.0040	U	ug/L	P399076	
		Pyraclostrobin	0.0020	U	ug/L	P399076	

Field ID: G2TLHR0012 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2252077	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P399076	
		Tolfenpyrad	0.0020	U	ug/L	P399076	
		Triclopyr	0.0040	U	ug/L	P399076	
2252082	EPA 200.7 Rev. 4.4	Barium	7.2		ug/L	P399356	
		Calcium	3.02		mg/L	P399356	
		Iron	1.19E+03		ug/L	P399356	
		Magnesium	0.53		mg/L	P399356	
		Manganese	6.5		ug/L	P399356	
		Potassium	0.35	I	mg/L	P399356	
		Sodium	3.0		mg/L	P399356	
		Zinc	5.0	U	ug/L	P399356	
	EPA 200.8 Rev. 5.4	Aluminum	237		ug/L	P399356	
		Antimony	0.050	U	ug/L	P399356	
		Arsenic	0.47		ug/L	P399356	
		Beryllium	0.012	I	ug/L	P399356	
		Boron**	11.1		ug/L	P399356	
		Cadmium	0.020	U	ug/L	P399356	
		Chromium	0.40	U	ug/L	P399356	
		Copper	0.40	U	ug/L	P399356	
		Lead	0.30	I	ug/L	P399356	
		Nickel	0.50	U	ug/L	P399356	
		Selenium	0.20	U	ug/L	P399356	
		Silver	0.010	U	ug/L	P399356	
		Thallium	0.10	U	ug/L	P399356	
	SM 2340B	Hardness	9.7		mg/L	P399356	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Brothers River @ Mouth **Collection Date/Time: 06/03/2021 11:50**

Field ID: G2TLHR0013 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2252078	EPA 8321B	Aldicarb	0.020	U	ug/L	P399330	
		Aldicarb Sulfone	0.0020	U	ug/L	P399330	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P399330	
		Carbaryl	0.0020	U	ug/L	P399330	
		Carbofuran	0.0020	U	ug/L	P399330	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P399330	
		Methiocarb	0.0020	U	ug/L	P399330	
		Methomyl	0.0020	U	ug/L	P399330	
		Oxamyl	0.0020	U	ug/L	P399330	
		Propoxur	0.0020	U	ug/L	P399330	
2252079		2,4-D	0.028		ug/L	P399076	
		Acesulfame K	0.10	U	ug/L	P399276	
		2,4,5-T	0.0040	U	ug/L	P399076	
		AMPA	0.10	U	ug/L	P399276	
		Acetaminophen	0.0080	U	ug/L	P399076	
		Acetamiprid	0.0020	U	ug/L	P399076	
		Endothall	0.25	U	ug/L	P399276	
		Glufosinate	0.10	U	ug/L	P399276	
		Glyphosate	0.10	U	ug/L	P399276	
		Afidopyropen	0.0020	U	ug/L	P399076	
		Bentazon	0.0011	I	ug/L	P399076	
		Sucralose	1.3		ug/L	P399276	
		Benzovindiflupyr	0.0020	U	ug/L	P399076	
		Carbamazepine	0.0016	I	ug/L	P399076	
		Clothianidin	0.0020	U	ug/L	P399076	
		Dinotefuran	0.0020	U	ug/L	P399076	
		Diuron	0.0095		ug/L	P399076	
		Fenuron	0.016	U	ug/L	P399076	
		Fluridone	8.0E-04	U	ug/L	P399076	
		Imazapyr	0.025		ug/L	P399076	
		Hydrocodone	0.0020	U	ug/L	P399076	
		Ibuprofen	0.020	U	ug/L	P399076	
		Imidacloprid	0.0025	I	ug/L	P399076	
		Linuron	0.0040	U	ug/L	P399076	
		Mandestrobin	0.0020	U	ug/L	P399076	
		MCPP	0.0076	I	ug/L	P399076	
		Naproxen	0.0080	U	ug/L	P399076	
		Primidone	0.0040	U	ug/L	P399076	
		Pyraclostrobin	0.0020	U	ug/L	P399076	
		Thiamethoxam	0.0020	U	ug/L	P399076	
		Tolfenpyrad	0.0020	U	ug/L	P399076	
		Triclopyr	0.0040	U	ug/L	P399076	
2252080	EPA 8270E	Aldrin	0.72	U	ng/L	P399210	
		Alpha-BHC	0.11	U	ng/L	P399210	

Field ID: G2TLHR0013 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2252080	EPA 8270E	Alpha-Chlordane	0.22	U	ng/L	P399210	
		Beta-BHC	0.11	U	ng/L	P399210	
		Beta-Cyfluthrin**	1.4	U	ng/L	P399210	
		Bifenthrin**	0.56	U	ng/L	P399210	
		Chlorothalonil	0.63	I	ng/L	P399210	
		Cis-Nonachlor**	0.22	U	ng/L	P399210	
		Cypermethrin	1.7	U	ng/L	P399210	
		Dacthal**	0.17	U	ng/L	P399210	
		DDD-p,p'	0.28	U	ng/L	P399210	
		DDE-p,p'	0.22	U	ng/L	P399210	
		DDT-p,p'	0.28	U	ng/L	P399210	
		Delta-BHC	0.44	U	ng/L	P399210	
		Deltamethrin**	1.4	U	ng/L	P399210	MS
		Dichlobenil**	0.11	U	ng/L	P399210	MS
		Dicofol	1.4	U	ng/L	P399210	
		Dieldrin	0.79	I	ng/L	P399210	RPD
		Endosulfan I	0.44	U	ng/L	P399210	
		Endosulfan II	0.44	U	ng/L	P399210	
		Endosulfan Sulfate	0.33	U	ng/L	P399210	
		Endrin	0.44	U	ng/L	P399210	
		Endrin Aldehyde	0.83	U	ng/L	P399210	MS
		Endrin Ketone	0.44	U	ng/L	P399210	
		Esfenvalerate**	0.83	U	ng/L	P399210	
		Ethalfluralin**	0.17	U	ng/L	P399210	
		Fenpropathrin**	0.28	U	ng/L	P399210	
		Gamma-BHC	0.14	U	ng/L	P399210	
		Gamma-Chlordane	0.22	U	ng/L	P399210	
		Heptachlor	0.22	U	ng/L	P399210	
		Heptachlor Epoxide	0.28	U	ng/L	P399210	
		Hexachlorobenzene	1.1	U	ng/L	P399210	
		Kepone**	5.6	U	ng/L	P399210	
		Lambda-Cyhalothrin**	0.83	U	ng/L	P399210	
		Methoxychlor	0.33	U	ng/L	P399210	
		MGK-264**	0.22	U	ng/L	P399210	
		Mirex	0.33	U	ng/L	P399210	
		Permethrin	1.8	U	ng/L	P399210	
		Phenothrin**	1.0	U	ng/L	P399210	
		Piperonyl Butoxide**	0.17	U	ng/L	P399210	
		Prallethrin**	2.2	U	ng/L	P399210	
		Tau-Fluvalinate**	0.28	U	ng/L	P399210	
		Tetramethrin**	0.83	U	ng/L	P399210	
		Trans-Nonachlor**	0.22	U	ng/L	P399210	
		Triclosan Methyl**	0.17	U	ng/L	P399210	
		Trifluralin	0.22	U	ng/L	P399210	
	EPA 8276	Chlordane	5.6	U	ng/L	P399210	

Field ID: G2TLHR0013 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2252080	EPA 8276	Toxaphene	33	U	ng/L	P399210	
2252081	EPA 8270E	Acetochlor	0.44	I	ng/L	P399205	
		Alachlor	0.26	U	ng/L	P399205	
		Ametryn	0.62	U	ng/L	P399205	
		Atrazine	50		ng/L	P399205	
		Atrazine Desethyl	14		ng/L	P399205	
		Azinphos Methyl	2.1	U	ng/L	P399205	MS
		Azoxystrobin**	0.52	U	ng/L	P399205	RPD
		Bromacil	1.7	I	ng/L	P399205	
		Butylate	0.42	U	ng/L	P399205	
		Caffeine**	16	I	ng/L	P399205	
		Carbophenothion	0.52	U	ng/L	P399205	
		Carfentrazone Ethyl**	0.10	U	ng/L	P399205	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P399205	
		Chlorpyrifos Methyl	0.052	U	ng/L	P399205	
		Cyanazine	3.4	U	ng/L	P399205	
		Demeton	1.6	U	ng/L	P399205	
		Diazinon	0.13	U	ng/L	P399205	
		Difenoconazole**	0.62	U	ng/L	P399205	
		Dimethenamid**	0.12	I	ng/L	P399205	
		Disulfoton	0.52	U	ng/L	P399205	
		Dithiopyr**	0.63	I	ng/L	P399205	
		EPTC	1.3	U	ng/L	P399205	
		Ethion	0.16	U	ng/L	P399205	
		Ethoprop	0.10	U	ng/L	P399205	
		Fenamiphos	0.52	U	ng/L	P399205	
		Fenbuconazole**	0.13	U	ng/L	P399205	
		Fipronil	0.26	U	ng/L	P399205	
		Fipronil Desulfinyl**	0.40	I	ng/L	P399205	
		Fipronil Sulfide	0.16	U	ng/L	P399205	
		Fipronil Sulfone	0.26	I	ng/L	P399205	
		Fluazifop-P-butyl**	0.10	U	ng/L	P399205	
		Fludioxonil**	0.13	U	ng/L	P399205	
		Flumioxazin**	1.8	U	ng/L	P399205	
		Flutolanil**	0.33	I	ng/L	P399205	
		Fluxapyroxad**	0.57		ng/L	P399205	
		Fonofos	0.21	U	ng/L	P399205	
		Hexazinone	1.6	I	ng/L	P399205	
		Imazalil**	0.78	U	ng/L	P399205	
		Iprodione**	0.62	U	ng/L	P399205	
		Malathion	0.36	U	ng/L	P399205	
		Metalaxyl	1.2	I	ng/L	P399205	
		Metolachlor	6.6		ng/L	P399205	
		Metribuzin	3.4	U	ng/L	P399205	
		Mevinphos	1.1	U	ng/L	P399205	

Field ID: G2TLHR0013 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2252081	EPA 8270E	Molinate	0.31	U	ng/L	P399205	
		Myclobutanil**	0.26	U	ng/L	P399205	
		Naled**	1.6	U	ng/L	P399205	
		Norflurazon	0.52	U	ng/L	P399205	
		Oxadiazon	8.0		ng/L	P399205	
		Oxyfluorfen**	0.16	U	ng/L	P399205	
		Parathion Ethyl	0.26	U	ng/L	P399205	
		Parathion Methyl	0.57	U	ng/L	P399205	
		Pendimethalin	1.0	U	ng/L	P399205	
		Phorate	0.55	U	ng/L	P399205	
		Prodiamine**	0.18	U	ng/L	P399205	
		Prometon	0.94	U	ng/L	P399205	
		Prometryn	0.21	U	ng/L	P399205	
		Pronamide**	0.16	U	ng/L	P399205	
		Propiconazole**	3.1		ng/L	P399205	
		Pyriproxyfen**	0.13	U	ng/L	P399205	
		Simazine	36		ng/L	P399205	
		Sulfentrazone**	0.52	U	ng/L	P399205	
		Tebuconazole**	1.8	I	ng/L	P399205	
		Terbufos	0.10	U	ng/L	P399205	
		Terbuthylazine	0.44	U	ng/L	P399205	
2252084	EPA 200.7 Rev. 4.4	Barium	19.7		ug/L	P399356	
		Calcium	17.1		mg/L	P399356	
		Iron	340		ug/L	P399356	
		Magnesium	2.25		mg/L	P399356	
		Manganese	43.4		ug/L	P399356	
		Potassium	1.6		mg/L	P399356	
		Sodium	6.2		mg/L	P399356	
		Zinc	5.1	I	ug/L	P399356	
	EPA 200.8 Rev. 5.4	Aluminum	122		ug/L	P399356	
		Antimony	0.068	I	ug/L	P399356	
		Arsenic	0.39		ug/L	P399356	
		Beryllium	0.015	I	ug/L	P399356	
		Boron**	16.4		ug/L	P399356	
		Cadmium	0.020	U	ug/L	P399356	
		Chromium	0.40	U	ug/L	P399356	
		Copper	1.70		ug/L	P399356	
		Lead	0.21	I	ug/L	P399356	
		Nickel	0.50	U	ug/L	P399356	
		Selenium	0.20	U	ug/L	P399356	
		Silver	0.010	U	ug/L	P399356	
		Thallium	0.10	U	ug/L	P399356	
	SM 2340B	Hardness	52.1		mg/L	P399356	

Ref. Method and Comment:
EPA 8270E: MS accuracy for atrazine and caffeine not assessed due to high content of these parameters in the sample spiked.

Sample Location: Apalachicola River .8 Miles Upstream Owl Creek **Collection Date/Time: 06/03/2021 10:25**

Field ID: G2TLHR0042 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2252069	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P399251	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P399478	
		Sulfate	6.1		mg SO4/L	P399481	
	SM 2120 B-2011	Color (true)	10		PCU	P399263	
	SM 2320 B-2011	Total Alkalinity	52		mg CaCO3/L	P399338	
	SM 2540 C-2011	TDS	73		mg/L	P399751	
	SM 2540 D-2011	TSS	23		mg/L	P399648	
	SM 4500 F-C-2011	Fluoride	0.068	I	mg F/L	P399342	
2252070	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P399515	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P399565	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.41		mg N/L	P399219	
	EPA 365.1 Rev. 2.0	Total-P	0.052		mg P/L	P399299	
	SM 5310 B-2011	Organic Carbon	2.9		mg C/L	P399667	
2252071	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P399172	
2252083	EPA 200.7 Rev. 4.4	Barium	23.2		ug/L	P399356	
		Calcium	19.1		mg/L	P399356	
		Iron	830		ug/L	P399356	
		Magnesium	2.37		mg/L	P399356	
		Manganese	78.8		ug/L	P399356	
		Potassium	1.6		mg/L	P399356	
		Sodium	6.2		mg/L	P399356	
		Zinc	5.2	I	ug/L	P399356	
	EPA 200.8 Rev. 5.4	Aluminum	509		ug/L	P399356	
		Antimony	0.059	I	ug/L	P399356	
		Arsenic	0.44		ug/L	P399356	
		Beryllium	0.047		ug/L	P399356	
		Boron**	14.7		ug/L	P399356	
		Cadmium	0.020	U	ug/L	P399356	
		Chromium	1.0	I	ug/L	P399356	
		Copper	0.89		ug/L	P399356	
		Lead	0.48		ug/L	P399356	
		Nickel	0.52	I	ug/L	P399356	
		Selenium	0.20	U	ug/L	P399356	
		Silver	0.010	U	ug/L	P399356	
		Thallium	0.10	U	ug/L	P399356	
	SM 2340B	Hardness	57.5		mg/L	P399356	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P399251

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399356

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
Manganese	1.0	U	ug/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: P399356

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	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: P399478

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399481

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399515

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: P399465

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399565

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399219

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399287

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399299

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399172

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

Reference Method: EPA 8270E
Batch ID: P399205

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P399205

Component	Result	Code	Units
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.50	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P399205

Component	Result	Code	Units
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P399205

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

Reference Method: EPA 8270E
Batch ID: P399210

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfluralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.30	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P399210

Component	Result	Code	Units
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P399210

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

Reference Method: EPA 8321B
Batch ID: P399076

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P399276

Component	Result	Code	Units

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P399276

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

Reference Method: EPA 8321B
Batch ID: P399330

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P399263

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P399338

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

Reference Method: SM 2540 C-2011
Batch ID: P399751

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P399648

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P399342

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P399667

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P399730

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: P399356

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.8		P	85 - 115
Calcium	103		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Manganese	99.7		P	85 - 115
Potassium	99.2		P	85 - 115
Sodium	101		P	85 - 115
Zinc	97.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399356

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.8		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	104		P	85 - 115
Beryllium	94.9		P	85 - 115
Boron	101		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	100		P	85 - 115
Copper	104		P	85 - 115
Lead	113		P	85 - 115
Nickel	104		P	85 - 115
Selenium	101		P	85 - 115
Silver	101		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399515

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399465

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399565

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399219

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399287

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399299

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399172

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

Reference Method: EPA 8270E
Batch ID: P399205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	86.7	91.5	P/P	70 - 121
Alachlor	85.2	89.1	P/P	70 - 119
Ametryn	103	105	P/P	61 - 135
Atrazine	91.0	95.8	P/P	76 - 123
Atrazine Desethyl	75.3	97.5	P/P	35 - 140
Azinphos Methyl	117	115	P/P	57 - 163
Azoxystrobin	122	151	P/P	43 - 231
Bromacil	77.7	86.1	P/P	42 - 123
Butylate	49.7	57.9	P/P	34 - 92.0
Caffeine	94.0	86.6	P/P	70 - 130
Carbophenothion	106	106	P/P	61 - 121
Carfentrazone Ethyl	113	122	P/P	62 - 139
Chlorpyrifos Ethyl	92.3	85.6	P/P	67 - 121
Chlorpyrifos Methyl	88.7	85.3	P/P	67 - 120
Cyanazine	175	177	P/P	20 - 226
Demeton	84.1	86.0	P/P	35 - 125
Diazinon	84.3	87.4	P/P	70 - 122
Difenoconazole	112	120	P/P	56 - 186
Dimethenamid	83.0	86.3	P/P	67 - 119
Disulfoton	88.1	86.9	P/P	47 - 120
Dithiopyr	77.4	83.2	P/P	67 - 118
EPTC	44.2	52.2	P/P	33 - 90.0

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P399205

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethion	90.1	70.2	P/P	40 - 133
Ethoprop	97.5	101	P/P	61 - 121
Fenamiphos	115	116	P/P	31 - 139
Fenbuconazole	86.3	91.3	P/P	66 - 141
Fipronil	77.1	91.9	P/P	62 - 129
Fipronil Desulfinyl	82.6	85.9	P/P	59 - 126
Fipronil Sulfide	83.7	92.2	P/P	63 - 117
Fipronil Sulfone	96.0	88.8	P/P	57 - 117
Fluazifop-P-butyl	105	117	P/P	63 - 124
Fludioxonil	92.3	92.7	P/P	63 - 123
Flumioxazin	97.7	118	P/P	34 - 245
Flutolanil	99.6	109	P/P	56 - 131
Fluxapyroxad	86.6	89.7	P/P	57 - 117
Fonofos	91.1	92.5	P/P	61 - 116
Hexazinone	92.1	98.0	P/P	55 - 138
Imazalil	101	103	P/P	33 - 143
Iprodione	78.4	92.4	P/P	59 - 118
Malathion	100	101	P/P	62 - 138
Metalaxyl	94.4	93.7	P/P	24 - 147
Metolachlor	87.8	91.9	P/P	68 - 118
Metribuzin	81.7	91.5	P/P	20 - 239
Mevinphos	88.7	94.9	P/P	46 - 124
Molinate	65.6	71.8	P/P	46 - 100
Myclobutanil	96.6	102	P/P	32 - 149
Naled	32.0	37.8	P/P	32 - 95.0
Norflurazon	90.8	109	P/P	57 - 127
Oxadiazon	96.7	105	P/P	63 - 118
Oxyfluorfen	93.9	102	P/P	69 - 137
Parathion Ethyl	84.8	88.5	P/P	70 - 113
Parathion Methyl	80.9	97.1	P/P	71 - 130
Pendimethalin	74.4	80.7	P/P	55 - 118
Phorate	106	104	P/P	46 - 125
Prodiamine	45.4	48.3	P/P	20 - 141
Prometon	87.7	96.4	P/P	54 - 122
Prometryn	98.0	100	P/P	66 - 124
Pronamide	89.6	92.6	P/P	79 - 122
Propiconazole	105	124	P/P	61 - 126
Pyriproxyfen	81.1	84.5	P/P	52 - 131
Simazine	84.2	93.3	P/P	75 - 128
Sulfentrazone	68.7	76.0	P/P	20 - 132
Tebuconazole	93.2	87.1	P/P	20 - 116
Terbufos	83.8	85.7	P/P	61 - 117
Terbuthylazine	88.0	91.3	P/P	74 - 116

Reference Method: EPA 8270E
Batch ID: P399210

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	47.7	48.1	P/P	20 - 150
Alpha-BHC	94.4	92.8	P/P	50 - 150
Alpha-Chlordane	81.6	86.8	P/P	50 - 150
Beta-BHC	106	104	P/P	50 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P399210

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	98.0	112	P/P	50 - 150
Bifenthrin	72.3	75.6	P/P	40 - 150
Chlorothalonil	81.7	85.0	P/P	20 - 150
Cis-Nonachlor	83.5	91.4	P/P	50 - 150
Cypermethrin	98.2	107	P/P	50 - 150
Dacthal	90.4	97.1	P/P	50 - 150
DDD-p,p'	83.9	89.1	P/P	50 - 150
DDE-p,p'	80.9	84.3	P/P	50 - 150
DDT-p,p'	83.2	85.1	P/P	50 - 150
Delta-BHC	109	112	P/P	50 - 150
Deltamethrin	83.9	103	P/P	50 - 150
Dichlobenil	58.6	56.4	P/P	40 - 150
Dicofol	81.2	86.5	P/P	50 - 150
Dieldrin	87.5	91.6	P/P	50 - 150
Endosulfan I	86.3	90.0	P/P	50 - 150
Endosulfan II	97.5	105	P/P	50 - 150
Endosulfan Sulfate	99.9	116	P/P	50 - 150
Endrin	86.1	94.0	P/P	50 - 150
Endrin Aldehyde	82.5	84.1	P/P	50 - 150
Endrin Ketone	110	122	P/P	50 - 150
Esfenvalerate	89.1	99.4	P/P	50 - 180
Ethalfluralin	80.6	82.8	P/P	50 - 150
Fenpropathrin	84.8	95.5	P/P	50 - 150
Gamma-BHC	97.9	99.7	P/P	50 - 150
Gamma-Chlordane	81.0	83.4	P/P	50 - 150
Heptachlor	78.6	77.2	P/P	50 - 150
Heptachlor Epoxide	85.2	87.8	P/P	50 - 150
Hexachlorobenzene	80.1	74.3	P/P	50 - 150
Kepone	117	100	P/P	30 - 180
Lambda-Cyhalothrin	65.6	83.0	P/P	50 - 200
Methoxychlor	93.2	98.1	P/P	50 - 150
MGK-264	74.0	82.5	P/P	30 - 150
Mirex	136	154	P/P	50 - 180
Permethrin	93.5	102	P/P	50 - 150
Phenothrin	54.4	62.9	P/P	20 - 150
Piperonyl Butoxide	52.7	69.4	P/P	50 - 150
Prallethrin	65.7	74.7	P/P	30 - 150
Tau-Fluvalinate	74.7	84.1	P/P	40 - 150
Tetramethrin	79.2	88.8	P/P	30 - 150
Trans-Nonachlor	76.3	82.2	P/P	50 - 150
Triclosan Methyl	84.0	87.7	P/P	50 - 150
Trifluralin	82.9	83.3	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P399210

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	82.9	81.1	P/P	56 - 117
Toxaphene	101	98.7	P/P	45 - 116

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P399076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.1		P	40 - 150
2,4,5-T	103		P	40 - 150
Acetaminophen	62.1		P	30 - 150
Acetamiprid	88.6		P	40 - 150
Afidopyropen	80.4		P	40 - 150
Bentazon	110		P	30 - 150
Benzovindiflupyr	96.8		P	40 - 150
Carbamazepine	91.1		P	40 - 150
Clothianidin	76.1		P	40 - 150
Dinotefuran	71.4		P	40 - 150
Diuron	88.2		P	40 - 150
Fenuron	103		P	40 - 150
Fluridone	89.3		P	40 - 150
Hydrocodone	78.7		P	40 - 150
Ibuprofen	82.6		P	40 - 150
Imazapyr	97.3		P	40 - 150
Imidacloprid	78.0		P	40 - 150
Linuron	81.4		P	40 - 150
Mandestrobin	99.1		P	40 - 150
MCPP	105		P	40 - 150
Naproxen	84.6		P	40 - 150
Primidone	95.2		P	40 - 150
Pyraclostrobin	90.2		P	40 - 150
Thiamethoxam	82.0		P	40 - 150
Tolfenpyrad	57.3		P	30 - 150
Triclopyr	96.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	76.3		P	40 - 150
AMPA	96.4		P	40 - 150
Endothall	88.4		P	40 - 150
Glufosinate	102		P	40 - 150
Glyphosate	108		P	40 - 150
Sucralose	93.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	79.6		P	40 - 150
Aldicarb	73.9		P	30 - 150
Aldicarb Sulfone	83.4		P	40 - 150
Aldicarb Sulfoxide	95.5		P	40 - 150
Carbaryl	74.4		P	40 - 150
Carbofuran	76.2		P	40 - 150
Methiocarb	71.8		P	40 - 150
Methomyl	76.4		P	40 - 150
Oxamyl	80.4		P	40 - 150
Propoxur	71.2		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P399263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P399338

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.1		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P399342

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P399667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P399730

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.9		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399356

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251773	Barium	99.7	99.9	P/P	80 - 120
2251773	Calcium	102		P	80 - 120
2251773	Iron	105	107	P/P	80 - 120
2251773	Magnesium	103		P	80 - 120
2251773	Manganese	101	101	P/P	80 - 120
2251773	Potassium	97.4	99.0	P/P	80 - 120
2251773	Sodium	101		P	80 - 120
2251773	Zinc	102	103	P/P	80 - 120
2251954	Barium	102		P	80 - 120
2251954	Calcium	107		P	80 - 120
2251954	Iron	106		P	80 - 120
2251954	Magnesium	110		P	80 - 120
2251954	Manganese	103		P	80 - 120
2251954	Potassium	104		P	80 - 120
2251954	Sodium	102		P	80 - 120
2251954	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399356

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251773	Aluminum	93.4	95.4	P/P	80 - 120
2251773	Antimony	101	102	P/P	80 - 120
2251773	Arsenic	101	103	P/P	80 - 120
2251773	Beryllium	92.0	93.4	P/P	80 - 120
2251773	Boron	101	101	P/P	80 - 120
2251773	Cadmium	103	103	P/P	80 - 120
2251773	Chromium	98.4	100	P/P	80 - 120
2251773	Copper	97.2	98.7	P/P	80 - 120
2251773	Lead	111	112	P/P	80 - 120
2251773	Nickel	96.8	98.6	P/P	80 - 120
2251773	Selenium	96.6	97.8	P/P	80 - 120
2251773	Silver	98.8	100	P/P	80 - 120
2251773	Thallium	107	108	P/P	80 - 120
2251954	Aluminum	94.4		P	80 - 120
2251954	Antimony	100		P	80 - 120
2251954	Arsenic	99.3		P	80 - 120
2251954	Beryllium	90.1		P	80 - 120
2251954	Boron	102		P	80 - 120
2251954	Cadmium	103		P	80 - 120
2251954	Chromium	98.0		P	80 - 120
2251954	Copper	98.2		P	80 - 120
2251954	Lead	110		P	80 - 120
2251954	Nickel	95.8		P	80 - 120
2251954	Selenium	95.7		P	80 - 120
2251954	Silver	100		P	80 - 120
2251954	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251761	Chloride	96.5		P	90 - 110
2251977	Chloride	94.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251761	Sulfate	96.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399515

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252172	Ammonia-N	94.4	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252070	Kjeldahl Nitrogen	104	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252067	NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251813	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399299

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251998	Total-P	105	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399172

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251935	O-Phosphate-P	99.4	101	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P399205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251292	Acetochlor	93.8	99.8	P/P	66 - 122
2251292	Alachlor	89.1	88.7	P/P	65 - 122
2251292	Ametryn	118	123	P/P	45 - 173

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P399205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251292	Atrazine Desethyl	58.4	70.1	P/P	25 - 150
2251292	Azinphos Methyl	207	211	F/F	44 - 174
2251292	Azoxystrobin	71.4	40.4	P/P	10 - 268
2251292	Bromacil	91.5	95.9	P/P	31 - 145
2251292	Butylate	49.5	43.2	P/P	15 - 97.0
2251292	Carbophenothion	99.7	99.4	P/P	42 - 129
2251292	Carfentrazone Ethyl	125	125	P/P	62 - 145
2251292	Chlorpyrifos Ethyl	85.2	81.3	P/P	60 - 124
2251292	Chlorpyrifos Methyl	81.9	85.9	P/P	66 - 119
2251292	Cyanazine	169	173	P/P	17 - 225
2251292	Demeton	93.7	99.1	P/P	36 - 142
2251292	Diazinon	93.3	98.3	P/P	70 - 128
2251292	Difenoconazole	95.7	90.2	P/P	33 - 222
2251292	Dimethenamid	83.2	85.4	P/P	54 - 125
2251292	Disulfoton	89.3	91.3	P/P	49 - 133
2251292	Dithiopyr	85.3	87.4	P/P	55 - 123
2251292	EPTC	45.9	38.2	P/P	19 - 91.0
2251292	Ethion	40.7	36.4	P/P	13 - 143
2251292	Ethoprop	103	106	P/P	49 - 144
2251292	Fenamiphos	101	92.2	P/P	32 - 136
2251292	Fenbuconazole	92.1	97.7	P/P	73 - 148
2251292	Fipronil	95.8	104	P/P	57 - 129
2251292	Fipronil Desulfinyl	90.2	96.3	P/P	49 - 127
2251292	Fipronil Sulfide	86.5	91.1	P/P	44 - 127
2251292	Fipronil Sulfone	83.6	82.8	P/P	35 - 126
2251292	Fluazifop-P-butyl	113	115	P/P	67 - 129
2251292	Fludioxonil	90.4	95.8	P/P	61 - 126
2251292	Flumioxazin	107	100	P/P	38 - 279
2251292	Flutolanil	118	96.7	P/P	55 - 136
2251292	Fluxapyroxad	99.1	102	P/P	33 - 140
2251292	Fonofos	87.3	98.4	P/P	58 - 125
2251292	Hexazinone	91.8	92.6	P/P	57 - 148
2251292	Imazalil	141	143	P/P	10 - 221
2251292	Iprodione	117	123	P/P	32 - 140
2251292	Malathion	99.3	103	P/P	52 - 138
2251292	Metalaxyl	92.5	102	P/P	46 - 134
2251292	Metolachlor	88.1	95.3	P/P	58 - 122
2251292	Metribuzin	100	111	P/P	16 - 272
2251292	Mevinphos	101	105	P/P	45 - 140
2251292	Molinate	72.2	68.0	P/P	41 - 103
2251292	Myclobutanil	107	105	P/P	60 - 134
2251292	Naled	33.1	31.0	P/P	20 - 113
2251292	Norflurazon	97.6	106	P/P	51 - 123
2251292	Oxadiazon	102	111	P/P	44 - 125
2251292	Oxyfluorfen	104	111	P/P	66 - 176
2251292	Parathion Ethyl	87.3	96.0	P/P	57 - 132
2251292	Parathion Methyl	98.0	104	P/P	59 - 156
2251292	Pendimethalin	82.5	85.7	P/P	59 - 129
2251292	Phorate	112	116	P/P	47 - 136
2251292	Prodiamine	46.0	57.5	P/P	10 - 159
2251292	Prometon	95.9	107	P/P	59 - 127
2251292	Prometryn	103	110	P/P	59 - 129

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P399205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251292	Pronamide	107	123	P/P	65 - 145
2251292	Propiconazole	106	109	P/P	28 - 165
2251292	Pyriproxyfen	126	138	P/P	21 - 180
2251292	Simazine	98.9	104	P/P	63 - 147
2251292	Sulfentrazone	120	135	P/P	32 - 136
2251292	Tebuconazole	53.9	51.4	P/P	10 - 117
2251292	Terbufos	85.7	92.8	P/P	61 - 131
2251292	Terbuthylazine	91.1	101	P/P	62 - 126

Reference Method: EPA 8270E
Batch ID: P399210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252468	Aldrin	62.0	70.7	P/P	20 - 170
2252468	Alpha-BHC	86.9	89.5	P/P	50 - 170
2252468	Alpha-Chlordane	107	82.9	P/P	50 - 170
2252468	Beta-BHC	86.0	89.3	P/P	50 - 170
2252468	Beta-Cyfluthrin	130	118	P/P	50 - 170
2252468	Bifenthrin	75.5	82.7	P/P	40 - 170
2252468	Chlorothalonil	51.3	58.5	P/P	20 - 170
2252468	Cis-Nonachlor	74.6	72.7	P/P	50 - 170
2252468	Cypermethrin	96.5	97.4	P/P	50 - 170
2252468	Dacthal	80.8	79.6	P/P	50 - 170
2252468	DDD-p,p'	85.0	70.8	P/P	50 - 170
2252468	DDE-p,p'	79.1	71.4	P/P	50 - 170
2252468	DDT-p,p'	79.9	82.0	P/P	50 - 170
2252468	Delta-BHC	110	106	P/P	50 - 170
2252468	Deltamethrin	40.8	53.6	F/P	50 - 170
2252468	Dichlobenil	46.3	38.7	P/F	40 - 170
2252468	Dicofol	59.1	64.7	P/P	50 - 170
2252468	Dieldrin	143	73.8	P/P	50 - 170
2252468	Endosulfan I	94.5	77.6	P/P	50 - 170
2252468	Endosulfan II	94.4	101	P/P	50 - 170
2252468	Endosulfan Sulfate	79.2	75.1	P/P	50 - 170
2252468	Endrin	85.5	81.4	P/P	50 - 170
2252468	Endrin Aldehyde	44.4	53.3	F/P	50 - 170
2252468	Endrin Ketone	115	104	P/P	50 - 170
2252468	Esfenvalerate	106	100	P/P	50 - 180
2252468	Ethalfluralin	88.1	93.0	P/P	50 - 170
2252468	Fenpropathrin	90.2	68.5	P/P	50 - 170
2252468	Gamma-BHC	79.9	63.3	P/P	50 - 170
2252468	Gamma-Chlordane	91.2	72.7	P/P	50 - 170
2252468	Heptachlor	80.6	95.5	P/P	50 - 170
2252468	Heptachlor Epoxide	88.6	75.4	P/P	50 - 170
2252468	Hexachlorobenzene	68.6	76.1	P/P	50 - 170
2252468	Kepone	125	100	P/P	30 - 180
2252468	Lambda-Cyhalothrin	116	108	P/P	50 - 200
2252468	Methoxychlor	101	90.7	P/P	50 - 170
2252468	MGK-264	78.1	72.0	P/P	30 - 170
2252468	Mirex	148	173	P/P	50 - 180
2252468	Permethrin	111	83.2	P/P	50 - 170
2252468	Phenothrin	102	75.9	P/P	20 - 170

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P399210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252468	Piperonyl Butoxide	55.3	59.1	P/P	50 - 170
2252468	Prallethrin	79.5	66.1	P/P	30 - 170
2252468	Tau-Fluvalinate	88.9	83.3	P/P	40 - 170
2252468	Tetramethrin	80.8	83.8	P/P	30 - 170
2252468	Trans-Nonachlor	70.3	70.1	P/P	50 - 170
2252468	Triclosan Methyl	71.5	71.4	P/P	50 - 170
2252468	Trifluralin	87.9	90.2	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P399210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252329	Chlordane	83.6	92.9	P/P	47 - 128
2252329	Toxaphene	103	117	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P399076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251243	2,4-D	122	128	P/P	40 - 150
2251243	2,4,5-T	107	105	P/P	40 - 150
2251243	Acetaminophen	89.9	81.9	P/P	30 - 150
2251243	Acetamiprid	103	94.5	P/P	40 - 150
2251243	Afidopyropen	92.5	79.5	P/P	40 - 150
2251243	Bentazon	102	94.0	P/P	30 - 150
2251243	Benzovindiflupyr	98.2	97.1	P/P	40 - 150
2251243	Carbamazepine	103	102	P/P	40 - 150
2251243	Clothianidin	97.1	90.4	P/P	40 - 150
2251243	Dinotefuran	92.2	85.7	P/P	40 - 150
2251243	Diuron	79.8	75.4	P/P	40 - 150
2251243	Fenuron	102	104	P/P	40 - 150
2251243	Fluridone	85.2	80.8	P/P	40 - 150
2251243	Hydrocodone	88.8	94.3	P/P	40 - 150
2251243	Ibuprofen	80.6	79.1	P/P	40 - 150
2251243	Imazapyr	117	103	P/P	40 - 150
2251243	Imidacloprid	130	116	P/P	40 - 150
2251243	Linuron	74.9	79.9	P/P	40 - 150
2251243	Mandestrobin	98.8	95.5	P/P	40 - 150
2251243	MCPP	121	119	P/P	40 - 150
2251243	Naproxen	106	78.9	P/P	40 - 150
2251243	Primidone	124	99.4	P/P	40 - 150
2251243	Pyraclostrobin	98.9	96.1	P/P	40 - 150
2251243	Thiamethoxam	122	108	P/P	40 - 150
2251243	Tolfenpyrad	56.5	59.9	P/P	30 - 150
2251243	Triclopyr	119	113	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251952	Acesulfame K	88.6	95.7	P/P	40 - 150
2251952	AMPA	104	106	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P399276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251952	Endothall	113	118	P/P	40 - 150
2251952	Glufosinate	113	116	P/P	40 - 150
2251952	Glyphosate	118	121	P/P	40 - 150
2251952	Sucralose	94.9	99.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252078	3-Hydroxycarbofuran	97.6	86.7	P/P	40 - 150
2252078	Aldicarb	78.6	71.4	P/P	30 - 150
2252078	Aldicarb Sulfone	108	101	P/P	40 - 150
2252078	Aldicarb Sulfoxide	103	98.7	P/P	40 - 150
2252078	Carbaryl	79.2	73.3	P/P	40 - 150
2252078	Carbofuran	75.3	74.0	P/P	40 - 150
2252078	Methiocarb	71.9	75.4	P/P	40 - 150
2252078	Methomyl	74.2	73.3	P/P	40 - 150
2252078	Oxamyl	93.6	91.1	P/P	40 - 150
2252078	Propoxur	72.1	67.9	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P399342

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251710	Fluoride	98.8	98.8	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P399667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2252091	Organic Carbon	97.2	96.0	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P399730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251927	Organic Carbon	98.6	98.7	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P399251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252069	Turbidity	0.702	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251773	Barium	0.256	Spike	P	0 - 20
2251773	Calcium	1.56	Spike	P	0 - 20
2251773	Iron	1.37	Spike	P	0 - 20
2251773	Magnesium	1.63	Spike	P	0 - 20
2251773	Manganese	0.0197	Spike	P	0 - 20
2251773	Potassium	0.840	Spike	P	0 - 20
2251773	Sodium	1.71	Spike	P	0 - 20
2251773	Zinc	1.02	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251773	Aluminum	1.87	Spike	P	0 - 20
2251773	Antimony	0.400	Spike	P	0 - 20
2251773	Arsenic	1.38	Spike	P	0 - 20
2251773	Beryllium	1.46	Spike	P	0 - 20
2251773	Boron	0.189	Spike	P	0 - 20
2251773	Cadmium	0.473	Spike	P	0 - 20
2251773	Chromium	2.04	Spike	P	0 - 20
2251773	Copper	1.38	Spike	P	0 - 20
2251773	Lead	0.791	Spike	P	0 - 20
2251773	Nickel	1.80	Spike	P	0 - 20
2251773	Selenium	1.16	Spike	P	0 - 20
2251773	Silver	1.50	Spike	P	0 - 20
2251773	Thallium	1.07	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251761	Chloride	1.35	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251761	Sulfate	1.71	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399515

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252172	Ammonia-N	1.82	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252041	Kjeldahl Nitrogen	3.83	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252070	Kjeldahl Nitrogen	1.61	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252067	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251813	Total-P	0.609	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251998	Total-P	1.98	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399172

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251935	O-Phosphate-P	1.20	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P399205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251292	Acetochlor	6.11	Spike	P	0 - 30
2251292	Alachlor	0.449	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P399205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251292	Ametryn	4.21	Spike	P	0 - 30
2251292	Atrazine	7.54	Spike	P	0 - 30
2251292	Atrazine Desethyl	12.3	Spike	P	0 - 30
2251292	Azinphos Methyl	1.88	Spike	P	0 - 30
2251292	Azoxystrobin	55.4	Spike	F	0 - 30
2251292	Bromacil	4.63	Spike	P	0 - 30
2251292	Butylate	13.5	Spike	P	0 - 30
2251292	Caffeine	3.30	Spike	P	0 - 30
2251292	Carbophenothion	0.331	Spike	P	0 - 30
2251292	Carfentrazone Ethyl	0.0240	Spike	P	0 - 30
2251292	Chlorpyrifos Ethyl	4.70	Spike	P	0 - 30
2251292	Chlorpyrifos Methyl	4.87	Spike	P	0 - 30
2251292	Cyanazine	2.61	Spike	P	0 - 30
2251292	Demeton	5.56	Spike	P	0 - 30
2251292	Diazinon	5.23	Spike	P	0 - 30
2251292	Difenoconazole	5.93	Spike	P	0 - 30
2251292	Dimethenamid	2.61	Spike	P	0 - 30
2251292	Disulfoton	2.19	Spike	P	0 - 30
2251292	Dithiopyr	2.41	Spike	P	0 - 30
2251292	EPTC	18.2	Spike	P	0 - 30
2251292	Ethion	11.3	Spike	P	0 - 30
2251292	Ethoprop	2.72	Spike	P	0 - 30
2251292	Fenamiphos	9.55	Spike	P	0 - 30
2251292	Fenbuconazole	5.84	Spike	P	0 - 30
2251292	Fipronil	8.52	Spike	P	0 - 30
2251292	Fipronil Desulfinyl	6.57	Spike	P	0 - 30
2251292	Fipronil Sulfide	5.22	Spike	P	0 - 30
2251292	Fipronil Sulfone	0.918	Spike	P	0 - 30
2251292	Fluazifop-P-butyl	1.90	Spike	P	0 - 30
2251292	Fludioxonil	5.61	Spike	P	0 - 30
2251292	Flumioxazin	6.70	Spike	P	0 - 30
2251292	Flutolanil	20.1	Spike	P	0 - 30
2251292	Fluxapyroxad	2.92	Spike	P	0 - 30
2251292	Fonofos	11.9	Spike	P	0 - 30
2251292	Hexazinone	0.653	Spike	P	0 - 30
2251292	Imazalil	1.36	Spike	P	0 - 30
2251292	Iprodione	5.32	Spike	P	0 - 30
2251292	Malathion	3.68	Spike	P	0 - 30
2251292	Metalaxyl	9.35	Spike	P	0 - 30
2251292	Metolachlor	7.34	Spike	P	0 - 30
2251292	Metribuzin	9.77	Spike	P	0 - 30
2251292	Mevinphos	3.64	Spike	P	0 - 30
2251292	Molinate	6.05	Spike	P	0 - 30
2251292	Myclobutanil	1.44	Spike	P	0 - 30
2251292	Naled	6.38	Spike	P	0 - 30
2251292	Norflurazon	8.03	Spike	P	0 - 30
2251292	Oxadiazon	8.43	Spike	P	0 - 30
2251292	Oxyfluorfen	6.18	Spike	P	0 - 30
2251292	Parathion Ethyl	9.49	Spike	P	0 - 30
2251292	Parathion Methyl	5.50	Spike	P	0 - 30
2251292	Pendimethalin	3.70	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P399205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251292	Phorate	3.96	Spike	P	0 - 30
2251292	Prodiamine	22.2	Spike	P	0 - 30
2251292	Prometon	10.6	Spike	P	0 - 30
2251292	Prometryn	6.15	Spike	P	0 - 30
2251292	Pronamide	13.8	Spike	P	0 - 30
2251292	Propiconazole	2.08	Spike	P	0 - 30
2251292	Pyriproxyfen	9.35	Spike	P	0 - 30
2251292	Simazine	4.89	Spike	P	0 - 30
2251292	Sulfentrazone	11.3	Spike	P	0 - 30
2251292	Tebuconazole	3.19	Spike	P	0 - 30
2251292	Terbufos	8.01	Spike	P	0 - 30
2251292	Terbuthylazine	10.1	Spike	P	0 - 30
LFB	Acetochlor	5.31	LCS	P	0 - 30
LFB	Alachlor	4.46	LCS	P	0 - 30
LFB	Ametryn	1.74	LCS	P	0 - 30
LFB	Atrazine	5.15	LCS	P	0 - 30
LFB	Atrazine Desethyl	25.7	LCS	P	0 - 30
LFB	Azinphos Methyl	1.77	LCS	P	0 - 30
LFB	Azoxystrobin	21.7	LCS	P	0 - 30
LFB	Bromacil	10.3	LCS	P	0 - 30
LFB	Butylate	15.2	LCS	P	0 - 30
LFB	Caffeine	8.29	LCS	P	0 - 30
LFB	Carbophenothion	0.301	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	7.15	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	7.50	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.98	LCS	P	0 - 30
LFB	Cyanazine	0.965	LCS	P	0 - 30
LFB	Demeton	2.19	LCS	P	0 - 30
LFB	Diazinon	3.61	LCS	P	0 - 30
LFB	Difenoconazole	7.17	LCS	P	0 - 30
LFB	Dimethenamid	3.94	LCS	P	0 - 30
LFB	Disulfoton	1.38	LCS	P	0 - 30
LFB	Dithiopyr	7.29	LCS	P	0 - 30
LFB	EPTC	16.6	LCS	P	0 - 30
LFB	Ethion	24.9	LCS	P	0 - 30
LFB	Ethoprop	3.71	LCS	P	0 - 30
LFB	Fenamiphos	1.26	LCS	P	0 - 30
LFB	Fenbuconazole	5.57	LCS	P	0 - 30
LFB	Fipronil	17.6	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	4.02	LCS	P	0 - 30
LFB	Fipronil Sulfide	9.63	LCS	P	0 - 30
LFB	Fipronil Sulfone	7.79	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	10.4	LCS	P	0 - 30
LFB	Fludioxonil	0.376	LCS	P	0 - 30
LFB	Flumioxazin	19.2	LCS	P	0 - 30
LFB	Flutolanil	8.70	LCS	P	0 - 30
LFB	Fluxapyroxad	3.53	LCS	P	0 - 30
LFB	Fonofos	1.52	LCS	P	0 - 30
LFB	Hexazinone	6.26	LCS	P	0 - 30
LFB	Imazalil	1.99	LCS	P	0 - 30
LFB	Iprodione	16.4	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P399205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Malathion	0.925	LCS	P	0 - 30
LFB	Metalaxyl	0.747	LCS	P	0 - 30
LFB	Metolachlor	4.62	LCS	P	0 - 30
LFB	Metribuzin	11.4	LCS	P	0 - 30
LFB	Mevinphos	6.77	LCS	P	0 - 30
LFB	Molinate	9.11	LCS	P	0 - 30
LFB	Myclobutanil	5.12	LCS	P	0 - 30
LFB	Naled	16.6	LCS	P	0 - 30
LFB	Norflurazon	17.8	LCS	P	0 - 30
LFB	Oxadiazon	8.63	LCS	P	0 - 30
LFB	Oxyfluorfen	8.62	LCS	P	0 - 30
LFB	Parathion Ethyl	4.24	LCS	P	0 - 30
LFB	Parathion Methyl	18.3	LCS	P	0 - 30
LFB	Pendimethalin	8.09	LCS	P	0 - 30
LFB	Phorate	2.46	LCS	P	0 - 30
LFB	Prodiamine	6.28	LCS	P	0 - 30
LFB	Prometon	9.44	LCS	P	0 - 30
LFB	Prometryn	2.30	LCS	P	0 - 30
LFB	Pronamide	3.22	LCS	P	0 - 30
LFB	Propiconazole	17.4	LCS	P	0 - 30
LFB	Pyriproxyfen	4.10	LCS	P	0 - 30
LFB	Simazine	10.2	LCS	P	0 - 30
LFB	Sulfentrazone	10.1	LCS	P	0 - 30
LFB	Tebuconazole	6.80	LCS	P	0 - 30
LFB	Terbufos	2.23	LCS	P	0 - 30
LFB	Terbuthylazine	3.69	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P399210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252468	Aldrin	13.2	Spike	P	0 - 30
2252468	Alpha-BHC	3.01	Spike	P	0 - 30
2252468	Alpha-Chlordane	24.9	Spike	P	0 - 30
2252468	Beta-BHC	3.71	Spike	P	0 - 30
2252468	Beta-Cyfluthrin	9.86	Spike	P	0 - 30
2252468	Bifenthrin	9.10	Spike	P	0 - 30
2252468	Chlorothalonil	13.1	Spike	P	0 - 50
2252468	Cis-Nonachlor	2.53	Spike	P	0 - 30
2252468	Cypermethrin	0.878	Spike	P	0 - 30
2252468	Dacthal	1.57	Spike	P	0 - 30
2252468	DDD-p,p'	18.3	Spike	P	0 - 30
2252468	DDE-p,p'	10.2	Spike	P	0 - 30
2252468	DDT-p,p'	2.56	Spike	P	0 - 30
2252468	Delta-BHC	3.50	Spike	P	0 - 30
2252468	Deltamethrin	27.3	Spike	P	0 - 30
2252468	Dichlobenil	17.9	Spike	P	0 - 30
2252468	Dicofol	9.18	Spike	P	0 - 30
2252468	Dieldrin	64.1	Spike	F	0 - 30
2252468	Endosulfan I	19.7	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P399210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252468	Endosulfan II	6.50	Spike	P	0 - 30
2252468	Endosulfan Sulfate	5.38	Spike	P	0 - 30
2252468	Endrin	4.92	Spike	P	0 - 30
2252468	Endrin Aldehyde	18.1	Spike	P	0 - 30
2252468	Endrin Ketone	9.45	Spike	P	0 - 30
2252468	Esfenvalerate	5.70	Spike	P	0 - 30
2252468	Ethalfluralin	5.42	Spike	P	0 - 30
2252468	Fenpropathrin	27.4	Spike	P	0 - 30
2252468	Gamma-BHC	23.2	Spike	P	0 - 30
2252468	Gamma-Chlordane	22.7	Spike	P	0 - 30
2252468	Heptachlor	16.9	Spike	P	0 - 30
2252468	Heptachlor Epoxide	16.0	Spike	P	0 - 30
2252468	Hexachlorobenzene	10.3	Spike	P	0 - 30
2252468	Kepone	22.1	Spike	P	0 - 30
2252468	Lambda-Cyhalothrin	6.59	Spike	P	0 - 30
2252468	Methoxychlor	10.8	Spike	P	0 - 30
2252468	MGK-264	8.22	Spike	P	0 - 30
2252468	Mirex	15.2	Spike	P	0 - 30
2252468	Permethrin	29.1	Spike	P	0 - 30
2252468	Phenothrin	29.3	Spike	P	0 - 30
2252468	Piperonyl Butoxide	6.77	Spike	P	0 - 30
2252468	Prallethrin	18.4	Spike	P	0 - 30
2252468	Tau-Fluvalinate	6.49	Spike	P	0 - 30
2252468	Tetramethrin	3.70	Spike	P	0 - 30
2252468	Trans-Nonachlor	0.254	Spike	P	0 - 30
2252468	Triclosan Methyl	0.128	Spike	P	0 - 30
2252468	Trifluralin	2.54	Spike	P	0 - 30
LFB	Aldrin	0.885	LCS	P	0 - 30
LFB	Alpha-BHC	1.71	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.16	LCS	P	0 - 30
LFB	Beta-BHC	2.48	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	13.8	LCS	P	0 - 30
LFB	Bifenthrin	4.52	LCS	P	0 - 30
LFB	Chlorothalonil	4.02	LCS	P	0 - 50
LFB	Cis-Nonachlor	9.03	LCS	P	0 - 30
LFB	Cypermethrin	8.24	LCS	P	0 - 30
LFB	Dacthal	7.20	LCS	P	0 - 30
LFB	DDD-p,p'	6.09	LCS	P	0 - 30
LFB	DDE-p,p'	4.05	LCS	P	0 - 30
LFB	DDT-p,p'	2.25	LCS	P	0 - 30
LFB	Delta-BHC	2.66	LCS	P	0 - 30
LFB	Deltamethrin	20.4	LCS	P	0 - 30
LFB	Dichlobenil	3.85	LCS	P	0 - 30
LFB	Dicofol	6.39	LCS	P	0 - 30
LFB	Dieldrin	4.64	LCS	P	0 - 30
LFB	Endosulfan I	4.14	LCS	P	0 - 30
LFB	Endosulfan II	7.60	LCS	P	0 - 30
LFB	Endosulfan Sulfate	15.0	LCS	P	0 - 30
LFB	Endrin	8.74	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.84	LCS	P	0 - 30
LFB	Endrin Ketone	10.8	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P399210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Esfenvalerate	10.8	LCS	P	0 - 30
LFB	Ethalfluralin	2.70	LCS	P	0 - 30
LFB	Fenpropathrin	11.8	LCS	P	0 - 30
LFB	Gamma-BHC	1.79	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.86	LCS	P	0 - 30
LFB	Heptachlor	1.73	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.02	LCS	P	0 - 30
LFB	Hexachlorobenzene	7.52	LCS	P	0 - 30
LFB	Kepone	15.0	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	23.3	LCS	P	0 - 30
LFB	Methoxychlor	5.04	LCS	P	0 - 30
LFB	MGK-264	10.9	LCS	P	0 - 30
LFB	Mirex	12.3	LCS	P	0 - 30
LFB	Permethrin	8.45	LCS	P	0 - 30
LFB	Phenothrin	14.5	LCS	P	0 - 30
LFB	Piperonyl Butoxide	27.3	LCS	P	0 - 30
LFB	Prallethrin	12.8	LCS	P	0 - 30
LFB	Tau-Fluvalinate	11.8	LCS	P	0 - 30
LFB	Tetramethrin	11.5	LCS	P	0 - 30
LFB	Trans-Nonachlor	7.42	LCS	P	0 - 30
LFB	Triclosan Methyl	4.29	LCS	P	0 - 30
LFB	Trifluralin	0.465	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P399210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252329	Chlordane	10.6	Spike	P	0 - 30
2252329	Toxaphene	12.2	Spike	P	0 - 30
LFB	Chlordane	2.29	LCS	P	0 - 30
LFB	Toxaphene	2.31	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251243	2,4-D	4.60	Spike	P	0 - 30
2251243	2,4,5-T	1.50	Spike	P	0 - 30
2251243	Acetaminophen	9.36	Spike	P	0 - 30
2251243	Acetamiprid	8.91	Spike	P	0 - 30
2251243	Afidopyropen	15.1	Spike	P	0 - 30
2251243	Bentazon	8.47	Spike	P	0 - 30
2251243	Benzovindiflupyr	1.20	Spike	P	0 - 30
2251243	Carbamazepine	0.696	Spike	P	0 - 30
2251243	Clothianidin	7.13	Spike	P	0 - 30
2251243	Dinotefuran	7.30	Spike	P	0 - 30
2251243	Diuron	5.56	Spike	P	0 - 30
2251243	Fenuron	2.56	Spike	P	0 - 30
2251243	Fluridone	5.29	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P399076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251243	Hydrocodone	5.95	Spike	P	0 - 30
2251243	Ibuprofen	1.86	Spike	P	0 - 30
2251243	Imazapyr	7.71	Spike	P	0 - 30
2251243	Imidacloprid	12.1	Spike	P	0 - 30
2251243	Linuron	6.44	Spike	P	0 - 30
2251243	Mandestrobin	3.39	Spike	P	0 - 30
2251243	MCPP	1.91	Spike	P	0 - 30
2251243	Naproxen	29.7	Spike	P	0 - 30
2251243	Primidone	21.9	Spike	P	0 - 30
2251243	Pyraclostrobin	2.81	Spike	P	0 - 30
2251243	Thiamethoxam	12.3	Spike	P	0 - 30
2251243	Tolfenpyrad	5.84	Spike	P	0 - 30
2251243	Triclopyr	5.64	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251952	Acesulfame K	7.77	Spike	P	0 - 30
2251952	AMPA	2.10	Spike	P	0 - 30
2251952	Endothall	3.74	Spike	P	0 - 30
2251952	Glufosinate	2.06	Spike	P	0 - 30
2251952	Glyphosate	3.11	Spike	P	0 - 30
2251952	Sucralose	4.32	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252078	3-Hydroxycarbofuran	11.8	Spike	P	0 - 30
2252078	Aldicarb	9.47	Spike	P	0 - 30
2252078	Aldicarb Sulfone	6.01	Spike	P	0 - 30
2252078	Aldicarb Sulfoxide	4.42	Spike	P	0 - 30
2252078	Carbaryl	7.75	Spike	P	0 - 30
2252078	Carbofuran	1.80	Spike	P	0 - 30
2252078	Methiocarb	4.87	Spike	P	0 - 30
2252078	Methomyl	1.10	Spike	P	0 - 30
2252078	Oxamyl	2.70	Spike	P	0 - 30
2252078	Propoxur	5.95	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P399263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252174	Color (true)	0.0620	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P399338

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251710	Total Alkalinity	1.18	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P399751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251978	TDS	3.57	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P399342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251710	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P399667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2252091	Organic Carbon	0.841	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P399730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251927	Organic Carbon	0.0454	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2252077
Field Sample ID: G2TLHR0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	135	P	30 - 160
EPA 8321B	Acetaminophen-d4	119	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.5	P	30 - 160
EPA 8321B	Diuron-d6	67.1	P	30 - 160
EPA 8321B	Endothall-d6	112	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	110	P	30 - 160
EPA 8321B	Ibuprofen-d3	93.7	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	80.4	P	30 - 160

Lab Sample ID: 2252078
Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	81.9	P	30 - 160

Lab Sample ID: 2252079
Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	103	P	30 - 160
EPA 8321B	Diuron-d6	80.6	P	30 - 160
EPA 8321B	Endothall-d6	64.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.3	P	30 - 160
EPA 8321B	Primidone-d5	97.0	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	30 - 160

Lab Sample ID: 2252080
Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	80.4	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	60.6	P	30 - 110
EPA 8276	Decachlorobiphenyl	65.5	P	29 - 92.0
EPA 8276	PCNB	70.5	P	43 - 134

Lab Sample ID: 2252081
Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	72.8	P	20 - 200
EPA 8270E	Simazine-d10	107	P	73 - 135
EPA 8270E	Terbufos-d10	84.6	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A105855
Included Lab Sample IDs: 2252068, 2252071

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.0	95.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A105874
Included Lab Sample IDs: 2252067, 2252070

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A105885
Included Lab Sample IDs: 2252066, 2252069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	98.0	P/P	95 - 105

Reference Method: SM 2120 B-2011
Run ID: A105890
Included Lab Sample IDs: 2252066, 2252069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.6	101	P/P	90 - 115

Reference Method: EPA 8321B
Run ID: A105919
Included Lab Sample IDs: 2252077, 2252079

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	146	120	P/P	60 - 160
Acesulfame K	91.6	104	P/P	60 - 160
Endothall	105	90.1	P/P	60 - 160
Endothall	78.7	96.1	P/P	60 - 160
Sucralose	112	123	P/P	60 - 160
Sucralose	96.0	97.2	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105927
Included Lab Sample IDs: 2252077, 2252079

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	107	120	P/P	60 - 160
Glufosinate	116	126	P/P	60 - 160
Glyphosate	117	131	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A105930
Included Lab Sample IDs: 2252066, 2252069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.7	96.1	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: SM 4500 F-C-2011
Run ID: A105930
Included Lab Sample IDs: 2252066, 2252069

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A105954
Included Lab Sample IDs: 2252070

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A105956
Included Lab Sample IDs: 2252066, 2252069

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	99.6	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A105964
Included Lab Sample IDs: 2252067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	99.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A105976
Included Lab Sample IDs: 2252082, 2252083, 2252084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	106	P/P	90 - 110
Calcium	103	103	P/P	90 - 110
Iron	104	104	P/P	90 - 110
Magnesium	105	105	P/P	90 - 110
Manganese	102	106	P/P	90 - 110
Potassium	102	103	P/P	90 - 110
Sodium	101	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A105982
Included Lab Sample IDs: 2252082, 2252083, 2252084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	95.4	90.7	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A105993
Included Lab Sample IDs: 2252067, 2252070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	97.1	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A106020
Included Lab Sample IDs: 2252067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.1	103	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A106022
Included Lab Sample IDs: 2252080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.4		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 8270E
Run ID: A106037
Included Lab Sample IDs: 2252080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	99.7		P	80 - 120
Alpha-Chlordane	104		P	80 - 120
Beta-BHC	102		P	80 - 120
Beta-Cyfluthrin	101		P	80 - 120
Bifenthrin	102		P	80 - 120
Chlorothalonil	96.7		P	80 - 120
Cis-Nonachlor	101		P	80 - 120
Cypermethrin	103		P	80 - 120
Dacthal	102		P	80 - 120
DDD-p,p'	104		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	95.8		P	80 - 120
Dichlobenil	105		P	80 - 120
Dicofol	98.7		P	80 - 120
Dieldrin	104		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	104		P	80 - 120
Endrin Aldehyde	98.4		P	80 - 120
Endrin Ketone	104		P	80 - 120
Esfenvalerate	97.8		P	80 - 120
Ethalfluralin	99.8		P	80 - 120
Fenpropathrin	105		P	80 - 120
Gamma-BHC	98.7		P	80 - 120
Gamma-Chlordane	103		P	80 - 120
Heptachlor	102		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Kepone	93.5		P	80 - 120
Lambda-Cyhalothrin	118		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	102		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106037
Included Lab Sample IDs: 2252080

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	102		P	80 - 120
Permethrin	101		P	80 - 120
Phenothrin	103		P	80 - 120
Piperonyl Butoxide	97.6		P	80 - 120
Prallethrin	102		P	80 - 120
Tau-Fluvalinate	98.4		P	80 - 120
Tetramethrin	103		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	97.1		P	80 - 120

Reference Method: EPA 8321B
Run ID: A106040
Included Lab Sample IDs: 2252077, 2252079

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	82.9	98.7	P/P	50 - 150
2,4,5-T	119	115	P/P	50 - 150
3-Hydroxycarbofuran	104	104	P/P	60 - 150
Acetaminophen	91.7	92.3	P/P	60 - 160
Acetamiprid	105	107	P/P	50 - 150
Afidopyropen	122	81.5	P/P	50 - 150
Aldicarb	98.8	106	P/P	60 - 150
Aldicarb Sulfone	104	97.7	P/P	50 - 150
Aldicarb Sulfoxide	95.1	86.0	P/P	50 - 150
Bentazon	139	138	P/P	50 - 160
Benzovindiflupyr	109	113	P/P	50 - 150
Carbamazepine	108	109	P/P	60 - 150
Carbaryl	115	120	P/P	60 - 150
Carbofuran	112	104	P/P	50 - 150
Clothianidin	99.7	103	P/P	60 - 150
Dinotefuran	97.6	102	P/P	50 - 150
Diuron	101	112	P/P	60 - 160
Fenuron	91.3	92.4	P/P	60 - 150
Fluridone	106	103	P/P	60 - 160
Hydrocodone	94.2	93.8	P/P	60 - 150
Ibuprofen	95.4	87.1	P/P	50 - 160
Imazapyr	123	113	P/P	50 - 150
Imidacloprid	91.3	93.8	P/P	60 - 150
Linuron	95.6	99.6	P/P	60 - 150
Mandestrobin	96.7	104	P/P	50 - 150
MCPP	121	126	P/P	50 - 150
Methiocarb	98.9	100	P/P	50 - 150
Methomyl	99.2	96.1	P/P	50 - 150
Naproxen	102	111	P/P	50 - 160
Oxamyl	102	99.5	P/P	50 - 150
Primidone	113	105	P/P	60 - 150
Propoxur	113	110	P/P	50 - 150
Pyraclostrobin	107	104	P/P	60 - 150
Thiamethoxam	99.3	99.0	P/P	50 - 150
Tolfenpyrad	97.9	100	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A106040
Included Lab Sample IDs: 2252077, 2252079

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Triclopyr	103	115	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A106042
Included Lab Sample IDs: 2252081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	98.5		P	80 - 120
Ametryn	97.0		P	80 - 120
Atrazine	97.2		P	80 - 120
Atrazine Desethyl	102		P	80 - 120
Azinphos Methyl	95.2		P	80 - 120
Azoxystrobin	108		P	80 - 120
Bromacil	99.5		P	80 - 120
Butylate	96.4		P	80 - 120
Caffeine	92.2		P	80 - 120
Carbophenothion	93.6		P	80 - 120
Carfentrazone Ethyl	96.5		P	80 - 120
Chlorpyrifos Ethyl	101		P	80 - 120
Chlorpyrifos Methyl	95.7		P	80 - 120
Cyanazine	103		P	80 - 120
Demeton	92.8		P	80 - 120
Diazinon	98.1		P	80 - 120
Difenoconazole	97.4		P	80 - 120
Dimethenamid	98.6		P	80 - 120
Disulfoton	92.7		P	80 - 120
Dithiopyr	98.6		P	80 - 120
EPTC	98.5		P	80 - 120
Ethion	95.1		P	80 - 120
Ethoprop	99.0		P	80 - 120
Fenamiphos	101		P	80 - 120
Fenbuconazole	96.7		P	80 - 120
Fipronil	96.2		P	80 - 120
Fipronil Desulfinyl	98.4		P	80 - 120
Fipronil Sulfide	101		P	80 - 120
Fipronil Sulfone	97.6		P	80 - 120
Fluazifop-P-butyl	105		P	80 - 120
Fludioxonil	99.5		P	80 - 120
Flumioxazin	90.9		P	80 - 120
Flutolanil	99.0		P	80 - 120
Fonofos	96.2		P	80 - 120
Hexazinone	99.0		P	80 - 120
Imazalil	104		P	80 - 120
Iprodione	100		P	80 - 120
Malathion	95.3		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	99.1		P	80 - 120
Metribuzin	94.0		P	80 - 120
Mevinphos	94.8		P	80 - 120
Molinate	100		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106042
Included Lab Sample IDs: 2252081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Myclobutanil	95.1		P	80 - 120
Naled	98.5		P	80 - 120
Norflurazon	97.2		P	80 - 120
Oxadiazon	101		P	80 - 120
Oxyfluorfen	96.7		P	80 - 120
Parathion Ethyl	92.9		P	80 - 120
Parathion Methyl	99.7		P	80 - 120
Pendimethalin	96.8		P	80 - 120
Phorate	93.7		P	80 - 120
Prodiamine	92.8		P	80 - 120
Prometon	96.5		P	80 - 120
Prometryn	98.3		P	80 - 120
Pronamide	97.5		P	80 - 120
Propiconazole	99.3		P	80 - 120
Pyriproxyfen	98.9		P	80 - 120
Simazine	106		P	80 - 120
Sulfentrazone	100		P	80 - 120
Tebuconazole	95.5		P	80 - 120
Terbufos	94.8		P	80 - 120
Terbuthylazine	98.9		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A106059
Included Lab Sample IDs: 2252070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.3	96.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A106075
Included Lab Sample IDs: 2252070

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

Reference Method: SM 5310 B-2011
Run ID: A106083
Included Lab Sample IDs: 2252067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	97.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A106086
Included Lab Sample IDs: 2252082, 2252083, 2252084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.1	95.8	P/P	90 - 110
Antimony	99.5	99.4	P/P	90 - 110
Arsenic	99.6	98.5	P/P	90 - 110
Beryllium	94.9	95.0	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A106086
Included Lab Sample IDs: 2252082, 2252083, 2252084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	100	97.5	P/P	90 - 110
Cadmium	99.7	99.7	P/P	90 - 110
Chromium	96.0	96.9	P/P	90 - 110
Copper	95.5	96.1	P/P	90 - 110
Lead	108	110	P/P	90 - 110
Nickel	95.6	95.9	P/P	90 - 110
Selenium	99.8	98.5	P/P	90 - 110
Silver	96.9	96.8	P/P	90 - 110
Thallium	95.0	95.1	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A106162
Included Lab Sample IDs: 2252081

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluxapyroxad	96.4		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							0.702	
EPA 200.7 Rev. 4.4	Barium	98.8		99.7	99.9	102			0.256
	Calcium	103		102	107				1.56
	Iron	104		105	107	106			1.37
	Magnesium	104		103	110				1.63
	Manganese	99.7		101	101	103			0.0197
	Potassium	99.2		97.4	99.0	104			0.840
	Sodium	101		101	102				1.71
	Zinc	97.0		102	103	101			1.02
EPA 200.8 Rev. 5.4	Aluminum	98.8		93.4	95.4	94.4			1.87
	Antimony	102		101	102	100			0.400
	Arsenic	104		101	103	99.3			1.38
	Beryllium	94.9		92.0	93.4	90.1			1.46
	Boron	101		101	101	102			0.189
	Cadmium	103		103	103	103			0.473
	Chromium	100		98.4	100	98.0			2.04
	Copper	104		97.2	98.7	98.2			1.38
	Lead	113		111	112	110			0.791
	Nickel	104		96.8	98.6	95.8			1.80
	Selenium	101		96.6	97.8	95.7			1.16
	Silver	101		100	98.8	100			1.50
	Thallium	105		107	108	103			1.07
EPA 300.0 Rev. 2.1	Chloride	98.1		96.5	94.0			1.35	
	Sulfate	98.1		96.5				1.71	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0		94.4	96.4				1.82
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.0							3.83
	Kjeldahl Nitrogen	98.6		104	106				1.61
EPA 353.2 Rev. 2.0	NO2NO3-N	102		98.5	98.5				0.0
EPA 365.1 Rev. 2.0	Total-P	100		105	104				0.609
	Total-P	102		105	107				1.98
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.0		99.4	101				1.20
EPA 8270E	Acetochlor	86.7	91.5	93.8	99.8		5.31		6.11
	Alachlor	85.2	89.1	89.1	88.7		4.46		0.449
	Aldrin	48.1	47.7	62.0	70.7		0.885		13.2
	Alpha-BHC	94.4	92.8	86.9	89.5		1.71		3.01
	Alpha-Chlordane	81.6	86.8	107	82.9		6.16		24.9
	Ametryn	103	105	118	123		1.74		4.21
	Atrazine	91.0	95.8				5.15		7.54
	Atrazine Desethyl	75.3	97.5	58.4	70.1		25.7		12.3
	Azinphos Methyl	117	115	207	211		1.77		1.88
	Azoxystrobin	122	151	71.4	40.4		21.7		55.4
	Beta-BHC	106	104	86.0	89.3		2.48		3.71
	Beta-Cyfluthrin	98.0	112	130	118		13.8		9.86
	Bifenthrin	72.3	75.6	75.5	82.7		4.52		9.10
	Bromacil	77.7	86.1	91.5	95.9		10.3		4.63
	Butylate	49.7	57.9	49.5	43.2		15.2		13.5
	Caffeine	94.0	86.6				8.29		3.30
	Carbophenothion	106	106	99.7	99.4		0.301		0.331
	Carfentrazone Ethyl	113	122	125	125		7.15		0.0240
	Chlorothalonil	81.7	85.0	51.3	58.5		4.02		13.1
	Chlorpyrifos Ethyl	92.3	85.6	85.2	81.3		7.50		4.70
	Chlorpyrifos Methyl	88.7	85.3	81.9	85.9		3.98		4.87
	Cis-Nonachlor	83.5	91.4	74.6	72.7		9.03		2.53
	Cyanazine	175	177	169	173		0.965		2.61

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Cypermethrin	107	98.2	96.5	97.4	8.24		0.878
	Dacthal	97.1	90.4	80.8	79.6	7.20		1.57
	DDD-p,p'	89.1	83.9	85.0	70.8	6.09		18.3
	DDE-p,p'	84.3	80.9	79.1	71.4	4.05		10.2
	DDT-p,p'	85.1	83.2	79.9	82.0	2.25		2.56
	Delta-BHC	112	109	110	106	2.66		3.50
	Deltamethrin	103	83.9	40.8	53.6	20.4		27.3
	Demeton	84.1	86.0	93.7	99.1	2.19		5.56
	Diazinon	84.3	87.4	93.3	98.3	3.61		5.23
	Dichlobenil	56.4	58.6	46.3	38.7	3.85		17.9
	Dicofol	81.2	86.5	59.1	64.7	6.39		9.18
	Dieldrin	87.5	91.6	143	73.8	4.64		64.1
	Difenoconazole	112	120	95.7	90.2	7.17		5.93
	Dimethenamid	83.0	86.3	83.2	85.4	3.94		2.61
	Disulfoton	88.1	86.9	89.3	91.3	1.38		2.19
	Dithiopyr	77.4	83.2	85.3	87.4	7.29		2.41
	Endosulfan I	86.3	90.0	94.5	77.6	4.14		19.7
	Endosulfan II	97.5	105	94.4	101	7.60		6.50
	Endosulfan Sulfate	99.9	116	79.2	75.1	15.0		5.38
	Endrin	86.1	94.0	85.5	81.4	8.74		4.92
	Endrin Aldehyde	82.5	84.1	44.4	53.3	1.84		18.1
	Endrin Ketone	110	122	115	104	10.8		9.45
	EPTC	44.2	52.2	45.9	38.2	16.6		18.2
	Esfenvalerate	89.1	99.4	106	100	10.8		5.70
	Ethalfluralin	80.6	82.8	88.1	93.0	2.70		5.42
	Ethion	90.1	70.2	40.7	36.4	24.9		11.3
	Ethoprop	97.5	101	103	106	3.71		2.72
	Fenamiphos	115	116	101	92.2	1.26		9.55
	Fenbuconazole	86.3	91.3	92.1	97.7	5.57		5.84
	Fenpropathrin	84.8	95.5	90.2	68.5	11.8		27.4
	Fipronil	77.1	91.9	95.8	104	17.6		8.52
	Fipronil Desulfinyl	82.6	85.9	90.2	96.3	4.02		6.57
	Fipronil Sulfide	83.7	92.2	86.5	91.1	9.63		5.22
	Fipronil Sulfone	96.0	88.8	83.6	82.8	7.79		0.918
	Fluazifop-P-butyl	105	117	113	115	10.4		1.90
	Fludioxonil	92.3	92.7	90.4	95.8	0.376		5.61
	Flumioxazin	97.7	118	107	100	19.2		6.70
	Flutolanil	99.6	109	118	96.7	8.70		20.1
	Fluxapyroxad	86.6	89.7	99.1	102	3.53		2.92
	Fonofos	91.1	92.5	87.3	98.4	1.52		11.9
	Gamma-BHC	97.9	99.7	79.9	63.3	1.79		23.2
	Gamma-Chlordane	81.0	83.4	91.2	72.7	2.86		22.7
	Heptachlor	78.6	77.2	80.6	95.5	1.73		16.9
	Heptachlor Epoxide	85.2	87.8	88.6	75.4	3.02		16.0
	Hexachlorobenzene	80.1	74.3	68.6	76.1	7.52		10.3
	Hexazinone	92.1	98.0	91.8	92.6	6.26		0.653
	Imazalil	101	103	141	143	1.99		1.36
	Iprodione	78.4	92.4	117	123	16.4		5.32
	Kepone	117	100	125	100	15.0		22.1
	Lambda-Cyhalothrin	65.6	83.0	116	108	23.3		6.59
	Malathion	100	101	99.3	103	0.925		3.68
	Metalaxyl	94.4	93.7	92.5	102	0.747		9.35
	Methoxychlor	93.2	98.1	101	90.7	5.04		10.8
	Metolachlor	87.8	91.9	88.1	95.3	4.62		7.34

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Metribuzin	81.7	91.5	100	111	11.4		9.77
	Mevinphos	88.7	94.9	101	105	6.77		3.64
	MGK-264	74.0	82.5	78.1	72.0	10.9		8.22
	Mirex	136	154	148	173	12.3		15.2
	Molinate	65.6	71.8	72.2	68.0	9.11		6.05
	Myclobutanil	96.6	102	107	105	5.12		1.44
	Naled	32.0	37.8	33.1	31.0	16.6		6.38
	Norflurazon	90.8	109	97.6	106	17.8		8.03
	Oxadiazon	96.7	105	102	111	8.63		8.43
	Oxyfluorfen	93.9	102	104	111	8.62		6.18
	Parathion Ethyl	84.8	88.5	87.3	96.0	4.24		9.49
	Parathion Methyl	80.9	97.1	98.0	104	18.3		5.50
	Pendimethalin	74.4	80.7	82.5	85.7	8.09		3.70
	Permethrin	93.5	102	111	83.2	8.45		29.1
	Phenothrin	54.4	62.9	102	75.9	14.5		29.3
	Phorate	106	104	112	116	2.46		3.96
	Piperonyl Butoxide	52.7	69.4	55.3	59.1	27.3		6.77
	Prallethrin	65.7	74.7	79.5	66.1	12.8		18.4
	Prodiamine	45.4	48.3	46.0	57.5	6.28		22.2
	Prometon	87.7	96.4	95.9	107	9.44		10.6
	Prometryn	98.0	100	103	110	2.30		6.15
	Pronamide	89.6	92.6	107	123	3.22		13.8
	Propiconazole	105	124	106	109	17.4		2.08
	Pyriproxyfen	81.1	84.5	126	138	4.10		9.35
	Simazine	84.2	93.3	98.9	104	10.2		4.89
	Sulfentrazone	68.7	76.0	120	135	10.1		11.3
	Tau-Fluvalinate	74.7	84.1	88.9	83.3	11.8		6.49
	Tebuconazole	93.2	87.1	53.9	51.4	6.80		3.19
	Terbufos	83.8	85.7	85.7	92.8	2.23		8.01
	Terbuthylazine	88.0	91.3	91.1	101	3.69		10.1
	Tetramethrin	79.2	88.8	80.8	83.8	11.5		3.70
	Trans-Nonachlor	76.3	82.2	70.3	70.1	7.42		0.254
	Triclosan Methyl	84.0	87.7	71.5	71.4	4.29		0.128
	Trifluralin	82.9	83.3	87.9	90.2	0.465		2.54
EPA 8276	Chlordane	82.9	81.1	83.6	92.9	2.29		10.6
	Toxaphene	101	98.7	103	117	2.31		12.2
EPA 8321B	2,4-D	97.1		128	122			4.60
	2,4,5-T	103		107	105			1.50
	3-Hydroxycarbofuran	79.6		97.6	86.7			11.8
	Acesulfame K	76.3		88.6	95.7			7.77
	Acetaminophen	62.1		81.9	89.9			9.36
	Acetamiprid	88.6		94.5	103			8.91
	Afidopyropen	80.4		79.5	92.5			15.1
	Aldicarb	73.9		78.6	71.4			9.47
	Aldicarb Sulfone	83.4		108	101			6.01
	Aldicarb Sulfoxide	95.5		103	98.7			4.42
	AMPA	96.4		104	106			2.10
	Bentazon	110		102	94.0			8.47
	Benzovindiflupyr	96.8		97.1	98.2			1.20
	Carbamazepine	91.1		102	103			0.696
	Carbaryl	74.4		79.2	73.3			7.75
	Carbofuran	76.2		75.3	74.0			1.80
	Clothianidin	76.1		90.4	97.1			7.13
	Dinotefuran	71.4		85.7	92.2			7.30

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Diuron	88.2	75.4	79.8			5.56
	Endothall	88.4	113	118			3.74
	Fenuron	103	104	102			2.56
	Fluridone	89.3	80.8	85.2			5.29
	Glufosinate	102	113	116			2.06
	Glyphosate	108	118	121			3.11
	Hydrocodone	78.7	94.3	88.8			5.95
	Ibuprofen	82.6	80.6	79.1			1.86
	Imazapyr	97.3	103	117			7.71
	Imidacloprid	78.0	116	130			12.1
	Linuron	81.4	79.9	74.9			6.44
	Mandestrobin	99.1	95.5	98.8			3.39
	MCPP	105	119	121			1.91
	Methiocarb	71.8	71.9	75.4			4.87
	Methomyl	76.4	74.2	73.3			1.10
	Naproxen	84.6	78.9	106			29.7
	Oxamyl	80.4	93.6	91.1			2.70
	Primidone	95.2	99.4	124			21.9
	Propoxur	71.2	72.1	67.9			5.95
	Pyraclostrobin	90.2	96.1	98.9			2.81
	Sucralose	93.9	94.9	99.9			4.32
	Thiamethoxam	82.0	108	122			12.3
	Tolfenpyrad	57.3	59.9	56.5			5.84
	Triclopyr	96.0	113	119			5.64
SM 2120 B-2011	Color (true)	101				0.0620	
SM 2320 B-2011	Total Alkalinity	98.1				1.18	
SM 2540 C-2011	TDS					3.57	
SM 4500 F-C-2011	Fluoride	99.5	98.8	98.8			0.0
SM 5310 B-2011	Organic Carbon	95.0	97.2	96.0			0.841
	Organic Carbon	99.9	98.6	98.7			0.0454

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2252066, 2252069
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2252082, 2252083, 2252084
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2252082, 2252083, 2252084
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2252066, 2252069
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2252066, 2252069
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2252067, 2252070
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2252067, 2252070
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2252067, 2252070
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2252067, 2252070
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2252068, 2252071
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2252080
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2252081
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2252080
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2252078
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2252077, 2252079
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2252066, 2252069

Reference Method Descriptions

Method	Description	Associated Samples
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2252066, 2252069
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2252082, 2252083, 2252084
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2252066, 2252069
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2252066, 2252069
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2252066, 2252069
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2252067, 2252070

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	06/03/2021			06/04/2021 15:02	Yen Ta	2252066, 2252069
EPA 200.7 Rev. 4.4	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/09/2021 18:35	Betina Topolski	2252082
	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/09/2021 18:41	Betina Topolski	2252083
	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/09/2021 18:48	Betina Topolski	2252084
	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/10/2021 10:33	Betina Topolski	2252082
	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/10/2021 10:36	Betina Topolski	2252083
	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/10/2021 10:39	Betina Topolski	2252084
EPA 200.8 Rev. 5.4	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/15/2021 21:25	Alexander Thompson	2252082
	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/15/2021 21:35	Alexander Thompson	2252083
	06/03/2021	06/08/2021 15:25	Elliott D. Healy	06/15/2021 21:45	Alexander Thompson	2252084
EPA 300.0 Rev. 2.1	06/03/2021			06/10/2021 03:48	Lipi Saha	2252066
	06/03/2021			06/10/2021 04:00	Lipi Saha	2252069
EPA 350.1 Rev. 2.0	06/03/2021			06/10/2021 12:39	Roberta Tatti	2252067
	06/03/2021			06/10/2021 12:41	Roberta Tatti	2252070
EPA 351.2 Rev. 2.0	06/03/2021	06/09/2021 13:07	Benjamin T. Nordmann	06/10/2021 11:19	Virginia P. Brown	2252067
	06/03/2021	06/11/2021 14:03	Benjamin T. Nordmann	06/14/2021 14:38	Virginia P. Brown	2252070
EPA 353.2 Rev. 2.0	06/03/2021			06/04/2021 11:18	Beverly Y. Sanders	2252067
	06/03/2021			06/04/2021 11:19	Beverly Y. Sanders	2252070
EPA 365.1 Rev. 2.0	06/03/2021	06/07/2021 13:53	Yen Ta	06/07/2021 17:13	Shengyu Ding	2252070
	06/03/2021	06/07/2021 13:53	Yen Ta	06/09/2021 11:07	Shengyu Ding	2252067
EPA 365.1 Rev. 2.0 dissolved	06/03/2021			06/03/2021 15:37	Blanca Fach	2252068
	06/03/2021			06/03/2021 15:38	Blanca Fach	2252071
EPA 8270E	06/03/2021	06/07/2021 08:00	Fe-Val Siddell	06/08/2021 18:53	Vandana T. Nagar	2252081
	06/03/2021	06/07/2021 08:00	Fe-Val Siddell	06/15/2021 14:54	Vandana T. Nagar	2252081
	06/03/2021	06/07/2021 08:00	Rasheda Ghaffari	06/11/2021 19:54	Michael Poppell	2252080
EPA 8276	06/03/2021	06/07/2021 08:00	Rasheda Ghaffari	06/11/2021 03:17	Chiran X. Ghimire	2252080
EPA 8321B	06/03/2021	06/07/2021 08:00	Pramila Ghimire	06/07/2021 11:27	Pramila Ghimire	2252077
	06/03/2021	06/07/2021 08:00	Pramila Ghimire	06/07/2021 13:08	Juyoung Kim	2252077
	06/03/2021	06/07/2021 08:00	Pramila Ghimire	06/07/2021 13:19	Juyoung Kim	2252079
	06/03/2021	06/07/2021 08:00	Pramila Ghimire	06/07/2021 13:52	Pramila Ghimire	2252079
	06/03/2021	06/07/2021 09:00	Hoor Shaik	06/12/2021 07:00	Juyoung Kim	2252077
	06/03/2021	06/07/2021 09:00	Hoor Shaik	06/12/2021 07:35	Juyoung Kim	2252079
	06/03/2021	06/10/2021 10:00	Hoor Shaik	06/12/2021 15:40	Juyoung Kim	2252078
SM 2120 B-2011	06/03/2021			06/04/2021 16:38	Madeline Gruver	2252066, 2252069
SM 2320 B-2011	06/03/2021			06/08/2021 01:54	Dale L. Simmons	2252066
	06/03/2021			06/08/2021 02:06	Dale L. Simmons	2252069
SM 2340B	06/03/2021			06/09/2021 18:35	Betina Topolski	2252082
	06/03/2021			06/09/2021 18:41	Betina Topolski	2252083
	06/03/2021			06/09/2021 18:48	Betina Topolski	2252084
SM 2540 C-2011	06/03/2021			06/08/2021 14:56	Yijie Li	2252066, 2252069

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-2011	06/03/2021			06/08/2021 14:56	Yijie Li	2252066, 2252069
SM 4500 F-C-2011	06/03/2021			06/08/2021 01:54	Dale L. Simmons	2252066
	06/03/2021			06/08/2021 02:06	Dale L. Simmons	2252069
SM 5310 B-2011	06/03/2021			06/10/2021 00:48	Madeline Gruver	2252070
	06/03/2021			06/15/2021 08:46	Madeline Gruver	2252067