Chemical Analysis Report

SE-DIST-2021-05-28-01

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

Event Description: **SMP - 3208B Deploy**
Request ID: **RQ-2021-05-10-57**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Drew Liddick

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 21-JUN-2021 10:28

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: Bessey Creek @ Mouth **Collection Date/Time: 05/27/2021 15:00**

Field ID: G2SE0048 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251125	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P399011	
	SM 2320 B-2011	Total Alkalinity	150		mg CaCO3/L	P399280	
	SM 2540 D-2011	TSS	5	I	mg/L	P399107	
	SM 4500 F-C-2011	Fluoride	0.76		mg F/L	P399274	
2251126	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P399320	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P399151	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P399090	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P399540	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P399097	
2251127	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P398988	
2251155	EPA 8321B	Aldicarb	0.020	U	ug/L	P399077	RPD
		Aldicarb Sulfone	0.0020	U	ug/L	P399077	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P399077	
		Carbaryl	0.0020	U	ug/L	P399077	
		Carbofuran	0.0020	U	ug/L	P399077	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P399077	
		Methiocarb	0.0020	U	ug/L	P399077	
		Methomyl	0.0020	U	ug/L	P399077	
		Oxamyl	0.0020	U	ug/L	P399077	
		Propoxur	0.0020	U	ug/L	P399077	
2251156		Acesulfame K	0.10	U	ug/L	P399017	
		2,4-D	0.021		ug/L	P399014	
		AMPA	1.0	U	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399014	
		Sucralose	0.30		ug/L	P399017	MS
		Acetaminophen	0.013	I	ug/L	P399014	
		Endothall	0.25	U	ug/L	P399017	
		Acetamiprid	0.0020	U	ug/L	P399014	
		Glufosinate	1.0	U	ug/L	P399017	
		Glyphosate	1.0	U	ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399014	
		Bentazon	0.030		ug/L	P399014	
		Benzovindiflupyr	0.0020	U	ug/L	P399014	
		Carbamazepine	0.0012	I	ug/L	P399014	
		Clothianidin	0.0020	U	ug/L	P399014	
		Dinotefuran	0.0020	U	ug/L	P399014	
		Diuron	0.053		ug/L	P399014	
		Fenuron	0.016	U	ug/L	P399014	
		Fluridone	0.0043		ug/L	P399014	
		Imazapyr	0.045		ug/L	P399014	
		Hydrocodone	0.0020	U	ug/L	P399014	
		Ibuprofen	0.020	U	ug/L	P399014	
		Imidacloprid	0.0051	I	ug/L	P399014	

Field ID: G2SE0048 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251156	EPA 8321B	Linuron	0.0040	U	ug/L	P399014	
		Mandestrobin	0.0020	U	ug/L	P399014	
		MCPP	0.0020	U	ug/L	P399014	
		Naproxen	0.0080	U	ug/L	P399014	
		Primidone	0.0042	I	ug/L	P399014	
		Pyraclostrobin	0.0020	U	ug/L	P399014	
		Thiamethoxam	0.0020	U	ug/L	P399014	
		Tolfenpyrad	0.0020	U	ug/L	P399014	
		Triclopyr	0.0040	U	ug/L	P399014	
2251157	EPA 8270E	Aldrin	0.68	UJ	ng/L	P399190	RPD
		Alpha-BHC	0.10	U	ng/L	P399190	
		Alpha-Chlordane	0.21	U	ng/L	P399190	
		Beta-BHC	0.10	U	ng/L	P399190	
		Beta-Cyfluthrin**	1.3	UJ	ng/L	P399190	RPD
		Bifenthrin**	0.52	U	ng/L	P399190	
		Chlorothalonil	0.80	I J	ng/L	P399190	MS, RPD
		Cis-Nonachlor**	0.21	U	ng/L	P399190	
		Cypermethrin	1.6	U	ng/L	P399190	
		Dacthal**	0.16	U	ng/L	P399190	
		DDD-p,p'	0.26	U	ng/L	P399190	
		DDE-p,p'	0.21	U	ng/L	P399190	
		DDT-p,p'	0.26	U	ng/L	P399190	
		Delta-BHC	0.42	U	ng/L	P399190	
		Deltamethrin**	1.3	UJ	ng/L	P399190	LCS, MS
		Dichlobenil**	0.10	UJ	ng/L	P399190	RPD
		Dicofol	1.3	U	ng/L	P399190	
		Dieldrin	0.42	U	ng/L	P399190	
		Endosulfan I	0.42	U	ng/L	P399190	
		Endosulfan II	0.42	U	ng/L	P399190	
		Endosulfan Sulfate	0.31	U	ng/L	P399190	
		Endrin	0.42	U	ng/L	P399190	
		Endrin Aldehyde	0.79	U	ng/L	P399190	
		Endrin Ketone	0.42	U	ng/L	P399190	
		Esfenvalerate**	0.79	UJ	ng/L	P399190	RPD
		Ethalfluralin**	0.16	U	ng/L	P399190	
		Fenpropathrin**	0.26	U	ng/L	P399190	
		Gamma-BHC	0.13	U	ng/L	P399190	
		Gamma-Chlordane	0.21	U	ng/L	P399190	
		Heptachlor	0.21	UJ	ng/L	P399190	MS
		Heptachlor Epoxide	0.26	U	ng/L	P399190	
		Hexachlorobenzene	1.0	U	ng/L	P399190	
		Kepone**	5.2	UJ	ng/L	P399190	RPD
		Lambda-Cyhalothrin**	0.79	U	ng/L	P399190	
		Methoxychlor	0.31	U	ng/L	P399190	
		MGK-264**	0.21	U	ng/L	P399190	

Field ID: G2SE0048 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251157	EPA 8270E	Mirex	0.31	U	ng/L	P399190	
		Permethrin	1.7	U	ng/L	P399190	
		Phenothrin**	0.94	U	ng/L	P399190	
		Piperonyl Butoxide**	0.16	U	ng/L	P399190	
		Prallethrin**	2.1	U	ng/L	P399190	
		Tau-Fluvalinate**	0.26	U	ng/L	P399190	
		Tetramethrin**	0.79	U	ng/L	P399190	
		Trans-Nonachlor**	0.21	UJ	ng/L	P399190	MS
		Triclosan Methyl**	0.16	U	ng/L	P399190	
		Trifluralin	0.21	U	ng/L	P399190	
	EPA 8276	Chlordane	5.2	U	ng/L	P399190	
		Toxaphene	31	U	ng/L	P399190	
2251158	EPA 8270E	Acetochlor	0.24	U	ng/L	P398911	
		Alachlor	0.24	U	ng/L	P398911	
		Ametryn	4.5		ng/L	P398911	
		Atrazine	87		ng/L	P398911	
		Atrazine Desethyl	12		ng/L	P398911	RPD
		Azinphos Methyl	1.9	U	ng/L	P398911	MS, RPD
		Azoxystrobin**	4.0		ng/L	P398911	
		Bromacil	2.2		ng/L	P398911	
		Butylate	0.39	U	ng/L	P398911	
		Caffeine**	12	I	ng/L	P398911	
		Carbophenothion	0.48	U	ng/L	P398911	
		Carfentrazone Ethyl**	0.096	U	ng/L	P398911	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P398911	
		Chlorpyrifos Methyl	0.048	U	ng/L	P398911	
		Cyanazine	3.1	U	ng/L	P398911	
		Demeton	1.4	U	ng/L	P398911	
		Diazinon	0.12	U	ng/L	P398911	
		Difenoconazole**	0.58	U	ng/L	P398911	
		Dimethenamid**	0.096	U	ng/L	P398911	
		Disulfoton	0.48	U	ng/L	P398911	
		Dithiopyr**	0.17	U	ng/L	P398911	
		EPTC	1.2	U	ng/L	P398911	
		Ethion	0.14	U	ng/L	P398911	
		Ethoprop	0.096	U	ng/L	P398911	
		Fenamiphos	0.48	U	ng/L	P398911	
		Fenbuconazole**	0.12	U	ng/L	P398911	
		Fipronil	0.24	U	ng/L	P398911	
		Fipronil Desulfinyl**	0.23	I	ng/L	P398911	
		Fipronil Sulfide	0.14	U	ng/L	P398911	
		Fipronil Sulfone	0.35	I	ng/L	P398911	
		Fluazifop-P-butyl**	0.096	U	ng/L	P398911	
		Fludioxonil**	0.12	U	ng/L	P398911	
		Flumioxazin**	1.7	U	ng/L	P398911	

Field ID: G2SE0048 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251158	EPA 8270E	Flutolanil**	0.29	I	ng/L	P398911	
		Fluxapyroxad**	0.65		ng/L	P398911	
		Fonofos	0.19	U	ng/L	P398911	
		Hexazinone	11		ng/L	P398911	
		Imazalil**	0.72	U	ng/L	P398911	
		Iprodione**	0.58	U	ng/L	P398911	
		Malathion	0.34	U	ng/L	P398911	
		Metalaxyl	2.5	I	ng/L	P398911	
		Metolachlor	54		ng/L	P398911	
		Metribuzin	3.1	U	ng/L	P398911	
		Mevinphos	1.0	U	ng/L	P398911	
		Molinate	0.29	U	ng/L	P398911	
		Myclobutanil**	0.33	I	ng/L	P398911	
		Naled**	1.4	UJ	ng/L	P398911	LCS
		Norflurazon	7.1		ng/L	P398911	
		Oxadiazon	3.5		ng/L	P398911	
		Oxyfluorfen**	0.14	U	ng/L	P398911	
		Parathion Ethyl	0.24	U	ng/L	P398911	
		Parathion Methyl	0.53	U	ng/L	P398911	
		Pendimethalin	0.96	U	ng/L	P398911	
		Phorate	0.51	U	ng/L	P398911	
		Prodiamine**	0.17	U	ng/L	P398911	
		Prometon	0.87	U	ng/L	P398911	
		Prometryn	0.19	U	ng/L	P398911	
		Pronamide**	0.14	U	ng/L	P398911	
		Propiconazole**	5.8		ng/L	P398911	
		Pyriproxyfen**	0.12	U	ng/L	P398911	RPD
		Simazine	0.48	U	ng/L	P398911	
		Sulfentrazone**	11		ng/L	P398911	
		Tebuconazole**	1.1	I	ng/L	P398911	
		Terbufos	0.096	U	ng/L	P398911	
		Terbuthylazine	0.41	U	ng/L	P398911	
2251184	EPA 200.7 Rev. 4.4	Calcium	266		mg/L	P398980	
		Chromium	3.0	U	ug/L	P398980	
		Iron	90	U	ug/L	P398980	
		Magnesium	714		mg/L	P398980	
		Manganese	18		ug/L	P398980	
		Zinc	15	U	ug/L	P398980	
	EPA 200.8 Rev. 5.4	Aluminum	67	I	ug/L	P398980	
		Antimony	0.20	U	ug/L	P398980	
		Arsenic	3.46		ug/L	P398980	
		Beryllium	0.040	U	ug/L	P398980	
		Cadmium	0.080	U	ug/L	P398980	
		Copper	1.7	I	ug/L	P398980	
		Lead	0.80	U	ug/L	P398980	

Field ID: G2SE0048 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251184	EPA 200.8 Rev. 5.4	Nickel	2.0	U	ug/L	P398980	
		Selenium	0.80	U	ug/L	P398980	
		Silver	0.040	U	ug/L	P398980	
		Thallium	0.40	U	ug/L	P398980	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MDL for some parameters elevated due to matrix interference.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for some parameters not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: FB **Collection Date/Time: 05/27/2021 15:10**

Field ID: FB_05272021 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251122	EPA 180.1 Rev. 2.0	Turbidity	0.20		NTU	P399011	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P399063	
	SM 2540 D-2011	TSS	2	U	mg/L	P399106	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P399064	
2251123	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P399373	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P399150	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P399031	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P399486	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P399096	
2251124	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P398987	
2251154	EPA 8321B	2,4-D	0.0020	U	ug/L	P399014	
		Acesulfame K	0.10	U	ug/L	P399017	
		2,4,5-T	0.0040	U	ug/L	P399014	
		AMPA	0.10	U	ug/L	P399017	
		Sucralose	0.010	U	ug/L	P399017	MS
		Acetaminophen	0.0080	U	ug/L	P399014	
		Acetamiprid	0.0020	U	ug/L	P399014	
		Endothall	0.25	U	ug/L	P399017	
		Glufosinate	0.10	U	ug/L	P399017	
		Glyphosate	0.10	U	ug/L	P399017	
		Afidopyropen	0.0020	U	ug/L	P399014	
		Bentazon	8.0E-04	U	ug/L	P399014	
		Benzovindiflupyr	0.0020	U	ug/L	P399014	
		Carbamazepine	8.0E-04	U	ug/L	P399014	
		Clothianidin	0.0020	U	ug/L	P399014	
		Dinotefuran	0.0020	U	ug/L	P399014	
		Diuron	0.0020	U	ug/L	P399014	
		Fenuron	0.016	U	ug/L	P399014	
		Fluridone	8.0E-04	U	ug/L	P399014	
		Imazapyr	0.0040	U	ug/L	P399014	
		Hydrocodone	0.0020	U	ug/L	P399014	
		Ibuprofen	0.020	U	ug/L	P399014	
		Imidacloprid	0.0020	U	ug/L	P399014	
		Linuron	0.0040	U	ug/L	P399014	
		Mandestrobin	0.0020	U	ug/L	P399014	
		MCPP	0.0020	U	ug/L	P399014	
		Naproxen	0.0080	U	ug/L	P399014	
		Primidone	0.0040	U	ug/L	P399014	
		Pyraclostrobin	0.0020	U	ug/L	P399014	
		Thiamethoxam	0.0020	U	ug/L	P399014	
		Tolfenpyrad	0.0020	U	ug/L	P399014	
		Triclopyr	0.0040	U	ug/L	P399014	
2251183	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P399302	

Field ID: FB_05272021 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2251183	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P399302	
		Magnesium	0.040	U	mg/L	P399302	
		Manganese	1.0	U	ug/L	P399302	
		Zinc	5.0	U	ug/L	P399302	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P399302	
		Antimony	0.050	U	ug/L	P399302	
		Arsenic	0.050	U	ug/L	P399302	
		Beryllium	0.010	U	ug/L	P399302	
		Cadmium	0.020	U	ug/L	P399302	
		Chromium	0.40	U	ug/L	P399302	
		Copper	0.40	U	ug/L	P399302	
		Lead	0.20	U	ug/L	P399302	
		Nickel	0.50	U	ug/L	P399302	
		Selenium	0.20	U	ug/L	P399302	
		Silver	0.010	U	ug/L	P399302	
		Thallium	0.10	U	ug/L	P399302	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: The result was confirmed on 05/28/2021.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P399011

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P398980

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Chromium	1.0	U	ug/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399302

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398980

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
Cadmium	0.020	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 200.8 Rev. 5.4
Batch ID: P399302

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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399302

Component	Result	Code	Units
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399320

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399373

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399151

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399031

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399090

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399486

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399540

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398987

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398988

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

Reference Method: EPA 8270E
Batch ID: P398911

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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P398911

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P398911

Component	Result	Code	Units
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
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: P399190

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P399190

Component	Result	Code	Units
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
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: P399190

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

Reference Method: EPA 8321B
Batch ID: P399014

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P399014

Component	Result	Code	Units
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: P399017

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: P399077

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P399063

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

Reference Method: SM 2320 B-2011
Batch ID: P399280

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

Reference Method: SM 2540 D-2011
Batch ID: P399106

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P399107

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P399064

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P399274

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P399096

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

Reference Method: SM 5310 B-2011
Batch ID: P399097

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: P398980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.9		P	85 - 115
Chromium	97.1		P	85 - 115
Iron	107		P	85 - 115
Magnesium	95.9		P	85 - 115
Manganese	103		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	106		P	85 - 115
Magnesium	105		P	85 - 115
Manganese	99.7		P	85 - 115
Zinc	93.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398980

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	99.0		P	85 - 115
Arsenic	100		P	85 - 115
Beryllium	85.2		P	85 - 115
Cadmium	102		P	85 - 115
Copper	99.6		P	85 - 115
Lead	105		P	85 - 115
Nickel	100		P	85 - 115
Selenium	99.8		P	85 - 115
Silver	106		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.4		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	92.4		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	99.7		P	85 - 115
Copper	100		P	85 - 115
Lead	110		P	85 - 115
Nickel	99.6		P	85 - 115
Selenium	103		P	85 - 115
Silver	101		P	85 - 115
Thallium	104		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399320

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399373

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399151

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399031

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399090

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399486

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: P399540

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398987

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398988

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

Reference Method: EPA 8270E
Batch ID: P398911

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	74.6	77.1	P/P	70 - 121
Alachlor	71.4	73.0	P/P	70 - 119
Ametryn	98.4	89.2	P/P	61 - 135
Atrazine	80.7	86.5	P/P	76 - 123
Atrazine Desethyl	78.6	84.4	P/P	35 - 140
Azinphos Methyl	99.7	89.8	P/P	57 - 163
Azoxystrobin	118	118	P/P	43 - 231
Bromacil	66.6	67.4	P/P	42 - 123
Butylate	45.4	52.0	P/P	34 - 92.0
Caffeine	101	113	P/P	70 - 130
Carbophenothion	70.3	65.8	P/P	61 - 121
Carfentrazone Ethyl	84.6	76.3	P/P	62 - 139
Chlorpyrifos Ethyl	69.3	67.4	P/P	67 - 121
Chlorpyrifos Methyl	72.1	73.1	P/P	67 - 120
Cyanazine	151	154	P/P	20 - 226
Demeton	62.2	80.3	P/P	35 - 125
Diazinon	82.7	85.5	P/P	70 - 122
Difenoconazole	110	100	P/P	56 - 186
Dimethenamid	76.1	78.1	P/P	67 - 119
Disulfoton	61.0	77.9	P/P	47 - 120
Dithiopyr	71.7	72.9	P/P	67 - 118
EPTC	44.3	53.5	P/P	33 - 90.0
Ethion	51.8	58.4	P/P	40 - 133
Ethoprop	83.4	101	P/P	61 - 121
Fenamiphos	86.6	81.3	P/P	31 - 139
Fenbuconazole	90.1	76.9	P/P	66 - 141
Fipronil	83.3	77.3	P/P	62 - 129
Fipronil Desulfinyl	76.9	76.1	P/P	59 - 126
Fipronil Sulfide	80.1	76.6	P/P	63 - 117
Fipronil Sulfone	68.8	68.5	P/P	57 - 117
Fluazifop-P-butyl	81.8	73.5	P/P	63 - 124
Fludioxonil	86.1	77.4	P/P	63 - 123
Flumioxazin	107	106	P/P	34 - 245
Flutolanil	85.8	80.4	P/P	56 - 131
Fluxapyroxad	77.1	68.9	P/P	57 - 117
Fonofos	76.7	90.9	P/P	61 - 116
Hexazinone	80.9	90.1	P/P	55 - 138
Imazalil	84.2	78.0	P/P	33 - 143
Iprodione	78.6	70.5	P/P	59 - 118
Malathion	75.0	77.9	P/P	62 - 138
Metalaxyl	80.6	81.9	P/P	24 - 147
Metolachlor	75.7	74.2	P/P	68 - 118
Metribuzin	88.6	91.0	P/P	20 - 239
Mevinphos	74.1	78.0	P/P	46 - 124
Molinate	57.6	76.7	P/P	46 - 100
Myclobutanil	83.0	74.7	P/P	32 - 149

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P398911

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Naled	30.4	30.7	F/F	32 - 95.0
Norflurazon	77.4	68.9	P/P	57 - 127
Oxadiazon	78.7	75.8	P/P	63 - 118
Oxyfluorfen	77.2	73.5	P/P	69 - 137
Parathion Ethyl	77.7	85.5	P/P	70 - 113
Parathion Methyl	91.6	102	P/P	71 - 130
Pendimethalin	71.0	79.9	P/P	55 - 118
Phorate	74.8	78.3	P/P	46 - 125
Prodiamine	33.6	34.7	P/P	20 - 141
Prometon	80.1	87.5	P/P	54 - 122
Prometryn	85.3	85.5	P/P	66 - 124
Pronamide	84.2	88.5	P/P	79 - 122
Propiconazole	82.5	72.3	P/P	61 - 126
Pyriproxyfen	69.0	65.7	P/P	52 - 131
Simazine	80.4	89.6	P/P	75 - 128
Sulfentrazone	63.8	57.2	P/P	20 - 132
Tebuconazole	57.1	58.6	P/P	20 - 116
Terbufos	72.5	80.9	P/P	61 - 117
Terbuthylazine	79.7	83.1	P/P	74 - 116

Reference Method: EPA 8270E
Batch ID: P399190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	24.5	35.8	P/P	20 - 150
Alpha-BHC	87.9	95.1	P/P	50 - 150
Alpha-Chlordane	70.8	87.3	P/P	50 - 150
Beta-BHC	87.9	113	P/P	50 - 150
Beta-Cyfluthrin	132	128	P/P	50 - 150
Bifenthrin	71.5	77.2	P/P	40 - 150
Chlorothalonil	125	140	P/P	20 - 150
Cis-Nonachlor	77.4	84.2	P/P	50 - 150
Cypermethrin	125	124	P/P	50 - 150
Dacthal	85.3	95.2	P/P	50 - 150
DDD-p,p'	73.3	80.6	P/P	50 - 150
DDE-p,p'	67.2	79.6	P/P	50 - 150
DDT-p,p'	72.0	79.7	P/P	50 - 150
Delta-BHC	103	122	P/P	50 - 150
Deltamethrin	154	136	F/P	50 - 150
Dichlobenil	63.2	64.2	P/P	40 - 150
Dicofol	85.3	89.4	P/P	50 - 150
Dieldrin	76.5	89.6	P/P	50 - 150
Endosulfan I	76.8	86.5	P/P	50 - 150
Endosulfan II	86.5	94.5	P/P	50 - 150
Endosulfan Sulfate	81.1	88.4	P/P	50 - 150
Endrin	79.4	88.1	P/P	50 - 150
Endrin Aldehyde	85.0	93.9	P/P	50 - 150
Endrin Ketone	93.8	98.9	P/P	50 - 150
Esfenvalerate	134	126	P/P	50 - 180
Ethalfluralin	73.2	81.2	P/P	50 - 150
Fenpropathrin	85.0	89.3	P/P	50 - 150
Gamma-BHC	90.3	102	P/P	50 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P399190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Gamma-Chlordane	71.2	82.8	P/P	50 - 150
Heptachlor	64.2	70.5	P/P	50 - 150
Heptachlor Epoxide	78.1	87.8	P/P	50 - 150
Hexachlorobenzene	55.3	65.3	P/P	50 - 150
Kepone	85.9	115	P/P	30 - 180
Lambda-Cyhalothrin	134	135	P/P	50 - 200
Methoxychlor	88.7	94.5	P/P	50 - 150
MGK-264	56.9	65.0	P/P	30 - 150
Mirex	112	134	P/P	50 - 180
Permethrin	113	111	P/P	50 - 150
Phenothrin	39.6	47.2	P/P	20 - 150
Piperonyl Butoxide	97.9	96.7	P/P	50 - 150
Prallethrin	50.6	62.3	P/P	30 - 150
Tau-Fluvalinate	94.6	97.6	P/P	40 - 150
Tetramethrin	68.2	64.4	P/P	30 - 150
Trans-Nonachlor	71.1	81.2	P/P	50 - 150
Triclosan Methyl	75.9	87.4	P/P	50 - 150
Trifluralin	70.6	78.3	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P399190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	91.5	100	P/P	56 - 117
Toxaphene	86.4	100	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P399014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	113		P	40 - 150
2,4,5-T	111		P	40 - 150
Acetaminophen	92.4		P	30 - 150
Acetamiprid	84.1		P	40 - 150
Afidopyropen	75.4		P	40 - 150
Bentazon	96.7		P	30 - 150
Benzovindiflupyr	97.0		P	40 - 150
Carbamazepine	91.2		P	40 - 150
Clothianidin	86.9		P	40 - 150
Dinotefuran	94.2		P	40 - 150
Diuron	78.3		P	40 - 150
Fenuron	111		P	40 - 150
Fluridone	82.3		P	40 - 150
Hydrocodone	86.6		P	40 - 150
Ibuprofen	77.1		P	40 - 150
Imazapyr	96.0		P	40 - 150
Imidacloprid	85.8		P	40 - 150
Linuron	75.1		P	40 - 150
Mandestrobin	109		P	40 - 150
MCPP	116		P	40 - 150
Naproxen	60.5		P	40 - 150
Primidone	92.0		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P399014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	72.8		P	40 - 150
Thiamethoxam	85.6		P	40 - 150
Tolfenpyrad	61.4		P	30 - 150
Triclopyr	108		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	94.1		P	40 - 150
AMPA	89.9		P	40 - 150
Endothall	88.2		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	104		P	40 - 150
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399077

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	83.1		P	30 - 160
Aldicarb	103		P	30 - 160
Aldicarb Sulfone	88.8		P	30 - 160
Aldicarb Sulfoxide	77.5		P	30 - 160
Carbaryl	63.4		P	30 - 160
Carbofuran	60.4		P	30 - 160
Methiocarb	75.1		P	30 - 160
Methomyl	72.1		P	30 - 160
Oxamyl	88.6		P	30 - 160
Propoxur	65.9		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P399063

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.8		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P399280

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.9		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P399064

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P399274

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P399096

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

Reference Method: SM 5310 B-2011
Batch ID: P399097

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.7		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P398980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250502	Chromium	97.3	97.2	P/P	70 - 130
2250502	Iron	109	107	P/P	70 - 130
2250502	Manganese	105	104	P/P	70 - 130
2250502	Zinc	114	110	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251062	Calcium	105		P	80 - 120
2251062	Iron	106		P	80 - 120
2251062	Magnesium	102		P	80 - 120
2251062	Manganese	101		P	80 - 120
2251062	Zinc	98.0		P	80 - 120
2251291	Calcium	113	108	P/P	80 - 120
2251291	Iron	110	107	P/P	80 - 120
2251291	Magnesium	109	106	P/P	80 - 120
2251291	Manganese	103	101	P/P	80 - 120
2251291	Zinc	99.0	97.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250502	Aluminum	112	107	P/P	70 - 130
2250502	Antimony	103	99.6	P/P	70 - 130
2250502	Arsenic	110	106	P/P	70 - 130
2250502	Beryllium	77.9	76.1	P/P	70 - 130
2250502	Cadmium	96.0	92.5	P/P	70 - 130
2250502	Copper	108	105	P/P	70 - 130
2250502	Lead	113	108	P/P	70 - 130
2250502	Nickel	112	107	P/P	70 - 130
2250502	Selenium	103	97.2	P/P	70 - 130
2250502	Silver	95.5	93.5	P/P	70 - 130
2250502	Thallium	114	110	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251062	Aluminum	98.1		P	80 - 120
2251062	Antimony	104		P	80 - 120
2251062	Arsenic	103		P	80 - 120
2251062	Beryllium	95.5		P	80 - 120
2251062	Cadmium	104		P	80 - 120
2251062	Chromium	101		P	80 - 120
2251062	Copper	102		P	80 - 120
2251062	Lead	111		P	80 - 120
2251062	Nickel	101		P	80 - 120
2251062	Selenium	103		P	80 - 120
2251062	Silver	101		P	80 - 120
2251062	Thallium	107		P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251291	Aluminum	93.7	96.8	P/P	80 - 120
2251291	Antimony	99.7	101	P/P	80 - 120
2251291	Arsenic	99.5	102	P/P	80 - 120
2251291	Beryllium	89.3	94.0	P/P	80 - 120
2251291	Cadmium	102	103	P/P	80 - 120
2251291	Chromium	97.6	98.5	P/P	80 - 120
2251291	Copper	98.9	99.5	P/P	80 - 120
2251291	Lead	108	110	P/P	80 - 120
2251291	Nickel	97.3	97.7	P/P	80 - 120
2251291	Selenium	98.2	99.4	P/P	80 - 120
2251291	Silver	103	102	P/P	80 - 120
2251291	Thallium	102	104	P/P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250818	Ammonia-N	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251234	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251234	Kjeldahl Nitrogen	97.9	97.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399151

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251126	Kjeldahl Nitrogen	101	95.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251053	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251126	NO2NO3-N	98.5	98.5	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251104	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251595	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250906	O-Phosphate-P	98.0	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250927	O-Phosphate-P	98.0	98.0	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P398911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250788	Acetochlor	77.6	90.1	P/P	66 - 122
2250788	Alachlor	74.8	82.8	P/P	65 - 122
2250788	Azinphos Methyl	105	200	P/F	44 - 174
2250788	Azoxystrobin	125	138	P/P	10 - 268
2250788	Bromacil	68.0	90.3	P/P	31 - 145
2250788	Butylate	43.1	42.4	P/P	15 - 97.0
2250788	Caffeine	102	115	P/P	70 - 130
2250788	Carbophenothion	70.2	68.9	P/P	42 - 129
2250788	Carfentrazone Ethyl	83.8	88.7	P/P	62 - 145
2250788	Chlorpyrifos Ethyl	80.4	77.7	P/P	60 - 124
2250788	Chlorpyrifos Methyl	71.7	75.4	P/P	66 - 119
2250788	Cyanazine	146	175	P/P	17 - 225
2250788	Demeton	83.9	89.4	P/P	36 - 142
2250788	Diazinon	88.2	97.3	P/P	70 - 128
2250788	Difenoconazole	120	130	P/P	33 - 222
2250788	Dimethenamid	80.3	87.5	P/P	54 - 125
2250788	Disulfoton	75.1	72.7	P/P	49 - 133
2250788	Dithiopyr	78.2	83.3	P/P	55 - 123
2250788	EPTC	43.0	37.4	P/P	19 - 91.0
2250788	Ethion	58.7	66.2	P/P	13 - 143
2250788	Ethoprop	100	104	P/P	49 - 144
2250788	Fenamiphos	81.6	74.7	P/P	32 - 136
2250788	Fenbuconazole	96.3	104	P/P	73 - 148
2250788	Fipronil	85.4	92.2	P/P	57 - 129
2250788	Fipronil Desulfinyl	79.1	84.7	P/P	49 - 127
2250788	Fipronil Sulfide	79.0	78.5	P/P	44 - 127
2250788	Fipronil Sulfone	66.5	67.4	P/P	35 - 126
2250788	Fluazifop-P-butyl	86.2	87.7	P/P	67 - 129

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P398911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250788	Fludioxonil	81.1	90.6	P/P	61 - 126
2250788	Flumioxazin	144	164	P/P	38 - 279
2250788	Flutolanil	86.5	88.3	P/P	55 - 136
2250788	Fluxapyroxad	35.3	44.6	P/P	33 - 140
2250788	Fonofos	86.0	90.5	P/P	58 - 125
2250788	Imazalil	162	165	P/P	10 - 221
2250788	Iprodione	79.7	82.7	P/P	32 - 140
2250788	Malathion	81.7	82.8	P/P	52 - 138
2250788	Metalaxyl	83.4	88.1	P/P	46 - 134
2250788	Metolachlor	73.2	83.5	P/P	58 - 122
2250788	Metribuzin	102	109	P/P	16 - 272
2250788	Mevinphos	77.6	89.2	P/P	45 - 140
2250788	Molinate	68.1	67.9	P/P	41 - 103
2250788	Myclobutanil	83.0	90.0	P/P	60 - 134
2250788	Naled	30.1	28.6	P/P	20 - 113
2250788	Norflurazon	75.0	74.3	P/P	51 - 123
2250788	Oxadiazon	69.2	74.6	P/P	44 - 125
2250788	Oxyfluorfen	84.9	101	P/P	66 - 176
2250788	Parathion Ethyl	82.6	91.7	P/P	57 - 132
2250788	Parathion Methyl	94.3	99.5	P/P	59 - 156
2250788	Pendimethalin	85.2	93.3	P/P	59 - 129
2250788	Phorate	99.5	106	P/P	47 - 136
2250788	Prodiamine	46.9	50.2	P/P	10 - 159
2250788	Prometon	88.1	91.7	P/P	59 - 127
2250788	Prometryn	113	126	P/P	59 - 129
2250788	Pronamide	97.6	109	P/P	65 - 145
2250788	Propiconazole	77.2	65.7	P/P	28 - 165
2250788	Pyriproxyfen	70.3	162	P/P	21 - 180
2250788	Simazine	135	138	P/P	63 - 147
2250788	Sulfentrazone	65.3	73.8	P/P	32 - 136
2250788	Tebuconazole	60.6	68.2	P/P	10 - 117
2250788	Terbufos	84.6	91.2	P/P	61 - 131
2250788	Terbuthylazine	87.6	96.2	P/P	62 - 126

Reference Method: EPA 8270E
Batch ID: P399190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251157	Aldrin	37.4	43.2	P/P	20 - 170
2251157	Alpha-BHC	87.0	87.0	P/P	50 - 170
2251157	Alpha-Chlordane	58.1	65.6	P/P	50 - 170
2251157	Beta-BHC	101	115	P/P	50 - 170
2251157	Beta-Cyfluthrin	116	158	P/P	50 - 170
2251157	Bifenthrin	62.4	73.8	P/P	40 - 170
2251157	Chlorothalonil	100	174	P/F	20 - 170
2251157	Cis-Nonachlor	56.8	66.6	P/P	50 - 170
2251157	Cypermethrin	104	134	P/P	50 - 170
2251157	Dacthal	80.0	84.3	P/P	50 - 170
2251157	DDD-p,p'	69.2	83.2	P/P	50 - 170
2251157	DDE-p,p'	54.7	60.6	P/P	50 - 170
2251157	DDT-p,p'	63.4	64.7	P/P	50 - 170
2251157	Delta-BHC	118	134	P/P	50 - 170

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P399190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251157	Deltamethrin	135	179	P/F	50 - 170
2251157	Dichlobenil	61.1	41.0	P/P	40 - 170
2251157	Dicofol	78.1	88.4	P/P	50 - 170
2251157	Dieldrin	63.8	68.8	P/P	50 - 170
2251157	Endosulfan I	64.1	71.4	P/P	50 - 170
2251157	Endosulfan II	76.9	90.3	P/P	50 - 170
2251157	Endosulfan Sulfate	78.0	92.0	P/P	50 - 170
2251157	Endrin	66.4	74.7	P/P	50 - 170
2251157	Endrin Aldehyde	61.2	64.4	P/P	50 - 170
2251157	Endrin Ketone	82.5	106	P/P	50 - 170
2251157	Esfenvalerate	114	156	P/P	50 - 180
2251157	Ethalfluralin	63.2	63.1	P/P	50 - 170
2251157	Fenpropathrin	67.2	75.6	P/P	50 - 170
2251157	Gamma-BHC	103	102	P/P	50 - 170
2251157	Gamma-Chlordane	54.3	63.7	P/P	50 - 170
2251157	Heptachlor	48.1	55.6	F/P	50 - 170
2251157	Heptachlor Epoxide	65.0	71.4	P/P	50 - 170
2251157	Hexachlorobenzene	56.4	61.9	P/P	50 - 170
2251157	Kepone	51.1	95.2	P/P	30 - 180
2251157	Lambda-Cyhalothrin	140	187	P/P	50 - 200
2251157	Methoxychlor	80.9	80.7	P/P	50 - 170
2251157	MGK-264	68.6	83.4	P/P	30 - 170
2251157	Mirex	86.5	104	P/P	50 - 180
2251157	Permethrin	98.5	114	P/P	50 - 170
2251157	Phenothrin	49.2	50.9	P/P	20 - 170
2251157	Piperonyl Butoxide	102	119	P/P	50 - 170
2251157	Prallethrin	57.8	62.1	P/P	30 - 170
2251157	Tau-Fluvalinate	85.1	109	P/P	40 - 170
2251157	Tetramethrin	65.7	78.7	P/P	30 - 170
2251157	Trans-Nonachlor	48.1	59.5	F/P	50 - 170
2251157	Triclosan Methyl	67.3	72.9	P/P	50 - 170
2251157	Trifluralin	55.6	61.0	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P399190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250779	Chlordane	89.0	83.6	P/P	47 - 128
2250779	Toxaphene	86.9	94.3	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P399014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250793	2,4-D	119	109	P/P	40 - 150
2250793	2,4,5-T	92.1	77.2	P/P	40 - 150
2250793	Acetaminophen	84.2	82.6	P/P	30 - 150
2250793	Acetamiprid	66.2	66.9	P/P	40 - 150
2250793	Afidopyropen	102	84.3	P/P	40 - 150
2250793	Benzovindiflupyr	95.7	91.9	P/P	40 - 150
2250793	Carbamazepine	72.2	68.9	P/P	40 - 150
2250793	Clothianidin	70.9	78.2	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P399014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250793	Dinotefuran	90.2	94.5	P/P	40 - 150
2250793	Diuron	52.4	51.7	P/P	40 - 150
2250793	Fenuron	75.6	77.9	P/P	40 - 150
2250793	Fluridone	75.7	77.2	P/P	40 - 150
2250793	Hydrocodone	70.7	69.7	P/P	40 - 150
2250793	Ibuprofen	79.6	76.3	P/P	40 - 150
2250793	Imidacloprid	133	125	P/P	40 - 150
2250793	Linuron	75.9	72.8	P/P	40 - 150
2250793	Mandestrobin	129	113	P/P	40 - 150
2250793	MCPP	102	104	P/P	40 - 150
2250793	Naproxen	65.5	65.1	P/P	40 - 150
2250793	Primidone	85.8	86.3	P/P	40 - 150
2250793	Pyraclostrobin	77.3	75.8	P/P	40 - 150
2250793	Thiamethoxam	89.5	87.3	P/P	40 - 150
2250793	Tolfenpyrad	57.1	54.5	P/P	30 - 150
2250793	Triclopyr	88.0	83.7	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250902	Acesulfame K	84.9	81.4	P/P	40 - 150
2250902	AMPA	72.3	70.9	P/P	40 - 150
2250902	Endothall	93.1	103	P/P	40 - 150
2250902	Glufosinate	105	95.8	P/P	40 - 150
2250902	Glyphosate	99.6	90.0	P/P	40 - 150
2250902	Sucralose	38.7	52.0	F/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P399077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250951	3-Hydroxycarbofuran	97.8	91.3	P/P	30 - 160
2250951	Aldicarb	90.0	57.8	P/P	30 - 160
2250951	Aldicarb Sulfone	108	104	P/P	30 - 160
2250951	Aldicarb Sulfoxide	68.8	65.7	P/P	30 - 160
2250951	Carbaryl	49.0	46.4	P/P	30 - 160
2250951	Carbofuran	52.6	45.7	P/P	30 - 160
2250951	Methiocarb	68.5	69.3	P/P	30 - 160
2250951	Methomyl	68.6	69.0	P/P	30 - 160
2250951	Oxamyl	89.6	81.0	P/P	30 - 160
2250951	Propoxur	51.0	46.3	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P399064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251100	Fluoride	99.1	98.4	P/P	92 - 107

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P399274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251254	Fluoride	95.2	95.9	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P399096

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251053	Organic Carbon	101	101	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P399097

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2250817	Organic Carbon	97.4	97.1	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P399011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251099	Turbidity	4.19	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P398980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250502	Calcium	2.41	Spike	P	0 - 20
2250502	Chromium	0.0664	Spike	P	0 - 20
2250502	Iron	1.58	Spike	P	0 - 20
2250502	Magnesium	2.23	Spike	P	0 - 20
2250502	Manganese	1.07	Spike	P	0 - 20
2250502	Zinc	2.86	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P399302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251291	Calcium	2.81	Spike	P	0 - 20
2251291	Iron	2.15	Spike	P	0 - 20
2251291	Magnesium	2.21	Spike	P	0 - 20
2251291	Manganese	1.68	Spike	P	0 - 20
2251291	Zinc	1.32	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P398980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250502	Aluminum	4.36	Spike	P	0 - 20
2250502	Antimony	3.54	Spike	P	0 - 20
2250502	Arsenic	3.44	Spike	P	0 - 20
2250502	Beryllium	2.34	Spike	P	0 - 20
2250502	Cadmium	3.56	Spike	P	0 - 20
2250502	Copper	3.48	Spike	P	0 - 20
2250502	Lead	3.96	Spike	P	0 - 20
2250502	Nickel	2.65	Spike	P	0 - 20
2250502	Selenium	5.61	Spike	P	0 - 20
2250502	Silver	2.11	Spike	P	0 - 20
2250502	Thallium	3.26	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251291	Aluminum	3.19	Spike	P	0 - 20
2251291	Antimony	0.851	Spike	P	0 - 20
2251291	Arsenic	2.07	Spike	P	0 - 20
2251291	Beryllium	5.13	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P399302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251291	Cadmium	0.698	Spike	P	0 - 20
2251291	Chromium	0.968	Spike	P	0 - 20
2251291	Copper	0.543	Spike	P	0 - 20
2251291	Lead	2.05	Spike	P	0 - 20
2251291	Nickel	0.352	Spike	P	0 - 20
2251291	Selenium	1.20	Spike	P	0 - 20
2251291	Silver	1.13	Spike	P	0 - 20
2251291	Thallium	2.85	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250818	Ammonia-N	1.75	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251234	Ammonia-N	0.877	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251234	Kjeldahl Nitrogen	0.0579	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251126	Kjeldahl Nitrogen	4.12	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251053	NO2NO3-N	0.491	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251126	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251104	Total-P	0.184	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P399540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251595	Total-P	0.611	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250906	O-Phosphate-P	1.32	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250927	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P398911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250788	Acetochlor	14.9	Spike	P	0 - 30
2250788	Alachlor	10.1	Spike	P	0 - 30
2250788	Ametryn	1.95	Spike	P	0 - 30
2250788	Atrazine	3.24	Spike	P	0 - 30
2250788	Atrazine Desethyl	34.8	Spike	F	0 - 30
2250788	Azinphos Methyl	61.9	Spike	F	0 - 30
2250788	Azoxystrobin	8.18	Spike	P	0 - 30
2250788	Bromacil	28.2	Spike	P	0 - 30
2250788	Butylate	1.75	Spike	P	0 - 30
2250788	Caffeine	12.1	Spike	P	0 - 30
2250788	Carbophenothion	1.91	Spike	P	0 - 30
2250788	Carfentrazone Ethyl	5.60	Spike	P	0 - 30
2250788	Chlorpyrifos Ethyl	3.39	Spike	P	0 - 30
2250788	Chlorpyrifos Methyl	5.14	Spike	P	0 - 30
2250788	Cyanazine	18.0	Spike	P	0 - 30
2250788	Demeton	6.33	Spike	P	0 - 30
2250788	Diazinon	9.83	Spike	P	0 - 30
2250788	Difenoconazole	7.56	Spike	P	0 - 30
2250788	Dimethenamid	8.54	Spike	P	0 - 30
2250788	Disulfoton	3.24	Spike	P	0 - 30
2250788	Dithiopyr	6.31	Spike	P	0 - 30
2250788	EPTC	14.0	Spike	P	0 - 30
2250788	Ethion	11.9	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250788	Ethoprop	4.10	Spike	P	0 - 30
2250788	Fenamiphos	8.82	Spike	P	0 - 30
2250788	Fenbuconazole	7.30	Spike	P	0 - 30
2250788	Fipronil	7.62	Spike	P	0 - 30
2250788	Fipronil Desulfinyl	6.81	Spike	P	0 - 30
2250788	Fipronil Sulfide	0.609	Spike	P	0 - 30
2250788	Fipronil Sulfone	1.28	Spike	P	0 - 30
2250788	Fluazifop-P-butyl	1.67	Spike	P	0 - 30
2250788	Fludioxonil	11.1	Spike	P	0 - 30
2250788	Flumioxazin	12.4	Spike	P	0 - 30
2250788	Flutolanil	2.06	Spike	P	0 - 30
2250788	Fluxapyroxad	4.85	Spike	P	0 - 30
2250788	Fonofos	5.13	Spike	P	0 - 30
2250788	Hexazinone	2.14	Spike	P	0 - 30
2250788	Imazalil	2.17	Spike	P	0 - 30
2250788	Iprodione	3.61	Spike	P	0 - 30
2250788	Malathion	1.31	Spike	P	0 - 30
2250788	Metalaxyl	5.50	Spike	P	0 - 30
2250788	Metolachlor	10.9	Spike	P	0 - 30
2250788	Metribuzin	2.66	Spike	P	0 - 30
2250788	Mevinphos	13.9	Spike	P	0 - 30
2250788	Molinate	0.230	Spike	P	0 - 30
2250788	Myclobutanil	8.08	Spike	P	0 - 30
2250788	Naled	5.20	Spike	P	0 - 30
2250788	Norflurazon	1.01	Spike	P	0 - 30
2250788	Oxadiazon	6.64	Spike	P	0 - 30
2250788	Oxyfluorfen	17.4	Spike	P	0 - 30
2250788	Parathion Ethyl	10.4	Spike	P	0 - 30
2250788	Parathion Methyl	5.35	Spike	P	0 - 30
2250788	Pendimethalin	9.07	Spike	P	0 - 30
2250788	Phorate	6.65	Spike	P	0 - 30
2250788	Prodiamine	6.70	Spike	P	0 - 30
2250788	Prometon	3.99	Spike	P	0 - 30
2250788	Prometryn	10.5	Spike	P	0 - 30
2250788	Pronamide	11.4	Spike	P	0 - 30
2250788	Propiconazole	8.82	Spike	P	0 - 30
2250788	Pyriproxyfen	78.8	Spike	F	0 - 30
2250788	Simazine	2.32	Spike	P	0 - 30
2250788	Sulfentrazone	12.3	Spike	P	0 - 30
2250788	Tebuconazole	11.7	Spike	P	0 - 30
2250788	Terbufos	7.47	Spike	P	0 - 30
2250788	Terbuthylazine	9.30	Spike	P	0 - 30
LFB	Acetochlor	3.39	LCS	P	0 - 30
LFB	Alachlor	2.22	LCS	P	0 - 30
LFB	Ametryn	9.80	LCS	P	0 - 30
LFB	Atrazine	7.01	LCS	P	0 - 30
LFB	Atrazine Desethyl	7.13	LCS	P	0 - 30
LFB	Azinphos Methyl	10.4	LCS	P	0 - 30
LFB	Azoxystrobin	0.182	LCS	P	0 - 30
LFB	Bromacil	1.20	LCS	P	0 - 30
LFB	Butylate	13.6	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Caffeine	10.7	LCS	P	0 - 30
LFB	Carbophenothion	6.59	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	10.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.83	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.41	LCS	P	0 - 30
LFB	Cyanazine	1.93	LCS	P	0 - 30
LFB	Demeton	25.4	LCS	P	0 - 30
LFB	Diazinon	3.33	LCS	P	0 - 30
LFB	Difenoconazole	8.88	LCS	P	0 - 30
LFB	Dimethenamid	2.69	LCS	P	0 - 30
LFB	Disulfoton	24.3	LCS	P	0 - 30
LFB	Dithiopyr	1.66	LCS	P	0 - 30
LFB	EPTC	18.8	LCS	P	0 - 30
LFB	Ethion	11.9	LCS	P	0 - 30
LFB	Ethoprop	19.4	LCS	P	0 - 30
LFB	Fenamiphos	6.35	LCS	P	0 - 30
LFB	Fenbuconazole	15.8	LCS	P	0 - 30
LFB	Fipronil	7.57	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	1.05	LCS	P	0 - 30
LFB	Fipronil Sulfide	4.38	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.426	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	10.6	LCS	P	0 - 30
LFB	Fludioxonil	10.6	LCS	P	0 - 30
LFB	Flumioxazin	0.325	LCS	P	0 - 30
LFB	Flutolanil	6.44	LCS	P	0 - 30
LFB	Fluxapyroxad	11.2	LCS	P	0 - 30
LFB	Fonofos	17.0	LCS	P	0 - 30
LFB	Hexazinone	10.8	LCS	P	0 - 30
LFB	Imazalil	7.62	LCS	P	0 - 30
LFB	Iprodione	10.8	LCS	P	0 - 30
LFB	Malathion	3.69	LCS	P	0 - 30
LFB	Metalaxyl	1.60	LCS	P	0 - 30
LFB	Metolachlor	1.99	LCS	P	0 - 30
LFB	Metribuzin	2.66	LCS	P	0 - 30
LFB	Mevinphos	5.08	LCS	P	0 - 30
LFB	Molinate	28.5	LCS	P	0 - 30
LFB	Myclobutanil	10.5	LCS	P	0 - 30
LFB	Naled	0.825	LCS	P	0 - 30
LFB	Norflurazon	11.6	LCS	P	0 - 30
LFB	Oxadiazon	3.69	LCS	P	0 - 30
LFB	Oxyfluorfen	4.86	LCS	P	0 - 30
LFB	Parathion Ethyl	9.58	LCS	P	0 - 30
LFB	Parathion Methyl	10.5	LCS	P	0 - 30
LFB	Pendimethalin	11.8	LCS	P	0 - 30
LFB	Phorate	4.58	LCS	P	0 - 30
LFB	Prodiamine	3.43	LCS	P	0 - 30
LFB	Prometon	8.86	LCS	P	0 - 30
LFB	Prometryn	0.288	LCS	P	0 - 30
LFB	Pronamide	5.05	LCS	P	0 - 30
LFB	Propiconazole	13.2	LCS	P	0 - 30
LFB	Pyriproxyfen	4.87	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P398911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Simazine	10.8	LCS	P	0 - 30
LFB	Sulfentrazone	11.0	LCS	P	0 - 30
LFB	Tebuconazole	2.64	LCS	P	0 - 30
LFB	Terbufos	11.0	LCS	P	0 - 30
LFB	Terbuthylazine	4.18	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P399190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251157	Aldrin	14.6	Spike	P	0 - 30
2251157	Alpha-BHC	0.0287	Spike	P	0 - 30
2251157	Alpha-Chlordane	12.3	Spike	P	0 - 30
2251157	Beta-BHC	13.3	Spike	P	0 - 30
2251157	Beta-Cyfluthrin	30.2	Spike	F	0 - 30
2251157	Bifenthrin	16.9	Spike	P	0 - 30
2251157	Chlorothalonil	51.5	Spike	F	0 - 50
2251157	Cis-Nonachlor	15.8	Spike	P	0 - 30
2251157	Cypermethrin	25.0	Spike	P	0 - 30
2251157	Dacthal	5.15	Spike	P	0 - 30
2251157	DDD-p,p'	18.4	Spike	P	0 - 30
2251157	DDE-p,p'	10.2	Spike	P	0 - 30
2251157	DDT-p,p'	2.01	Spike	P	0 - 30
2251157	Delta-BHC	12.7	Spike	P	0 - 30
2251157	Deltamethrin	27.6	Spike	P	0 - 30
2251157	Dichlobenil	39.5	Spike	F	0 - 30
2251157	Dicofol	12.4	Spike	P	0 - 30
2251157	Dieldrin	7.61	Spike	P	0 - 30
2251157	Endosulfan I	10.7	Spike	P	0 - 30
2251157	Endosulfan II	16.0	Spike	P	0 - 30
2251157	Endosulfan Sulfate	16.5	Spike	P	0 - 30
2251157	Endrin	11.7	Spike	P	0 - 30
2251157	Endrin Aldehyde	5.09	Spike	P	0 - 30
2251157	Endrin Ketone	25.1	Spike	P	0 - 30
2251157	Esfenvalerate	31.0	Spike	F	0 - 30
2251157	Ethalfluralin	0.145	Spike	P	0 - 30
2251157	Fenpropathrin	11.7	Spike	P	0 - 30
2251157	Gamma-BHC	0.169	Spike	P	0 - 30
2251157	Gamma-Chlordane	16.0	Spike	P	0 - 30
2251157	Heptachlor	14.5	Spike	P	0 - 30
2251157	Heptachlor Epoxide	9.42	Spike	P	0 - 30
2251157	Hexachlorobenzene	9.30	Spike	P	0 - 30
2251157	Kepone	60.2	Spike	F	0 - 30
2251157	Lambda-Cyhalothrin	28.8	Spike	P	0 - 30
2251157	Methoxychlor	0.221	Spike	P	0 - 30
2251157	MGK-264	19.5	Spike	P	0 - 30
2251157	Mirex	18.8	Spike	P	0 - 30
2251157	Permethrin	14.2	Spike	P	0 - 30
2251157	Phenothrin	3.36	Spike	P	0 - 30
2251157	Piperonyl Butoxide	15.1	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P399190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251157	Prallethrin	7.19	Spike	P	0 - 30
2251157	Tau-Fluvalinate	24.9	Spike	P	0 - 30
2251157	Tetramethrin	18.0	Spike	P	0 - 30
2251157	Trans-Nonachlor	21.2	Spike	P	0 - 30
2251157	Triclosan Methyl	8.10	Spike	P	0 - 30
2251157	Trifluralin	9.30	Spike	P	0 - 30
LFB	Aldrin	37.4	LCS	F	0 - 30
LFB	Alpha-BHC	7.88	LCS	P	0 - 30
LFB	Alpha-Chlordane	20.8	LCS	P	0 - 30
LFB	Beta-BHC	25.4	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	3.65	LCS	P	0 - 30
LFB	Bifenthrin	7.66	LCS	P	0 - 30
LFB	Chlorothalonil	11.3	LCS	P	0 - 50
LFB	Cis-Nonachlor	8.51	LCS	P	0 - 30
LFB	Cypermethrin	1.20	LCS	P	0 - 30
LFB	Dacthal	10.9	LCS	P	0 - 30
LFB	DDD-p,p'	9.41	LCS	P	0 - 30
LFB	DDE-p,p'	17.0	LCS	P	0 - 30
LFB	DDT-p,p'	10.2	LCS	P	0 - 30
LFB	Delta-BHC	17.3	LCS	P	0 - 30
LFB	Deltamethrin	12.3	LCS	P	0 - 30
LFB	Dichlobenil	1.50	LCS	P	0 - 30
LFB	Dicofol	4.76	LCS	P	0 - 30
LFB	Dieldrin	15.9	LCS	P	0 - 30
LFB	Endosulfan I	12.0	LCS	P	0 - 30
LFB	Endosulfan II	8.85	LCS	P	0 - 30
LFB	Endosulfan Sulfate	8.65	LCS	P	0 - 30
LFB	Endrin	10.4	LCS	P	0 - 30
LFB	Endrin Aldehyde	9.95	LCS	P	0 - 30
LFB	Endrin Ketone	5.21	LCS	P	0 - 30
LFB	Esfenvalerate	6.00	LCS	P	0 - 30
LFB	Ethalfluralin	10.4	LCS	P	0 - 30
LFB	Fenpropathrin	4.92	LCS	P	0 - 30
LFB	Gamma-BHC	11.8	LCS	P	0 - 30
LFB	Gamma-Chlordane	15.1	LCS	P	0 - 30
LFB	Heptachlor	9.37	LCS	P	0 - 30
LFB	Heptachlor Epoxide	11.6	LCS	P	0 - 30
LFB	Hexachlorobenzene	16.7	LCS	P	0 - 30
LFB	Kepone	28.8	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	0.646	LCS	P	0 - 30
LFB	Methoxychlor	6.26	LCS	P	0 - 30
LFB	MGK-264	13.3	LCS	P	0 - 30
LFB	Mirex	18.1	LCS	P	0 - 30
LFB	Permethrin	1.83	LCS	P	0 - 30
LFB	Phenothrin	17.6	LCS	P	0 - 30
LFB	Piperonyl Butoxide	1.23	LCS	P	0 - 30
LFB	Prallethrin	20.8	LCS	P	0 - 30
LFB	Tau-Fluvalinate	3.07	LCS	P	0 - 30
LFB	Tetramethrin	5.77	LCS	P	0 - 30
LFB	Trans-Nonachlor	13.3	LCS	P	0 - 30
LFB	Triclosan Methyl	14.1	LCS	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P399190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Trifluralin	10.3	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P399190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250779	Chlordane	6.25	Spike	P	0 - 30
2250779	Toxaphene	8.10	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250793	2,4-D	8.58	Spike	P	0 - 30
2250793	2,4,5-T	17.5	Spike	P	0 - 30
2250793	Acetaminophen	1.98	Spike	P	0 - 30
2250793	Acetamiprid	0.967	Spike	P	0 - 30
2250793	Afidopyropen	18.7	Spike	P	0 - 30
2250793	Bentazon	6.97	Spike	P	0 - 30
2250793	Benzovindiflupyr	4.07	Spike	P	0 - 30
2250793	Carbamazepine	4.79	Spike	P	0 - 30
2250793	Clothianidin	9.73	Spike	P	0 - 30
2250793	Dinotefuran	4.61	Spike	P	0 - 30
2250793	Diuron	1.23	Spike	P	0 - 30
2250793	Fenuron	3.03	Spike	P	0 - 30
2250793	Fluridone	1.97	Spike	P	0 - 30
2250793	Hydrocodone	1.38	Spike	P	0 - 30
2250793	Ibuprofen	4.25	Spike	P	0 - 30
2250793	Imazapyr	4.99	Spike	P	0 - 30
2250793	Imidacloprid	6.13	Spike	P	0 - 30
2250793	Linuron	4.22	Spike	P	0 - 30
2250793	Mandestrobin	13.8	Spike	P	0 - 30
2250793	MCPP	1.87	Spike	P	0 - 30
2250793	Naproxen	0.658	Spike	P	0 - 30
2250793	Primidone	0.591	Spike	P	0 - 30
2250793	Pyraclostrobin	1.87	Spike	P	0 - 30
2250793	Thiamethoxam	2.45	Spike	P	0 - 30
2250793	Tolfenpyrad	4.69	Spike	P	0 - 30
2250793	Triclopyr	4.98	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250902	Acesulfame K	3.94	Spike	P	0 - 30
2250902	AMPA	1.92	Spike	P	0 - 30
2250902	Endothall	10.5	Spike	P	0 - 30
2250902	Glufosinate	8.87	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P399017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250902	Glyphosate	8.49	Spike	P	0 - 30
2250902	Sucralose	27.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P399077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250951	3-Hydroxycarbofuran	6.87	Spike	P	0 - 30
2250951	Aldicarb	43.6	Spike	F	0 - 30
2250951	Aldicarb Sulfone	4.41	Spike	P	0 - 30
2250951	Aldicarb Sulfoxide	4.61	Spike	P	0 - 30
2250951	Carbaryl	5.43	Spike	P	0 - 30
2250951	Carbofuran	14.1	Spike	P	0 - 30
2250951	Methiocarb	1.13	Spike	P	0 - 30
2250951	Methomyl	0.568	Spike	P	0 - 30
2250951	Oxamyl	10.0	Spike	P	0 - 30
2250951	Propoxur	9.66	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P399063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251100	Total Alkalinity	0.360	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P399280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251254	Total Alkalinity	0.417	Sample	P	0 - 5.2

Reference Method: SM 4500 F-C-2011
Batch ID: P399064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251100	Fluoride	0.506	Spike	P	0 - 2.1

Reference Method: SM 4500 F-C-2011
Batch ID: P399274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251254	Fluoride	0.502	Spike	P	0 - 2.1

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2011
Batch ID: P399096

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251053	Organic Carbon	0.461	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P399097

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2250817	Organic Carbon	0.323	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2251154
Field Sample ID: FB_05272021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Diuron-d6	91.5	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.5	P	30 - 160
EPA 8321B	Primidone-d5	97.6	P	30 - 160
EPA 8321B	Sucralose-d6	138	P	30 - 160
EPA 8321B	Sucralose-d6	138	P	30 - 160

Lab Sample ID: 2251155
Field Sample ID: G2SE0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	49.0	P	30 - 160

Lab Sample ID: 2251156
Field Sample ID: G2SE0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	107	P	30 - 160
EPA 8321B	Acetaminophen-d4	130	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.1	P	30 - 160
EPA 8321B	Diuron-d6	66.8	P	30 - 160
EPA 8321B	Endothall-d6	94.9	P	30 - 160
EPA 8321B	Endothall-d6	94.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	60.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	60.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.6	P	30 - 160
EPA 8321B	Primidone-d5	111	P	30 - 160
EPA 8321B	Sucralose-d6	96.3	P	30 - 160
EPA 8321B	Sucralose-d6	96.3	P	30 - 160

Lab Sample ID: 2251157
Field Sample ID: G2SE0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	68.1	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	56.6	P	30 - 110
EPA 8276	Decachlorobiphenyl	63.0	P	29 - 92.0
EPA 8276	PCNB	76.7	P	43 - 134

Lab Sample ID: 2251158
Field Sample ID: G2SE0048

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	51.4	P	20 - 200
EPA 8270E	Simazine-d10	89.6	P	73 - 135
EPA 8270E	Terbufos-d10	79.3	P	58 - 130

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A105764
Included Lab Sample IDs: 2251124, 2251127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	97.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A105767
Included Lab Sample IDs: 2251122, 2251125

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A105788
Included Lab Sample IDs: 2251123

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

Reference Method: SM 2320 B-2011
Run ID: A105797
Included Lab Sample IDs: 2251122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A105797
Included Lab Sample IDs: 2251122

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A105798
Included Lab Sample IDs: 2251184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Chromium	99.9	99.4	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Magnesium	102	103	P/P	90 - 110
Manganese	102	102	P/P	90 - 110
Zinc	102	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A105815
Included Lab Sample IDs: 2251126

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-2011
Run ID: A105818
Included Lab Sample IDs: 2251123, 2251126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	98.7	P/P	90 - 110
Organic Carbon	99.4	100	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A105827
Included Lab Sample IDs: 2251154, 2251156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	139	P/P	60 - 160
Acesulfame K	95.8	113	P/P	60 - 160
Endothall	120	125	P/P	60 - 160
Endothall	125	126	P/P	60 - 160
Sucralose	116	101	P/P	60 - 160
Sucralose	94.1	116	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105838
Included Lab Sample IDs: 2251154

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.1	94.3	P/P	60 - 160
Glufosinate	97.4	99.9	P/P	60 - 160
Glyphosate	107	112	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105839
Included Lab Sample IDs: 2251156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	101	107	P/P	60 - 160
Glufosinate	103	115	P/P	60 - 160
Glyphosate	100	108	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A105850
Included Lab Sample IDs: 2251154, 2251156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.5	109	P/P	50 - 150
2,4,5-T	121	109	P/P	50 - 150
Acetaminophen	105	119	P/P	60 - 160
Acetamiprid	107	107	P/P	50 - 150
Afidopyropen	102	107	P/P	50 - 150
Bentazon	134	121	P/P	50 - 160
Benzovindiflupyr	119	141	P/P	50 - 150
Carbamazepine	105	109	P/P	60 - 150
Clothianidin	101	110	P/P	60 - 150
Dinotefuran	99.3	107	P/P	50 - 150
Diuron	103	101	P/P	60 - 160
Fenuron	95.7	96.3	P/P	60 - 150
Fluridone	107	103	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A105850
Included Lab Sample IDs: 2251154, 2251156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hydrocodone	98.0	102	P/P	60 - 150
Ibuprofen	122	119	P/P	50 - 160
Imazapyr	82.1	97.1	P/P	50 - 150
Imidacloprid	95.2	101	P/P	60 - 150
Linuron	94.1	98.9	P/P	60 - 150
Mandestrobin	132	140	P/P	50 - 150
MCPP	96.1	94.7	P/P	50 - 150
Naproxen	71.9	84.1	P/P	50 - 160
Primidone	97.3	87.2	P/P	60 - 150
Pyraclostrobin	109	112	P/P	60 - 150
Thiamethoxam	104	105	P/P	50 - 150
Tolfenpyrad	105	114	P/P	60 - 150
Triclopyr	105	110	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A105860
Included Lab Sample IDs: 2251184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	105	106	P/P	90 - 110
Antimony	99.6	100	P/P	90 - 110
Arsenic	100	102	P/P	90 - 110
Beryllium	94.0	99.4	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Copper	100	104	P/P	90 - 110
Lead	107	106	P/P	90 - 110
Nickel	101	106	P/P	90 - 110
Selenium	102	102	P/P	90 - 110
Thallium	99.3	98.3	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A105868
Included Lab Sample IDs: 2251155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	95.1	88.9	P/P	60 - 150
Aldicarb	118	122	P/P	60 - 150
Aldicarb Sulfone	111	105	P/P	50 - 150
Aldicarb Sulfoxide	109	98.2	P/P	50 - 150
Carbaryl	104	100	P/P	60 - 150
Carbofuran	107	91.2	P/P	50 - 150
Methiocarb	112	102	P/P	50 - 150
Methomyl	103	114	P/P	50 - 150
Oxamyl	115	108	P/P	50 - 150
Propoxur	107	99.6	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A105875
Included Lab Sample IDs: 2251123, 2251126

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A105875
Included Lab Sample IDs: 2251123, 2251126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.3	90.9	P/P	90 - 110
Kjeldahl Nitrogen	91.6	95.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A105877
Included Lab Sample IDs: 2251184

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

Reference Method: SM 4500 F-C-2011
Run ID: A105892
Included Lab Sample IDs: 2251125

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

Reference Method: SM 2320 B-2011
Run ID: A105902
Included Lab Sample IDs: 2251125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.3	96.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A105920
Included Lab Sample IDs: 2251126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.3	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A105942
Included Lab Sample IDs: 2251123

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A105953
Included Lab Sample IDs: 2251183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	105	P/P	90 - 110
Iron	99.7	104	P/P	90 - 110
Magnesium	98.4	102	P/P	90 - 110
Manganese	101	104	P/P	90 - 110
Zinc	96.3	101	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8276
Run ID: A105980
Included Lab Sample IDs: 2251157

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.9		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 8270E
Run ID: A106018
Included Lab Sample IDs: 2251157

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.3		P	80 - 120
Alpha-BHC	97.8		P	80 - 120
Alpha-Chlordane	98.3		P	80 - 120
Beta-BHC	98.1		P	80 - 120
Beta-Cyfluthrin	98.8		P	80 - 120
Bifenthrin	95.9		P	80 - 120
Chlorothalonil	115		P	80 - 120
Cis-Nonachlor	94.9		P	80 - 120
Cypermethrin	98.2		P	80 - 120
Dacthal	98.2		P	80 - 120
DDD-p,p'	93.8		P	80 - 120
DDE-p,p'	97.5		P	80 - 120
DDT-p,p'	98.1		P	80 - 120
Delta-BHC	103		P	80 - 120
Deltamethrin	99.8		P	80 - 120
Dichlobenil	106		P	80 - 120
Dicofol	99.8		P	80 - 120
Dieldrin	99.3		P	80 - 120
Endosulfan I	97.1		P	80 - 120
Endosulfan II	99.4		P	80 - 120
Endosulfan Sulfate	92.2		P	80 - 120
Endrin	95.0		P	80 - 120
Endrin Aldehyde	91.2		P	80 - 120
Endrin Ketone	99.1		P	80 - 120
Esfenvalerate	92.2		P	80 - 120
Ethalfluralin	99.0		P	80 - 120
Fenpropathrin	91.4		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	98.7		P	80 - 120
Heptachlor	97.1		P	80 - 120
Heptachlor Epoxide	98.7		P	80 - 120
Hexachlorobenzene	104		P	80 - 120
Kepone	90.1		P	80 - 120
Lambda-Cyhalothrin	106		P	80 - 120
Methoxychlor	97.7		P	80 - 120
MGK-264	99.1		P	80 - 120
Mirex	96.2		P	80 - 120
Permethrin	95.4		P	80 - 120
Phenothrin	93.4		P	80 - 120
Piperonyl Butoxide	93.3		P	80 - 120
Prallethrin	97.1		P	80 - 120
Tau-Fluvalinate	99.6		P	80 - 120
Tetramethrin	94.7		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106018
Included Lab Sample IDs: 2251157

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Trans-Nonachlor	96.5		P	80 - 120
Triclosan Methyl	99.5		P	80 - 120
Trifluralin	97.9		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A106021
Included Lab Sample IDs: 2251123

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	98.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A106028
Included Lab Sample IDs: 2251183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.4	98.7	P/P	90 - 110
Antimony	97.4	101	P/P	90 - 110
Arsenic	99.3	101	P/P	90 - 110
Beryllium	94.8	96.6	P/P	90 - 110
Cadmium	97.5	101	P/P	90 - 110
Chromium	95.3	96.6	P/P	90 - 110
Copper	95.9	97.6	P/P	90 - 110
Lead	106	109	P/P	90 - 110
Nickel	97.4	97.9	P/P	90 - 110
Selenium	99.8	101	P/P	90 - 110
Silver	97.0	98.1	P/P	90 - 110
Thallium	93.9	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A106033
Included Lab Sample IDs: 2251126

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

Reference Method: EPA 8270E
Run ID: A106055
Included Lab Sample IDs: 2251158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	100		P	80 - 120
Azinphos Methyl	97.6		P	80 - 120
Butylate	96.3		P	80 - 120
Caffeine	107		P	80 - 120
Carbophenothion	99.2		P	80 - 120
Carfentrazone Ethyl	99.6		P	80 - 120
Chlorpyrifos Ethyl	95.1		P	80 - 120
Chlorpyrifos Methyl	99.6		P	80 - 120
Cyanazine	107		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106055
Included Lab Sample IDs: 2251158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Demeton	91.6		P	80 - 120
Diazinon	98.8		P	80 - 120
Difenoconazole	106		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	94.6		P	80 - 120
Dithiopyr	100		P	80 - 120
EPTC	98.5		P	80 - 120
Ethion	101		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	98.6		P	80 - 120
Fenbuconazole	102		P	80 - 120
Fipronil	99.9		P	80 - 120
Fipronil Desulfinyl	98.6		P	80 - 120
Fipronil Sulfide	102		P	80 - 120
Fipronil Sulfone	104		P	80 - 120
Fluazifop-P-butyl	105		P	80 - 120
Fludioxonil	98.2		P	80 - 120
Flumioxazin	104		P	80 - 120
Flutolanil	97.4		P	80 - 120
Fonofos	94.2		P	80 - 120
Imazalil	102		P	80 - 120
Iprodione	101		P	80 - 120
Malathion	98.6		P	80 - 120
Metalaxyl	102		P	80 - 120
Metribuzin	97.8		P	80 - 120
Mevinphos	95.3		P	80 - 120
Molinate	101		P	80 - 120
Myclobutanil	97.0		P	80 - 120
Naled	98.7		P	80 - 120
Oxyfluorfen	100		P	80 - 120
Parathion Ethyl	98.4		P	80 - 120
Parathion Methyl	97.1		P	80 - 120
Pendimethalin	96.9		P	80 - 120
Phorate	98.5		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	98.5		P	80 - 120
Propiconazole	101		P	80 - 120
Pyriproxyfen	102		P	80 - 120
Simazine	105		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	95.5		P	80 - 120
Terbuthylazine	97.4		P	80 - 120

Reference Method: EPA 8270E
Run ID: A106100
Included Lab Sample IDs: 2251158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ametryn	99.1		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A106100
Included Lab Sample IDs: 2251158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	94.8		P	80 - 120
Atrazine Desethyl	98.8		P	80 - 120
Azoxystrobin	96.4		P	80 - 120
Bromacil	94.5		P	80 - 120
Fluxapyroxad	103		P	80 - 120
Hexazinone	98.1		P	80 - 120
Metolachlor	98.6		P	80 - 120
Norflurazon	102		P	80 - 120
Oxadiazon	99.7		P	80 - 120
Sulfentrazone	92.7		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							4.19	
EPA 200.7 Rev. 4.4	Calcium	99.9							2.41
	Calcium	108		105	113	108			2.81
	Chromium	97.1		97.3	97.2				0.0664
	Iron	107		109	107				1.58
	Iron	106		106	110	107			2.15
	Magnesium	95.9							2.23
	Magnesium	105		102	109	106			2.21
	Manganese	103		105	104				1.07
	Manganese	99.7		101	103	101			1.68
	Zinc	101		114	110				2.86
	Zinc	93.4		98.0	99.0	97.7			1.32
EPA 200.8 Rev. 5.4	Aluminum	101		112	107				4.36
	Aluminum	99.4		98.1	93.7	96.8			3.19
	Antimony	99.0		103	99.6				3.54
	Antimony	102		104	99.7	101			0.851
	Arsenic	100		110	106				3.44
	Arsenic	102		103	99.5	102			2.07
	Beryllium	85.2		77.9	76.1				2.34
	Beryllium	92.4		95.5	89.3	94.0			5.13
	Cadmium	102		96.0	92.5				3.56
	Cadmium	103		104	102	103			0.698
	Chromium	99.7		101	97.6	98.5			0.968
	Copper	99.6		108	105				3.48
	Copper	100		102	98.9	99.5			0.543
	Lead	105		113	108				3.96
	Lead	110		111	108	110			2.05
	Nickel	100		112	107				2.65
	Nickel	99.6		101	97.3	97.7			0.352
	Selenium	99.8		103	97.2				5.61
	Selenium	103		103	98.2	99.4			1.20
	Silver	106		95.5	93.5				2.11
	Silver	101		101	103	102			1.13
	Thallium	106		114	110				3.26
	Thallium	104		107	102	104			2.85
EPA 350.1 Rev. 2.0	Ammonia-N	100		104	102				1.75
	Ammonia-N	98.8		102	103				0.877
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		97.9	97.9				0.0579
	Kjeldahl Nitrogen	98.7		101	95.7				4.12
EPA 353.2 Rev. 2.0	NO2NO3-N	100		102	102				0.491
	NO2NO3-N	98.5		98.5	98.5				0.0
EPA 365.1 Rev. 2.0	Total-P	100		102	102				0.184
	Total-P	103		102	102				0.611
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		98.0	99.3				1.32
	O-Phosphate-P	101		98.0	98.0				0.0
EPA 8270E	Acetochlor	77.1	74.6	77.6	90.1		3.39		14.9
	Alachlor	71.4	73.0	74.8	82.8		2.22		10.1
	Aldrin	24.5	35.8	37.4	43.2		37.4		14.6
	Alpha-BHC	87.9	95.1	87.0	87.0		7.88		0.0287
	Alpha-Chlordane	70.8	87.3	58.1	65.6		20.8		12.3
	Ametryn	98.4	89.2				9.80		1.95
	Atrazine	80.7	86.5				7.01		3.24
	Atrazine Desethyl	78.6	84.4				7.13		34.8
	Azinphos Methyl	99.7	89.8	105	200		10.4		61.9

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Azoxystrobin	118	118	125	138	0.182		8.18
	Beta-BHC	87.9	113	101	115	25.4		13.3
	Beta-Cyfluthrin	132	128	116	158	3.65		30.2
	Bifenthrin	71.5	77.2	62.4	73.8	7.66		16.9
	Bromacil	66.6	67.4	68.0	90.3	1.20		28.2
	Butylate	45.4	52.0	43.1	42.4	13.6		1.75
	Caffeine	101	113	102	115	10.7		12.1
	Carbophenothion	70.3	65.8	70.2	68.9	6.59		1.91
	Carfentrazone Ethyl	84.6	76.3	83.8	88.7	10.4		5.60
	Chlorothalonil	125	140	100	174	11.3		51.5
	Chlorpyrifos Ethyl	69.3	67.4	80.4	77.7	2.83		3.39
	Chlorpyrifos Methyl	72.1	73.1	71.7	75.4	1.41		5.14
	Cis-Nonachlor	77.4	84.2	56.8	66.6	8.51		15.8
	Cyanazine	151	154	146	175	1.93		18.0
	Cypermethrin	125	124	104	134	1.20		25.0
	Dacthal	85.3	95.2	80.0	84.3	10.9		5.15
	DDD-p,p'	73.3	80.6	69.2	83.2	9.41		18.4
	DDE-p,p'	67.2	79.6	54.7	60.6	17.0		10.2
	DDT-p,p'	72.0	79.7	63.4	64.7	10.2		2.01
	Delta-BHC	103	122	118	134	17.3		12.7
	Deltamethrin	154	136	135	179	12.3		27.6
	Demeton	62.2	80.3	83.9	89.4	25.4		6.33
	Diazinon	82.7	85.5	88.2	97.3	3.33		9.83
	Dichlobenil	63.2	64.2	61.1	41.0	1.50		39.5
	Dicofol	85.3	89.4	78.1	88.4	4.76		12.4
	Dieldrin	76.5	89.6	63.8	68.8	15.9		7.61
	Difenoconazole	110	100	120	130	8.88		7.56
	Dimethenamid	76.1	78.1	80.3	87.5	2.69		8.54
	Disulfoton	61.0	77.9	75.1	72.7	24.3		3.24
	Dithiopyr	71.7	72.9	78.2	83.3	1.66		6.31
	Endosulfan I	76.8	86.5	64.1	71.4	12.0		10.7
	Endosulfan II	86.5	94.5	76.9	90.3	8.85		16.0
	Endosulfan Sulfate	81.1	88.4	78.0	92.0	8.65		16.5
	Endrin	79.4	88.1	66.4	74.7	10.4		11.7
	Endrin Aldehyde	85.0	93.9	61.2	64.4	9.95		5.09
	Endrin Ketone	93.8	98.9	82.5	106	5.21		25.1
	EPTC	44.3	53.5	43.0	37.4	18.8		14.0
	Esfenvalerate	134	126	114	156	6.00		31.0
	Ethalfluralin	73.2	81.2	63.2	63.1	10.4		0.145
	Ethion	51.8	58.4	58.7	66.2	11.9		11.9
	Ethoprop	83.4	101	100	104	19.4		4.10
	Fenamiphos	86.6	81.3	81.6	74.7	6.35		8.82
	Fenbuconazole	90.1	76.9	96.3	104	15.8		7.30
	Fenpropathrin	85.0	89.3	67.2	75.6	4.92		11.7
	Fipronil	83.3	77.3	85.4	92.2	7.57		7.62
	Fipronil Desulfinyl	76.9	76.1	79.1	84.7	1.05		6.81
	Fipronil Sulfide	80.1	76.6	79.0	78.5	4.38		0.609
	Fipronil Sulfone	68.8	68.5	66.5	67.4	0.426		1.28
	Fluazifop-P-butyl	81.8	73.5	86.2	87.7	10.6		1.67
	Fludioxonil	86.1	77.4	81.1	90.6	10.6		11.1
	Flumioxazin	107	106	144	164	0.325		12.4
	Flutolanil	85.8	80.4	86.5	88.3	6.44		2.06
	Fluxapyroxad	77.1	68.9	35.3	44.6	11.2		4.85
	Fonofos	76.7	90.9	86.0	90.5	17.0		5.13

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision		
						LCS	SMP	MS
EPA 8270E	Gamma-BHC	90.3	102	103	102	11.8		0.169
	Gamma-Chlordane	71.2	82.8	54.3	63.7	15.1		16.0
	Heptachlor	64.2	70.5	48.1	55.6	9.37		14.5
	Heptachlor Epoxide	78.1	87.8	65.0	71.4	11.6		9.42
	Hexachlorobenzene	55.3	65.3	56.4	61.9	16.7		9.30
	Hexazinone	80.9	90.1			10.8		2.14
	Imazalil	84.2	78.0	162	165	7.62		2.17
	Iprodione	78.6	70.5	79.7	82.7	10.8		3.61
	Kepone	85.9	115	51.1	95.2	28.8		60.2
	Lambda-Cyhalothrin	134	135	140	187	0.646		28.8
	Malathion	75.0	77.9	81.7	82.8	3.69		1.31
	Metalaxyl	80.6	81.9	83.4	88.1	1.60		5.50
	Methoxychlor	88.7	94.5	80.9	80.7	6.26		0.221
	Metolachlor	75.7	74.2	73.2	83.5	1.99		10.9
	Metribuzin	88.6	91.0	102	109	2.66		2.66
	Mevinphos	74.1	78.0	77.6	89.2	5.08		13.9
	MGK-264	56.9	65.0	68.6	83.4	13.3		19.5
	Mirex	112	134	86.5	104	18.1		18.8
	Molinate	57.6	76.7	68.1	67.9	28.5		0.230
	Myclobutanil	83.0	74.7	83.0	90.0	10.5		8.08
	Naled	30.4	30.7	30.1	28.6	0.825		5.20
	Norflurazon	77.4	68.9	75.0	74.3	11.6		1.01
	Oxadiazon	78.7	75.8	69.2	74.6	3.69		6.64
	Oxyfluorfen	77.2	73.5	84.9	101	4.86		17.4
	Parathion Ethyl	77.7	85.5	82.6	91.7	9.58		10.4
	Parathion Methyl	91.6	102	94.3	99.5	10.5		5.35
	Pendimethalin	71.0	79.9	85.2	93.3	11.8		9.07
	Permethrin	113	111	98.5	114	1.83		14.2
	Phenothrin	39.6	47.2	49.2	50.9	17.6		3.36
	Phorate	74.8	78.3	99.5	106	4.58		6.65
	Piperonyl Butoxide	97.9	96.7	102	119	1.23		15.1
	Prallethrin	50.6	62.3	57.8	62.1	20.8		7.19
	Prodiamine	33.6	34.7	46.9	50.2	3.43		6.70
	Prometon	80.1	87.5	88.1	91.7	8.86		3.99
	Prometryn	85.3	85.5	113	126	0.288		10.5
	Pronamide	84.2	88.5	97.6	109	5.05		11.4
	Propiconazole	82.5	72.3	77.2	65.7	13.2		8.82
	Pyriproxyfen	69.0	65.7	70.3	162	4.87		78.8
	Simazine	80.4	89.6	135	138	10.8		2.32
	Sulfentrazone	63.8	57.2	65.3	73.8	11.0		12.3
	Tau-Fluvalinate	94.6	97.6	85.1	109	3.07		24.9
	Tebuconazole	57.1	58.6	60.6	68.2	2.64		11.7
	Terbufos	72.5	80.9	84.6	91.2	11.0		7.47
	Terbuthylazine	79.7	83.1	87.6	96.2	4.18		9.30
	Tetramethrin	68.2	64.4	65.7	78.7	5.77		18.0
	Trans-Nonachlor	71.1	81.2	48.1	59.5	13.3		21.2
	Triclosan Methyl	75.9	87.4	67.3	72.9	14.1		8.10
	Trifluralin	70.6	78.3	55.6	61.0	10.3		9.30
EPA 8276	Chlordane	91.5	100	89.0	83.6			6.25
	Toxaphene	86.4	100	86.9	94.3			8.10
EPA 8321B	2,4-D	113		119	109			8.58
	2,4,5-T	111		92.1	77.2			17.5
	3-Hydroxycarbofuran	83.1		97.8	91.3			6.87
	Acesulfame K	94.1		84.9	81.4			3.94

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Acetaminophen	92.4	84.2	82.6			1.98
	Acetamiprid	84.1	66.2	66.9			0.967
	Afidopyropen	75.4	102	84.3			18.7
	Aldicarb	103	90.0	57.8			43.6
	Aldicarb Sulfone	88.8	108	104			4.41
	Aldicarb Sulfoxide	77.5	68.8	65.7			4.61
	AMPA	89.9	72.3	70.9			1.92
	Bentazon	96.7					6.97
	Benzovindiflupyr	97.0	95.7	91.9			4.07
	Carbamazepine	91.2	72.2	68.9			4.79
	Carbaryl	63.4	49.0	46.4			5.43
	Carbofuran	60.4	52.6	45.7			14.1
	Clothianidin	86.9	70.9	78.2			9.73
	Dinotefuran	94.2	90.2	94.5			4.61
	Diuron	78.3	52.4	51.7			1.23
	Endothall	88.2	93.1	103			10.5
	Fenuron	111	75.6	77.9			3.03
	Fluridone	82.3	75.7	77.2			1.97
	Glufosinate	104	105	95.8			8.87
	Glyphosate	104	99.6	90.0			8.49
	Hydrocodone	86.6	70.7	69.7			1.38
	Ibuprofen	77.1	79.6	76.3			4.25
	Imazapyr	96.0					4.99
	Imidacloprid	85.8	133	125			6.13
	Linuron	75.1	75.9	72.8			4.22
	Mandestrobin	109	129	113			13.8
	MCPP	116	102	104			1.87
	Methiocarb	75.1	68.5	69.3			1.13
	Methomyl	72.1	68.6	69.0			0.568
	Naproxen	60.5	65.5	65.1			0.658
	Oxamyl	88.6	89.6	81.0			10.0
	Primidone	92.0	85.8	86.3			0.591
	Propoxur	65.9	51.0	46.3			9.66
	Pyraclostrobin	72.8	77.3	75.8			1.87
	Sucralose	113	38.7	52.0			27.3
	Thiamethoxam	85.6	89.5	87.3			2.45
	Tolfenpyrad	61.4	57.1	54.5			4.69
	Triclopyr	108	88.0	83.7			4.98
SM 2320 B-2011	Total Alkalinity	99.8				0.360	
	Total Alkalinity	99.9				0.417	
SM 4500 F-C-2011	Fluoride	99.5	99.1	98.4			0.506
	Fluoride	99.3	95.2	95.9			0.502
SM 5310 B-2011	Organic Carbon	97.6	101	101			0.461
	Organic Carbon	97.7	97.4	97.1			0.323

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2251122, 2251125
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2251183, 2251184
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2251183, 2251184

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2251123, 2251126
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2251123, 2251126
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2251123, 2251126
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2251123, 2251126
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2251124, 2251127
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2251157
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2251158
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2251157
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2251155
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2251154, 2251156
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2251154, 2251156
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2251122, 2251125
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2251122, 2251125
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2251122, 2251125
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2251123, 2251126

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	05/28/2021			05/28/2021 16:00	Sarah A Nixon	2251122, 2251125
EPA 200.7 Rev. 4.4	05/28/2021	05/28/2021 12:50	Elliott D. Healy	06/01/2021 21:32	Betina Topolski	2251184
	05/28/2021	05/28/2021 12:50	Elliott D. Healy	06/01/2021 21:44	Betina Topolski	2251184
	05/28/2021	06/07/2021 14:20	Elliott D. Healy	06/08/2021 14:13	Betina Topolski	2251183
EPA 200.8 Rev. 5.4	05/28/2021	05/28/2021 12:50	Elliott D. Healy	06/03/2021 17:02	Alexander Thompson	2251184
	05/28/2021	05/28/2021 12:50	Elliott D. Healy	06/03/2021 17:50	Alexander Thompson	2251184
	05/28/2021	05/28/2021 12:50	Elliott D. Healy	06/04/2021 13:18	Alexander Thompson	2251184
	05/28/2021	06/07/2021 14:20	Elliott D. Healy	06/11/2021 15:20	Alexander Thompson	2251183
EPA 350.1 Rev. 2.0	05/28/2021			06/07/2021 14:21	Ping Hua	2251126
	05/28/2021			06/08/2021 14:33	Roberta Tatti	2251123
EPA 351.2 Rev. 2.0	05/28/2021	06/03/2021 13:01	Benjamin T. Nordmann	06/04/2021 10:24	Virginia P. Brown	2251126
	05/28/2021	06/03/2021 13:01	Benjamin T. Nordmann	06/04/2021 11:28	Virginia P. Brown	2251123
EPA 353.2 Rev. 2.0	05/28/2021			06/01/2021 12:12	Beverly Y. Sanders	2251123
	05/28/2021			06/02/2021 12:15	Beverly Y. Sanders	2251126
EPA 365.1 Rev. 2.0	05/28/2021	06/10/2021 12:25	Yen Ta	06/11/2021 12:13	Shengyu Ding	2251123
	05/28/2021	06/11/2021 14:33	Madeline Gruver	06/14/2021 08:24	Shengyu Ding	2251126
EPA 365.1 Rev. 2.0 dissolved	05/28/2021			05/28/2021 13:28	Lipi Saha	2251124
	05/28/2021			05/28/2021 13:30	Lipi Saha	2251127
EPA 8270E	05/28/2021	06/01/2021 08:00	Fe-Val Siddell	06/09/2021 21:45	Vandana T. Nagar	2251158
	05/28/2021	06/01/2021 08:00	Fe-Val Siddell	06/11/2021 19:00	Vandana T. Nagar	2251158
	05/28/2021	06/01/2021 08:00	Fe-Val Siddell	06/11/2021 19:24	Vandana T. Nagar	2251158
	05/28/2021	06/02/2021 08:00	Fe-Val Siddell	06/10/2021 18:43	Michael Poppell	2251157
EPA 8276	05/28/2021	06/02/2021 08:00	Fe-Val Siddell	06/09/2021 18:37	Chiran X. Ghimire	2251157
EPA 8321B	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/02/2021 12:54	Juyoung Kim	2251154
	05/28/2021	06/01/2021 09:00	Hoor Shaik	06/02/2021 13:28	Juyoung Kim	2251156
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 11:57	Juyoung Kim	2251154
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 15:54	Pramila Ghimire	2251154
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 16:22	Pramila Ghimire	2251156
	05/28/2021	06/02/2021 08:00	Juyoung Kim	06/02/2021 17:56	Juyoung Kim	2251156
	05/28/2021	06/03/2021 09:00	Hoor Shaik	06/04/2021 01:15	Juyoung Kim	2251155
SM 2320 B-2011	05/28/2021			06/01/2021 20:44	Dale L. Simmons	2251122
	05/28/2021			06/06/2021 19:00	Dale L. Simmons	2251125
SM 2540 D-2011	05/28/2021			06/01/2021 14:02	Yijie Li	2251122, 2251125
SM 4500 F-C-2011	05/28/2021			06/01/2021 20:44	Dale L. Simmons	2251122
	05/28/2021			06/04/2021 21:14	Dale L. Simmons	2251125
SM 5310 B-2011	05/28/2021			06/02/2021 07:14	Madeline Gruver	2251123
	05/28/2021			06/02/2021 10:58	Madeline Gruver	2251126