

Chemical Analysis Report

SW-DIST-2020-09-17-01

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

Event Description: **Run 15**
Request ID: **RQ-2020-08-31-05**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Ben Pawater

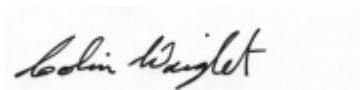
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This Report replaces the previous Report Serial Number: 0124953

Report Comment: Preparation date/time corrected for some analytes. No results modified from the previous report.

Revision certified by: Colin Wright, Program Administrator

Date Certified: 29-OCT-2020 13:31



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: Snug Harbor Near Getaway

Collection Date/Time: 09/16/2020 10:15

Field ID: G1SW0109

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196556	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P387516	
	EPA 300.0 Rev. 2.1	Bromide	41		mg Br/L	P387642	
	SM 2320 B-2011	Total Alkalinity	114		mg CaCO3/L	P387675	
	SM 2540 D-2011	TSS	5	I	mg/L	P387843	
	SM 4500 F-C-2011	Fluoride	1.0		mg F/L	P387681	
2196557	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P387578	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P387549	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P387602	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P387548	
	SM 5310 B-2011	Organic Carbon	5.2		mg C/L	P387838	
2196558	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P387522	
2196589	EPA 200.7 Rev. 4.4	Barium	6.3	I	ug/L	P387800	
		Calcium	285		mg/L	P387800	
		Chromium	9.3	I	ug/L	P387973	
		Iron	90	U	ug/L	P387800	
		Manganese	8.7	I	ug/L	P387800	
		Potassium	271		mg/L	P387800	
		Sodium	7.50E+03		mg/L	P387800	
		Zinc	15	U	ug/L	P387800	
		Aluminum	160	I	ug/L	P387800	
	EPA 200.8 Rev. 5.4	Antimony	0.50	U	ug/L	P387800	
		Arsenic	2.82		ug/L	P387800	
		Cadmium	0.080	U	ug/L	P387800	
		Copper	1.9	I	ug/L	P387800	
		Lead	2.0	U	ug/L	P387800	
		Nickel	2.0	U	ug/L	P387800	
		Selenium	0.80	U	ug/L	P387800	
		Silver	0.040	U	ug/L	P387800	
		Thallium	1.0	U	ug/L	P387800	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference and batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, potassium and sodium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Pp Ditch

Collection Date/Time: 09/16/2020 12:30

Field ID: G5SW0134

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196553	EPA 180.1 Rev. 2.0	Turbidity	3.7	A	NTU	P387516	
	EPA 300.0 Rev. 2.1	Bromide	0.28		mg Br/L	P387642	
	SM 2320 B-2011	Total Alkalinity	187		mg CaCO3/L	P387674	
	SM 2540 D-2011	TSS	3	I	mg/L	P387841	
	SM 4500 F-C-2011	Fluoride	0.34		mg F/L	P387680	
2196554	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P387580	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P387770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P387613	
	EPA 365.1 Rev. 2.0	Total-P	0.090		mg P/L	P387858	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P387836	
2196555	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.053		mg P/L	P387521	
2196583	EPA 8321B	Aldicarb	0.020	U	ug/L	P387668	
		Aldicarb Sulfone	0.0020	U	ug/L	P387668	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P387668	
		Carbaryl	0.0020	U	ug/L	P387668	
		Carbofuran	0.0020	U	ug/L	P387668	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P387668	
		Methiocarb	0.0020	U	ug/L	P387668	
		Methomyl	0.0020	U	ug/L	P387668	
		Oxamyl	0.0020	U	ug/L	P387668	
		Propoxur	0.0020	U	ug/L	P387668	
		2,4-D	1.1		ug/L	P387502	
		Acesulfame K**	0.10	U	ug/L	P387598	MS
		AMPA**	0.47		ug/L	P387598	MS
2196584		Sucralose**	1.2		ug/L	P387598	MS
		Acetaminophen**	0.026	I	ug/L	P387502	
		Acetamiprid**	0.0020	U	ug/L	P387502	
		Endothal**	0.25	U	ug/L	P387598	
		Glufosinate**	0.10	U	ug/L	P387598	MS
		Glyphosate**	1.9		ug/L	P387598	
		Afidopyropen**	0.0020	U	ug/L	P387502	
		Bentazon	0.10		ug/L	P387502	
		Benzovindiflupyr**	0.0020	U	ug/L	P387502	
		Carbamazepine**	0.0014	I	ug/L	P387502	
		Clothianidin**	0.015		ug/L	P387502	
		Dinotefuran**	0.0034	I	ug/L	P387502	
		Diuron	0.0078	I	ug/L	P387502	
		Fenuron	0.016	U	ug/L	P387502	
		Fluridone**	0.14		ug/L	P387502	
		Imazapyr**	0.13		ug/L	P387502	
		Hydrocodone**	0.0020	U	ug/L	P387502	
		Ibuprofen**	0.020	U	ug/L	P387502	
		Imidacloprid	0.17		ug/L	P387502	

Field ID: G5SW0134

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196584	EPA 8321B	Linuron	0.0040	U	ug/L	P387502	
		Mandestrobin**	0.0020	U	ug/L	P387502	
		MCPP	0.0030	I	ug/L	P387502	
		Naproxen**	0.0080	UJ	ug/L	P387502	RPD
		Primidone**	0.0089	I	ug/L	P387502	
		Pyraclostrobin**	0.0020	U	ug/L	P387502	
		Thiamethoxam**	0.0060	I	ug/L	P387502	
		Tolfenpyrad**	0.0020	U	ug/L	P387502	
		Triclopyr**	0.0040	U	ug/L	P387502	
2196586	EPA 8270E	Aldrin	4.5	U	ng/L	P387554	
		Alpha-BHC	2.2	U	ng/L	P387554	
		Alpha-Chlordane	1.1	U	ng/L	P387554	
		Beta-BHC	8.9	U	ng/L	P387554	
		Beta-Cyfluthrin**	17	U	ng/L	P387554	
		Bifenthrin**	4.5	U	ng/L	P387554	
		Delta-BHC	8.9	U	ng/L	P387554	
		Gamma-BHC	8.9	U	ng/L	P387554	
		Chlorothalonil	2.2	U	ng/L	P387554	
		Cis-Nonachlor**	1.1	U	ng/L	P387554	
		Cypermethrin	22	U	ng/L	P387554	
		Dacthal**	1.1	U	ng/L	P387554	MS
		DDD-p,p'	5.6	U	ng/L	P387554	
		DDE-p,p'	5.6	U	ng/L	P387554	
		DDT-p,p'	6.7	U	ng/L	P387554	
		Deltamethrin**	22	U	ng/L	P387554	
		Dicofol	33	U	ng/L	P387554	
		Dieldrin	4.5	U	ng/L	P387554	
		Endosulfan I	4.5	U	ng/L	P387554	
		Endosulfan II	4.5	UJ	ng/L	P387554	CCV
		Endosulfan Sulfate	2.2	U	ng/L	P387554	
		Endrin	2.2	U	ng/L	P387554	
		Endrin Aldehyde	2.2	U	ng/L	P387554	
		Endrin Ketone	2.2	U	ng/L	P387554	
		Ethalfuralin**	3.3	U	ng/L	P387554	
		Gamma-Chlordane	1.1	U	ng/L	P387554	
		Dichlobenil**	2.2	U	ng/L	P387554	
		Esfenvalerate**	22	U	ng/L	P387554	
		Fenpropathrin**	11	U	ng/L	P387554	MS
		Heptachlor	1.7	U	ng/L	P387554	
		Heptachlor Epoxide	2.2	U	ng/L	P387554	
		Hexachlorobenzene	2.2	U	ng/L	P387554	
		Lambda-Cyhalothrin**	17	U	ng/L	P387554	
		Methoxychlor	4.5	U	ng/L	P387554	
		Mirex	2.2	U	ng/L	P387554	
		MGK-264**	3.3	U	ng/L	P387554	

Field ID: G5SW0134

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196586	EPA 8270E	Permethrin	11	U	ng/L	P387554	
		Phenothrin**	33	U	ng/L	P387554	
		Piperonyl Butoxide**	73		ng/L	P387554	
		Prallethrin**	28	U	ng/L	P387554	
		Tau-Fluvalinate**	3.9	U	ng/L	P387554	
		Tetramethrin**	8.9	U	ng/L	P387554	
		Trans-Nonachlor**	1.1	U	ng/L	P387554	
		Triclosan Methyl**	1.1	U	ng/L	P387554	
		Trifluralin	2.8	U	ng/L	P387554	
		Chlordane	5.6	U	ng/L	P387554	
	EPA 8276	Toxaphene	33	UJ	ng/L	P387554	MS
2196587	EPA 8270E	Acetochlor	0.27	U	ng/L	P387510	
		Alachlor	0.27	U	ng/L	P387510	
		Ametryn	0.66	U	ng/L	P387510	
		Atrazine	25		ng/L	P387510	
		Atrazine Desethyl	5.8	I	ng/L	P387510	
		Azinphos Methyl	2.2	U	ng/L	P387510	
		Bromacil	0.55	U	ng/L	P387510	
		Butylate	0.44	U	ng/L	P387510	
		Carbophenothion	0.55	U	ng/L	P387510	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P387510	
		Chlorpyrifos Methyl	0.055	U	ng/L	P387510	
		Cyanazine	3.5	U	ng/L	P387510	
		Demeton	1.6	U	ng/L	P387510	
		Diazinon	0.14	U	ng/L	P387510	
		Dimethenamid**	0.22	I	ng/L	P387510	
		Disulfoton	0.55	U	ng/L	P387510	
		Dithiopyr**	1.0		ng/L	P387510	
		EPTC	1.4	U	ng/L	P387510	
		Ethion	0.16	U	ng/L	P387510	
		Ethoprop	0.11	U	ng/L	P387510	
		Fenamiphos	0.55	U	ng/L	P387510	
		Fipronil	2.3		ng/L	P387510	
		Fipronil Desulfinyl**	1.5		ng/L	P387510	
		Fipronil Sulfide	1.3		ng/L	P387510	
		Fipronil Sulfone	3.2		ng/L	P387510	
		Flumioxazin**	9.7		ng/L	P387510	
		Fonofos	0.22	U	ng/L	P387510	
		Hexazinone	0.82	I	ng/L	P387510	
		Imazalil**	0.82	U	ng/L	P387510	
		Malathion	0.38	U	ng/L	P387510	
		Metalaxyl	0.82	U	ng/L	P387510	
		Metolachlor	1.1	I	ng/L	P387510	
		Metribuzin	3.5	U	ng/L	P387510	
		Mevinphos	0.55	U	ng/L	P387510	

Field ID: G5SW0134

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196587	EPA 8270E	Molinate	0.33	U	ng/L	P387510	
		Naled**	1.6	U	ng/L	P387510	
		Norflurazon	0.55	U	ng/L	P387510	
		Oxadiazon	1.3		ng/L	P387510	
		Parathion Ethyl	0.27	U	ng/L	P387510	
		Parathion Methyl	0.60	U	ng/L	P387510	
		Pendimethalin	1.1	U	ng/L	P387510	
		Phorate	0.27	U	ng/L	P387510	
		Prodiamine**	0.19	U	ng/L	P387510	
		Prometon	0.98	U	ng/L	P387510	
		Prometryn	0.22	U	ng/L	P387510	
		Pronamide**	0.16	U	ng/L	P387510	
		Propiconazole**	14		ng/L	P387510	
		Simazine	0.55	U	ng/L	P387510	
		Sulfentrazone**	27		ng/L	P387510	
		Tebuconazole**	2.7		ng/L	P387510	
		Terbufos	0.11	U	ng/L	P387510	
		Terbutylazine	0.46	U	ng/L	P387510	
2196588	EPA 200.7 Rev. 4.4	Barium	36.3		ug/L	P387692	
		Calcium	91.9		mg/L	P387692	
		Iron	430		ug/L	P387692	
		Manganese	19.8		ug/L	P387692	
		Potassium	5.4		mg/L	P387692	
		Sodium	75.2		mg/L	P387692	
		Zinc	13	I	ug/L	P387692	
	EPA 200.8 Rev. 5.4	Aluminum	68		ug/L	P387692	
		Antimony	0.39		ug/L	P387692	
		Arsenic	2.49		ug/L	P387692	
		Cadmium	0.020	U	ug/L	P387692	
		Chromium	0.90	I	ug/L	P387692	
		Copper	5.59		ug/L	P387692	
		Lead	0.30	I	ug/L	P387692	
		Nickel	1.4	I	ug/L	P387692	
		Selenium	0.36	I	ug/L	P387692	
		Silver	0.010	U	ug/L	P387692	
		Thallium	0.10	U	ug/L	P387692	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference and batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8276: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: St Joe Tidal By Westchester Blvd

Collection Date/Time: 09/16/2020 11:45

Field ID: G5SW0169

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196559	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P387516	
	EPA 300.0 Rev. 2.1	Bromide	0.45		mg Br/L	P387642	
	SM 2320 B-2011	Total Alkalinity	184		mg CaCO3/L	P387674	
	SM 2540 D-2011	TSS	2	I	mg/L	P387841	
	SM 4500 F-C-2011	Fluoride	0.53		mg F/L	P387680	
2196560	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P387580	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.53		mg N/L	P387770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.9		mg N/L	P387613	
	EPA 365.1 Rev. 2.0	Total-P	0.73		mg P/L	P387858	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P387836	
2196561	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.64		mg P/L	P387521	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference and batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Mckay Tidal @ Idle Speed Sign

Collection Date/Time: 09/16/2020 11:00

Field ID: G5SW0173

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196726	EPA 180.1 Rev. 2.0	Turbidity	3.2	A	NTU	P387518	
	EPA 300.0 Rev. 2.1	Bromide	37		mg Br/L	P387642	
	SM 2320 B-2011	Total Alkalinity	122	A	mg CaCO3/L	P387675	
	SM 2540 D-2011	TSS	5	IA	mg/L	P387844	
	SM 4500 F-C-2011	Fluoride	0.87		mg F/L	P387681	
2196727	EPA 350.1 Rev. 2.0	Ammonia-N	0.25		mg N/L	P387578	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P387573	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P387603	
	EPA 365.1 Rev. 2.0	Total-P	0.099		mg P/L	P387918	
	SM 5310 B-2011	Organic Carbon	6.1		mg C/L	P387838	
2196728	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.051		mg P/L	P387522	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference and batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387516

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387518

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387692

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387800

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387973

Component	Result	Code	Units
Chromium	1.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387692

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387692

Component	Result	Code	Units
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387642

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387578

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387580

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387549

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387573

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387770

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387602

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387603

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387613

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387548

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387858

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387521

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387522

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

Reference Method: EPA 8270E
Batch ID: P387510

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
 Batch ID: P387510

Component	Result	Code	Units
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Flumioxazin	1.8	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P387554

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L
Beta-Cyfluthrin	15	U	ng/L
Bifenthrin	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
Dichlobenil	2.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Esfenvalerate	20	U	ng/L
Ethalfuralin	3.0	U	ng/L
Fenpropathrin	10	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
MGK-264	3.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Piperonyl Butoxide	1.5	U	ng/L
Prallethrin	25	U	ng/L
Tau-Fluvalinate	3.5	U	ng/L
Tetramethrin	8.0	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Triclosan Methyl	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P387554

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P387502

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

Reference Method: EPA 8321B
Batch ID: P387598

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: P387668

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: P387674

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2320 B-2011
Batch ID: P387675

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-2011
Batch ID: P387841

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387843

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387844

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387680

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387681

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387836

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

Reference Method: SM 5310 B-2011
Batch ID: P387838

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: P387692

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	105		P	85 - 115
Calcium	108		P	85 - 115
Iron	110		P	85 - 115
Manganese	106		P	85 - 115
Potassium	105		P	85 - 115
Sodium	98.4		P	85 - 115
Zinc	99.4		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	107		P	85 - 115
Calcium	106		P	85 - 115
Iron	112		P	85 - 115
Manganese	108		P	85 - 115
Potassium	104		P	85 - 115
Sodium	107		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387973

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	96.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387692

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	100		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	102		P	85 - 115
Copper	103		P	85 - 115
Lead	101		P	85 - 115
Nickel	102		P	85 - 115
Selenium	97.6		P	85 - 115
Silver	98.9		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	108		P	85 - 115
Arsenic	102		P	85 - 115
Cadmium	103		P	85 - 115
Copper	99.4		P	85 - 115
Lead	104		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Nickel	101		P	85 - 115
Selenium	100		P	85 - 115
Silver	104		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387578

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: P387580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387549

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387573

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: P387770

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387602

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387603

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P387613

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387548

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	108		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P387918

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387521

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P387522

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.8		P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P387510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	86.2	87.6	P/P	71 - 122
Alachlor	84.2	88.3	P/P	70 - 121
Ametryn	80.1	80.0	P/P	49 - 137
Atrazine	85.7	90.7	P/P	76 - 125
Atrazine Desethyl	92.3	96.2	P/P	31 - 144
Azinphos Methyl	127	114	P/P	67 - 150
Bromacil	79.0	84.7	P/P	36 - 121
Butylate	66.8	69.8	P/P	33 - 88.0
Carbophenothion	80.9	83.0	P/P	66 - 116
Chlorpyrifos Ethyl	82.0	86.8	P/P	73 - 117
Chlorpyrifos Methyl	89.0	89.7	P/P	68 - 121
Cyanazine	156	145	P/P	20 - 250
Demeton	76.9	78.7	P/P	30 - 123
Diazinon	91.7	92.5	P/P	70 - 128
Dimethenamid	84.7	85.2	P/P	66 - 122
Disulfoton	74.3	78.1	P/P	46 - 124

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P387510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dithiopyr	84.0	87.6	P/P	69 - 122
EPTC	62.3	60.3	P/P	31 - 90.0
Ethion	77.0	81.9	P/P	45 - 135
Ethoprop	82.1	79.1	P/P	59 - 118
Fenamiphos	77.1	83.0	P/P	30 - 136
Fipronil	88.9	93.5	P/P	57 - 127
Fipronil Desulfinyl	85.4	90.9	P/P	51 - 122
Fipronil Sulfide	70.2	74.5	P/P	57 - 119
Fipronil Sulfone	74.2	78.1	P/P	51 - 119
Flumioxazin	145	141	P/P	20 - 250
Fonofos	83.7	78.5	P/P	60 - 120
Hexazinone	78.2	75.8	P/P	57 - 142
Imazalil	87.9	94.4	P/P	30 - 139
Malathion	83.6	87.7	P/P	67 - 128
Metaxyl	84.6	91.3	P/P	21 - 148
Metolachlor	80.0	82.3	P/P	70 - 120
Metribuzin	87.9	92.1	P/P	20 - 250
Mevinphos	82.0	80.8	P/P	47 - 116
Molinate	67.6	65.8	P/P	41 - 99.0
Naled	57.2	60.1	P/P	38 - 97.0
Norflurazon	88.1	90.9	P/P	54 - 127
Oxadiazon	78.9	81.1	P/P	65 - 122
Parathion Ethyl	82.0	88.0	P/P	71 - 113
Parathion Methyl	95.6	96.6	P/P	73 - 129
Pendimethalin	72.8	74.5	P/P	63 - 130
Phorate	111	108	P/P	48 - 118
Prodiamine	40.1	37.5	P/P	20 - 144
Prometon	78.3	74.1	P/P	53 - 120
Prometryn	82.0	85.9	P/P	63 - 119
Pronamide	88.2	86.3	P/P	81 - 122
Propiconazole	90.8	94.0	P/P	62 - 124
Simazine	85.8	78.0	P/P	77 - 129
Sulfentrazone	82.8	82.3	P/P	20 - 137
Tebuconazole	70.8	72.0	P/P	20 - 118
Terbufos	78.7	76.5	P/P	61 - 119
Terbuthylazine	82.9	81.5	P/P	75 - 119

Reference Method: EPA 8270E
 Batch ID: P387554

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	45.5	41.1	P/P	20 - 87.0
Alpha-BHC	81.3	74.3	P/P	65 - 142
Alpha-Chlordane	78.1	77.3	P/P	58 - 106
Beta-BHC	85.0	81.8	P/P	65 - 179
Beta-Cyfluthrin	55.0	57.7	P/P	39 - 153
Bifenthrin	69.2	65.2	P/P	38 - 128
Chlorothalonil	78.8	75.7	P/P	20 - 214
Cis-Nonachlor	77.9	77.4	P/P	56 - 113
Cypermethrin	70.1	67.6	P/P	37 - 130
Dacthal	87.5	85.3	P/P	75 - 109
DDD-p,p'	85.9	84.5	P/P	66 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P387554

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDE-p,p'	75.1	74.2	P/P	53 - 108
DDT-p,p'	84.4	84.8	P/P	57 - 133
Delta-BHC	95.6	87.6	P/P	68 - 187
Deltamethrin	73.7	78.1	P/P	50 - 200
Dichlobenil	35.2	34.9	P/P	25 - 140
Dicofol	95.8	84.0	P/P	66 - 123
Dieldrin	83.9	81.6	P/P	65 - 111
Endosulfan I	82.8	84.7	P/P	65 - 115
Endosulfan II	110	96.3	P/P	68 - 133
Endosulfan Sulfate	84.4	77.3	P/P	62 - 127
Endrin	87.3	87.5	P/P	64 - 122
Endrin Aldehyde	97.1	103	P/P	61 - 132
Endrin Ketone	100	98.2	P/P	66 - 120
Esfenvalerate	74.2	80.7	P/P	50 - 150
Ethalfuralin	64.6	63.2	P/P	57 - 127
Fenpropathrin	90.1	96.9	P/P	60 - 160
Gamma-BHC	83.8	86.1	P/P	71 - 158
Gamma-Chlordane	74.0	71.3	P/P	53 - 106
Heptachlor	62.1	63.5	P/P	45 - 96.0
Heptachlor Epoxide	81.5	79.5	P/P	64 - 109
Hexachlorobenzene	59.2	59.0	P/P	46 - 103
Lambda-Cyhalothrin	61.6	59.5	P/P	38 - 145
Methoxychlor	83.3	79.2	P/P	69 - 149
MGK-264	63.7	55.5	P/P	50 - 150
Mirex	62.0	61.1	P/P	31 - 90.0
Permethrin	73.4	69.4	P/P	41 - 108
Phenothrin	49.9	46.6	P/P	22 - 91.0
Piperonyl Butoxide	97.2	91.8	P/P	50 - 150
Prallethrin	56.1	52.8	P/P	32 - 92.0
Tau-Fluvalinate	67.3	71.0	P/P	50 - 150
Tetramethrin	83.5	83.8	P/P	60 - 160
Trans-Nonachlor	72.6	71.2	P/P	50 - 107
Triclosan Methyl	92.6	91.2	P/P	50 - 150
Trifluralin	66.8	65.3	P/P	58 - 119

Reference Method: EPA 8276
Batch ID: P387554

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	89.8	81.4	P/P	47 - 119
Toxaphene	107	103	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P387502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	129		P	30 - 160
Acetaminophen	85.7		P	30 - 160
Acetamiprid	68.4		P	30 - 160
Afidopyropen	60.5		P	30 - 160
Bentazon	56.0		P	30 - 160
Benzovindiflupyr	64.6		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P387502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbamazepine	57.3		P	30 - 160
Clothianidin	78.9		P	30 - 160
Dinotefuran	88.9		P	30 - 160
Diuron	50.5		P	30 - 160
Fenuron	89.3		P	30 - 160
Fluridone	70.0		P	30 - 160
Hydrocodone	83.3		P	30 - 160
Ibuprofen	71.2		P	30 - 160
Imazapyr	99.5		P	30 - 160
Imidacloprid	96.1		P	30 - 160
Linuron	63.5		P	30 - 160
Mandestrobin	77.6		P	30 - 160
MCPP	108		P	30 - 160
Naproxen	105		P	30 - 160
Primidone	71.9		P	30 - 160
Pyraclostrobin	55.2		P	30 - 160
Thiamethoxam	80.1		P	30 - 160
Tolfenpyrad	36.5		P	30 - 160
Triclopyr	104		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P387598

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	75.3		P	40 - 150
AMPA	86.3		P	40 - 150
Endothall	104		P	40 - 150
Glufosinate	92.5		P	40 - 150
Glyphosate	105		P	40 - 140
Sucralose	105		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P387668

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	66.6		P	30 - 160
Aldicarb	62.3		P	30 - 160
Aldicarb Sulfone	68.4		P	30 - 160
Aldicarb Sulfoxide	74.1		P	30 - 160
Carbaryl	48.9		P	30 - 160
Carbofuran	42.0		P	30 - 160
Methiocarb	49.0		P	30 - 160
Methomyl	74.7		P	30 - 160
Oxamyl	72.0		P	30 - 160
Propoxur	43.8		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P387674

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	93 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P387675

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.1		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P387680

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.1		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P387681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.6		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P387836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196364	Barium	103		P	80 - 120
2196364	Calcium	102		P	80 - 120
2196364	Iron	106		P	80 - 120
2196364	Manganese	102		P	80 - 120
2196364	Potassium	101		P	80 - 120
2196364	Sodium	103		P	80 - 120
2196364	Zinc	99.2		P	80 - 120
2197193	Barium	106	106	P/P	80 - 120
2197193	Calcium	112	108	P/P	80 - 120
2197193	Iron	111	110	P/P	80 - 120
2197193	Manganese	107	106	P/P	80 - 120
2197193	Potassium	114	111	P/P	80 - 120
2197193	Sodium	104		P	80 - 120
2197193	Zinc	102	100	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197649	Barium	104	101	P/P	70 - 130
2197649	Iron	108	110	P/P	70 - 130
2197649	Manganese	105	103	P/P	70 - 130
2197649	Zinc	99.7	98.0	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387973

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197292	Chromium	97.0	94.8	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196364	Aluminum	99.7		P	80 - 120
2196364	Antimony	103		P	80 - 120
2196364	Arsenic	100		P	80 - 120
2196364	Cadmium	101		P	80 - 120
2196364	Chromium	104		P	80 - 120
2196364	Copper	98.6		P	80 - 120
2196364	Lead	101		P	80 - 120
2196364	Nickel	99.5		P	80 - 120
2196364	Selenium	94.2		P	80 - 120
2196364	Silver	117		P	80 - 120
2196364	Thallium	103		P	80 - 120
2197193	Aluminum	98.9	99.2	P/P	80 - 120
2197193	Antimony	103	104	P/P	80 - 120
2197193	Arsenic	99.4	99.3	P/P	80 - 120
2197193	Cadmium	101	101	P/P	80 - 120
2197193	Chromium	103	102	P/P	80 - 120
2197193	Copper	101	101	P/P	80 - 120
2197193	Lead	99.9	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197193	Nickel	100	100	P/P	80 - 120
2197193	Selenium	96.0	95.6	P/P	80 - 120
2197193	Silver	98.5	98.6	P/P	80 - 120
2197193	Thallium	102	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197649	Aluminum	117	118	P/P	70 - 130
2197649	Antimony	117	117	P/P	70 - 130
2197649	Arsenic	117	118	P/P	70 - 130
2197649	Cadmium	110	106	P/P	70 - 130
2197649	Copper	116	115	P/P	70 - 130
2197649	Lead	108	109	P/P	70 - 130
2197649	Nickel	111	110	P/P	70 - 130
2197649	Selenium	120	118	P/P	70 - 130
2197649	Silver	102	103	P/P	70 - 130
2197649	Thallium	107	110	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196574	Bromide	93.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196535	Ammonia-N	97.1	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196548	Ammonia-N	99.1	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387549

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196185	Kjeldahl Nitrogen	110	110	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387573

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196380	Kjeldahl Nitrogen	114	106	F/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387770

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196554	Kjeldahl Nitrogen	99.8	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196198	NO2NO3-N	97.5	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196642	NO2NO3-N	100	99.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196548	NO2NO3-N	99.9	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196378	Total-P	95.0	95.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196548	Total-P	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196642	Total-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196640	O-Phosphate-P	98.4	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387522

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196643	O-Phosphate-P	95.6	97.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P387510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196696	Acetochlor	86.5	87.2	P/P	68 - 126
2196696	Alachlor	81.9	84.3	P/P	66 - 125
2196696	Ametryn	103	97.9	P/P	31 - 182
2196696	Atrazine	97.1	98.6	P/P	68 - 137
2196696	Atrazine Desethyl	109	102	P/P	13 - 161
2196696	Azinphos Methyl	130	135	P/P	54 - 162
2196696	Bromacil	80.8	80.8	P/P	34 - 144
2196696	Butylate	54.8	61.3	P/P	16 - 92.0
2196696	Carbophenothion	86.0	89.4	P/P	30 - 131
2196696	Chlorpyrifos Ethyl	68.2	82.3	P/P	63 - 124
2196696	Chlorpyrifos Methyl	91.6	90.0	P/P	64 - 125
2196696	Cyanazine	146	162	P/P	13 - 245
2196696	Demeton	86.8	82.4	P/P	20 - 154
2196696	Diazinon	98.6	96.2	P/P	66 - 141
2196696	Dimethenamid	83.1	84.5	P/P	50 - 130
2196696	Disulfoton	84.0	90.8	P/P	55 - 130
2196696	Dithiopyr	84.0	86.2	P/P	66 - 122
2196696	EPTC	52.4	52.5	P/P	15 - 93.0
2196696	Ethion	76.8	82.5	P/P	15 - 148
2196696	Ethoprop	88.1	88.7	P/P	59 - 126
2196696	Fenamiphos	83.6	81.2	P/P	39 - 137
2196696	Fipronil	90.6	90.4	P/P	47 - 131
2196696	Fipronil Desulfinyl	90.1	84.7	P/P	43 - 121
2196696	Fipronil Sulfide	73.8	75.9	P/P	29 - 134
2196696	Fipronil Sulfone	72.8	85.3	P/P	19 - 131
2196696	Flumioxazin	155	161	P/P	10 - 300
2196696	Fonofos	87.5	88.3	P/P	62 - 128
2196696	Hexazinone	82.3	85.7	P/P	58 - 154
2196696	Imazalil	127	119	P/P	10 - 215
2196696	Malathion	84.6	89.8	P/P	54 - 135
2196696	Metalaxyl	90.4	88.8	P/P	46 - 136
2196696	Metolachlor	81.9	78.2	P/P	62 - 126
2196696	Metribuzin	94.5	82.2	P/P	44 - 277
2196696	Mevinphos	88.4	88.4	P/P	44 - 135
2196696	Molinate	61.6	64.1	P/P	31 - 104
2196696	Naled	63.1	65.8	P/P	33 - 113
2196696	Norflurazon	88.8	88.5	P/P	32 - 134
2196696	Oxadiazon	76.1	73.3	P/P	55 - 123
2196696	Parathion Ethyl	90.4	87.8	P/P	67 - 120
2196696	Parathion Methyl	102	99.4	P/P	70 - 140
2196696	Pendimethalin	79.3	86.6	P/P	59 - 145
2196696	Phorate	87.9	88.5	P/P	52 - 127
2196696	Prodiamine	40.7	45.0	P/P	11 - 157
2196696	Prometon	101	101	P/P	55 - 130
2196696	Prometryn	90.5	95.0	P/P	55 - 127
2196696	Pronamide	108	116	P/P	66 - 150
2196696	Propiconazole	98.2	104	P/P	14 - 178
2196696	Simazine	88.9	75.9	P/P	58 - 159
2196696	Sulfentrazone	86.1	81.2	P/P	21 - 144
2196696	Tebuconazole	67.5	68.4	P/P	10 - 122
2196696	Terbufos	83.8	85.6	P/P	65 - 131
2196696	Terbutylazine	84.9	85.0	P/P	63 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P387554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196684	Aldrin	54.3	50.0	P/P	32 - 82.0
2196684	Alpha-BHC	68.9	72.2	P/P	68 - 157
2196684	Alpha-Chlordane	64.4	62.1	P/P	54 - 108
2196684	Beta-BHC	78.8	66.3	P/P	54 - 200
2196684	Beta-Cyfluthrin	60.2	58.8	P/P	50 - 154
2196684	Bifenthrin	71.6	70.2	P/P	49 - 124
2196684	Chlorothalonil	69.9	61.0	P/P	10 - 289
2196684	Cis-Nonachlor	67.7	65.6	P/P	53 - 112
2196684	Cypermethrin	77.3	71.3	P/P	43 - 141
2196684	Dacthal	75.5	70.7	P/F	75 - 112
2196684	DDD-p,p'	68.9	65.8	P/P	58 - 125
2196684	DDE-p,p'	65.4	62.1	P/P	50 - 108
2196684	DDT-p,p'	69.1	64.2	P/P	52 - 140
2196684	Delta-BHC	82.9	73.7	P/P	61 - 228
2196684	Deltamethrin	77.0	59.5	P/P	50 - 200
2196684	Dichlobenil	48.8	49.5	P/P	25 - 140
2196684	Dicofol	63.8	64.3	P/P	59 - 130
2196684	Dieldrin	69.9	66.4	P/P	57 - 121
2196684	Endosulfan I	75.7	73.7	P/P	62 - 123
2196684	Endosulfan II	83.4	83.6	P/P	48 - 163
2196684	Endosulfan Sulfate	83.8	81.9	P/P	63 - 132
2196684	Endrin	73.3	71.4	P/P	58 - 128
2196684	Endrin Aldehyde	98.6	80.4	P/P	44 - 126
2196684	Endrin Ketone	86.9	79.5	P/P	68 - 127
2196684	Esfenvalerate	84.7	76.5	P/P	50 - 150
2196684	Ethalfuralin	58.1	58.1	P/P	55 - 131
2196684	Fenpropathrin	129	170	P/F	60 - 160
2196684	Gamma-BHC	88.2	80.9	P/P	54 - 206
2196684	Gamma-Chlordane	62.1	60.3	P/P	52 - 105
2196684	Heptachlor	58.4	55.1	P/P	47 - 94.0
2196684	Heptachlor Epoxide	71.4	68.2	P/P	61 - 113
2196684	Hexachlorobenzene	52.4	48.1	P/P	45 - 100
2196684	Lambda-Cyhalothrin	66.7	64.0	P/P	37 - 165
2196684	Methoxychlor	65.7	63.6	P/P	63 - 153
2196684	MGK-264	81.9	79.5	P/P	50 - 150
2196684	Mirex	59.9	57.7	P/P	38 - 90.0
2196684	Permethrin	61.4	58.6	P/P	45 - 112
2196684	Phenothrin	64.2	60.2	P/P	22 - 118
2196684	Piperonyl Butoxide	92.4	78.9	P/P	50 - 150
2196684	Prallethrin	67.3	61.3	P/P	21 - 114
2196684	Tau-Fluvalinate	77.8	76.7	P/P	50 - 150
2196684	Tetramethrin	79.5	75.6	P/P	60 - 160
2196684	Trans-Nonachlor	59.2	59.3	P/P	50 - 103
2196684	Triclosan Methyl	71.1	67.7	P/P	50 - 150
2196684	Trifluralin	57.3	57.3	P/P	57 - 122

Reference Method: EPA 8276
Batch ID: P387554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196586	Chlordane	103	103	P/P	34 - 129
2196586	Toxaphene	180	181	F/F	26 - 123

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P387502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196584	Acetaminophen	64.4	70.3	P/P	30 - 160
2196584	Acetamiprid	60.4	62.3	P/P	30 - 160
2196584	Afidopyropen	52.4	52.5	P/P	30 - 160
2196584	Benzovindiflupyr	49.7	49.3	P/P	30 - 160
2196584	Carbamazepine	43.5	45.9	P/P	30 - 160
2196584	Clothianidin	62.7	61.1	P/P	30 - 160
2196584	Dinotefuran	72.0	78.1	P/P	30 - 160
2196584	Diuron	37.9	40.5	P/P	30 - 160
2196584	Fenuron	66.7	69.0	P/P	30 - 160
2196584	Hydrocodone	61.3	66.2	P/P	30 - 160
2196584	Ibuprofen	45.2	52.3	P/P	30 - 160
2196584	Linuron	43.5	47.8	P/P	30 - 160
2196584	Mandestrobin	58.9	60.1	P/P	30 - 160
2196584	MCP	86.9	85.5	P/P	30 - 160
2196584	Naproxen	83.7	58.6	P/P	30 - 160
2196584	Primidone	66.5	63.0	P/P	30 - 160
2196584	Pyraclostrobin	48.0	50.9	P/P	30 - 160
2196584	Thiamethoxam	72.4	75.9	P/P	30 - 160
2196584	Tolfenpyrad	33.9	31.9	P/P	30 - 160
2196584	Triclopyr	91.3	88.1	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P387598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196261	Acesulfame K	34.2	35.1	F/F	40 - 150
2196261	AMPA	6.76	7.01	F/F	40 - 150
2196261	Endothall	110	128	P/P	40 - 150
2196261	Glufosinate	37.8	39.4	F/F	40 - 150
2196261	Glyphosate	72.6	73.3	P/P	40 - 140
2196261	Sucralose	29.5	32.1	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P387668

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196583	3-Hydroxycarbofuran	59.7	57.0	P/P	30 - 160
2196583	Aldicarb	44.4	53.8	P/P	30 - 160
2196583	Aldicarb Sulfone	75.4	71.5	P/P	30 - 160
2196583	Aldicarb Sulfoxide	34.1	33.3	P/P	30 - 160
2196583	Carbaryl	36.9	36.7	P/P	30 - 160
2196583	Carbofuran	36.7	35.1	P/P	30 - 160
2196583	Methiocarb	36.9	41.9	P/P	30 - 160
2196583	Methomyl	71.8	70.0	P/P	30 - 160
2196583	Oxamyl	65.9	68.0	P/P	30 - 160
2196583	Propoxur	38.1	37.6	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P387680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196638	Fluoride	96.2	96.9	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P387681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196726	Fluoride	100	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P387836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196931	Organic Carbon	98.8	102	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P387838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2197570	Organic Carbon	96.3	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196553	Turbidity	2.71	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196726	Turbidity	2.53	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197193	Barium	0.892	Spike	P	0 - 20
2197193	Calcium	2.28	Spike	P	0 - 20
2197193	Iron	0.994	Spike	P	0 - 20
2197193	Manganese	1.07	Spike	P	0 - 20
2197193	Potassium	2.71	Spike	P	0 - 20
2197193	Sodium	3.35	Spike	P	0 - 20
2197193	Zinc	2.05	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197649	Barium	2.78	Spike	P	0 - 20
2197649	Calcium	1.77	Spike	P	0 - 20
2197649	Iron	1.73	Spike	P	0 - 20
2197649	Manganese	2.05	Spike	P	0 - 20
2197649	Potassium	0.403	Spike	P	0 - 20
2197649	Sodium	0.882	Spike	P	0 - 20
2197649	Zinc	1.73	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P387973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197292	Chromium	2.21	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197193	Aluminum	0.262	Spike	P	0 - 20
2197193	Antimony	0.385	Spike	P	0 - 20
2197193	Arsenic	0.131	Spike	P	0 - 20
2197193	Cadmium	0.0458	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197193	Chromium	0.497	Spike	P	0 - 20
2197193	Copper	0.364	Spike	P	0 - 20
2197193	Lead	0.996	Spike	P	0 - 20
2197193	Nickel	0.285	Spike	P	0 - 20
2197193	Selenium	0.450	Spike	P	0 - 20
2197193	Silver	0.124	Spike	P	0 - 20
2197193	Thallium	1.63	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P387800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197649	Aluminum	0.673	Spike	P	0 - 20
2197649	Antimony	0.196	Spike	P	0 - 20
2197649	Arsenic	0.770	Spike	P	0 - 20
2197649	Cadmium	3.85	Spike	P	0 - 20
2197649	Copper	0.942	Spike	P	0 - 20
2197649	Lead	0.566	Spike	P	0 - 20
2197649	Nickel	0.326	Spike	P	0 - 20
2197649	Selenium	1.44	Spike	P	0 - 20
2197649	Silver	0.915	Spike	P	0 - 20
2197649	Thallium	3.35	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196535	Ammonia-N	1.17	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196548	Ammonia-N	1.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196185	Kjeldahl Nitrogen	0.0	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196380	Kjeldahl Nitrogen	6.53	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196554	Kjeldahl Nitrogen	2.35	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196198	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196642	NO2NO3-N	0.477	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196548	NO2NO3-N	0.491	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196378	Total-P	0.629	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196548	Total-P	1.83	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196642	Total-P	0.0247	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196640	O-Phosphate-P	2.21	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196643	O-Phosphate-P	1.59	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P387510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196696	Acetochlor	0.855	Spike	P	0 - 30
2196696	Alachlor	2.87	Spike	P	0 - 30
2196696	Ametryn	5.30	Spike	P	0 - 30
2196696	Atrazine	1.57	Spike	P	0 - 30
2196696	Atrazine Desethyl	7.35	Spike	P	0 - 30
2196696	Azinphos Methyl	3.96	Spike	P	0 - 30
2196696	Bromacil	0.00851	Spike	P	0 - 30
2196696	Butylate	11.2	Spike	P	0 - 30
2196696	Carbophenothion	3.79	Spike	P	0 - 30
2196696	Chlorpyrifos Ethyl	18.7	Spike	P	0 - 30
2196696	Chlorpyrifos Methyl	1.82	Spike	P	0 - 30
2196696	Cyanazine	10.6	Spike	P	0 - 30
2196696	Demeton	5.15	Spike	P	0 - 30
2196696	Diazinon	2.39	Spike	P	0 - 30
2196696	Dimethenamid	1.76	Spike	P	0 - 30
2196696	Disulfoton	7.87	Spike	P	0 - 30
2196696	Dithiopyr	2.64	Spike	P	0 - 30
2196696	EPTC	0.221	Spike	P	0 - 30
2196696	Ethion	7.16	Spike	P	0 - 30
2196696	Ethoprop	0.575	Spike	P	0 - 30
2196696	Fenamiphos	2.98	Spike	P	0 - 30
2196696	Fipronil	0.268	Spike	P	0 - 30
2196696	Fipronil Desulfinyl	6.24	Spike	P	0 - 30
2196696	Fipronil Sulfide	2.78	Spike	P	0 - 30
2196696	Fipronil Sulfone	15.8	Spike	P	0 - 30
2196696	Flumioxazin	3.58	Spike	P	0 - 30
2196696	Fonofos	0.836	Spike	P	0 - 30
2196696	Hexazinone	4.10	Spike	P	0 - 30
2196696	Imazalil	6.40	Spike	P	0 - 30
2196696	Malathion	5.93	Spike	P	0 - 30
2196696	Metalaxyl	1.77	Spike	P	0 - 30
2196696	Metolachlor	4.59	Spike	P	0 - 30
2196696	Metribuzin	13.9	Spike	P	0 - 30
2196696	Mevinphos	0.0827	Spike	P	0 - 30
2196696	Molinate	3.93	Spike	P	0 - 30
2196696	Naled	4.31	Spike	P	0 - 30
2196696	Norflurazon	0.428	Spike	P	0 - 30
2196696	Oxadiazon	3.60	Spike	P	0 - 30
2196696	Parathion Ethyl	2.93	Spike	P	0 - 30
2196696	Parathion Methyl	2.10	Spike	P	0 - 30
2196696	Pendimethalin	8.85	Spike	P	0 - 30
2196696	Phorate	0.678	Spike	P	0 - 30
2196696	Prodiamine	10.1	Spike	P	0 - 30
2196696	Prometon	0.129	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P387510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196696	Prometryn	4.81	Spike	P	0 - 30
2196696	Pronamide	7.05	Spike	P	0 - 30
2196696	Propiconazole	5.97	Spike	P	0 - 30
2196696	Simazine	15.8	Spike	P	0 - 30
2196696	Sulfentrazone	5.92	Spike	P	0 - 30
2196696	Tebuconazole	1.36	Spike	P	0 - 30
2196696	Terbufos	2.15	Spike	P	0 - 30
2196696	Terbutylazine	0.158	Spike	P	0 - 30
LFB	Acetochlor	1.68	LCS	P	0 - 30
LFB	Alachlor	4.75	LCS	P	0 - 30
LFB	Ametryn	0.0383	LCS	P	0 - 30
LFB	Atrazine	5.57	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.09	LCS	P	0 - 30
LFB	Azinphos Methyl	10.6	LCS	P	0 - 30
LFB	Bromacil	6.97	LCS	P	0 - 30
LFB	Butylate	4.25	LCS	P	0 - 30
LFB	Carbophenothion	2.57	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	5.64	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.775	LCS	P	0 - 30
LFB	Cyanazine	7.25	LCS	P	0 - 30
LFB	Demeton	2.40	LCS	P	0 - 30
LFB	Diazinon	0.926	LCS	P	0 - 30
LFB	Dimethenamid	0.613	LCS	P	0 - 30
LFB	Disulfoton	4.91	LCS	P	0 - 30
LFB	Dithiopyr	4.16	LCS	P	0 - 30
LFB	EPTC	3.41	LCS	P	0 - 30
LFB	Ethion	6.17	LCS	P	0 - 30
LFB	Ethoprop	3.74	LCS	P	0 - 30
LFB	Fenamiphos	7.40	LCS	P	0 - 30
LFB	Fipronil	5.03	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	6.13	LCS	P	0 - 30
LFB	Fipronil Sulfide	5.88	LCS	P	0 - 30
LFB	Fipronil Sulfone	5.12	LCS	P	0 - 30
LFB	Flumioxazin	2.81	LCS	P	0 - 30
LFB	Fonofos	6.47	LCS	P	0 - 30
LFB	Hexazinone	3.24	LCS	P	0 - 30
LFB	Imazalil	7.08	LCS	P	0 - 30
LFB	Malathion	4.68	LCS	P	0 - 30
LFB	Metalaxyl	7.62	LCS	P	0 - 30
LFB	Metolachlor	2.94	LCS	P	0 - 30
LFB	Metribuzin	4.69	LCS	P	0 - 30
LFB	Mevinphos	1.45	LCS	P	0 - 30
LFB	Molinate	2.83	LCS	P	0 - 30
LFB	Naled	4.88	LCS	P	0 - 30
LFB	Norflurazon	3.16	LCS	P	0 - 30
LFB	Oxadiazon	2.68	LCS	P	0 - 30
LFB	Parathion Ethyl	7.07	LCS	P	0 - 30
LFB	Parathion Methyl	1.14	LCS	P	0 - 30
LFB	Pendimethalin	2.26	LCS	P	0 - 30
LFB	Phorate	2.44	LCS	P	0 - 30
LFB	Prodiamine	6.73	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P387510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometon	5.60	LCS	P	0 - 30
LFB	Prometryn	4.63	LCS	P	0 - 30
LFB	Pronamide	2.17	LCS	P	0 - 30
LFB	Propiconazole	3.46	LCS	P	0 - 30
LFB	Simazine	9.49	LCS	P	0 - 30
LFB	Sulfentrazone	0.559	LCS	P	0 - 30
LFB	Tebuconazole	1.76	LCS	P	0 - 30
LFB	Terbufos	2.80	LCS	P	0 - 30
LFB	Terbutylazine	1.66	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P387554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196684	Aldrin	8.43	Spike	P	0 - 30
2196684	Alpha-BHC	4.76	Spike	P	0 - 30
2196684	Alpha-Chlordane	3.49	Spike	P	0 - 30
2196684	Beta-BHC	17.3	Spike	P	0 - 30
2196684	Beta-Cyfluthrin	2.39	Spike	P	0 - 30
2196684	Bifenthrin	2.00	Spike	P	0 - 30
2196684	Chlorothalonil	13.7	Spike	P	0 - 30
2196684	Cis-Nonachlor	3.14	Spike	P	0 - 30
2196684	Cypermethrin	8.02	Spike	P	0 - 30
2196684	Dacthal	6.15	Spike	P	0 - 30
2196684	DDD-p,p'	4.54	Spike	P	0 - 30
2196684	DDE-p,p'	5.21	Spike	P	0 - 30
2196684	DDT-p,p'	7.47	Spike	P	0 - 30
2196684	Delta-BHC	11.8	Spike	P	0 - 30
2196684	Deltamethrin	25.6	Spike	P	0 - 30
2196684	Dichlobenil	1.38	Spike	P	0 - 30
2196684	Dicofol	0.842	Spike	P	0 - 30
2196684	Dieldrin	5.20	Spike	P	0 - 30
2196684	Endosulfan I	2.80	Spike	P	0 - 30
2196684	Endosulfan II	0.244	Spike	P	0 - 30
2196684	Endosulfan Sulfate	2.34	Spike	P	0 - 30
2196684	Endrin	2.65	Spike	P	0 - 30
2196684	Endrin Aldehyde	20.3	Spike	P	0 - 30
2196684	Endrin Ketone	8.86	Spike	P	0 - 30
2196684	Esfenvalerate	10.1	Spike	P	0 - 30
2196684	Ethalfuralin	0.0594	Spike	P	0 - 30
2196684	Fenpropathrin	27.7	Spike	P	0 - 30
2196684	Gamma-BHC	8.55	Spike	P	0 - 30
2196684	Gamma-Chlordane	2.75	Spike	P	0 - 30
2196684	Heptachlor	5.65	Spike	P	0 - 30
2196684	Heptachlor Epoxide	4.55	Spike	P	0 - 30
2196684	Hexachlorobenzene	8.39	Spike	P	0 - 30
2196684	Lambda-Cyhalothrin	4.23	Spike	P	0 - 30
2196684	Methoxychlor	3.29	Spike	P	0 - 30
2196684	MGK-264	2.94	Spike	P	0 - 30
2196684	Mirex	3.76	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P387554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196684	Permethrin	4.14	Spike	P	0 - 30
2196684	Phenothrin	6.50	Spike	P	0 - 30
2196684	Piperonyl Butoxide	15.9	Spike	P	0 - 30
2196684	Prallethrin	9.33	Spike	P	0 - 30
2196684	Tau-Fluvalinate	1.40	Spike	P	0 - 30
2196684	Tetramethrin	5.09	Spike	P	0 - 30
2196684	Trans-Nonachlor	0.255	Spike	P	0 - 30
2196684	Triclosan Methyl	4.62	Spike	P	0 - 30
2196684	Trifluralin	0.0183	Spike	P	0 - 30
LFB	Aldrin	10.1	LCS	P	0 - 30
LFB	Alpha-BHC	8.94	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.10	LCS	P	0 - 30
LFB	Beta-BHC	3.83	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	4.76	LCS	P	0 - 30
LFB	Bifenthrin	5.97	LCS	P	0 - 30
LFB	Chlorothalonil	3.97	LCS	P	0 - 30
LFB	Cis-Nonachlor	0.588	LCS	P	0 - 30
LFB	Cypermethrin	3.68	LCS	P	0 - 30
LFB	Dacthal	2.49	LCS	P	0 - 30
LFB	DDD-p,p'	1.65	LCS	P	0 - 30
LFB	DDE-p,p'	1.19	LCS	P	0 - 30
LFB	DDT-p,p'	0.546	LCS	P	0 - 30
LFB	Delta-BHC	8.68	LCS	P	0 - 30
LFB	Deltamethrin	5.78	LCS	P	0 - 30
LFB	Dichlobenil	0.903	LCS	P	0 - 30
LFB	Dicofol	13.1	LCS	P	0 - 30
LFB	Dieldrin	2.78	LCS	P	0 - 30
LFB	Endosulfan I	2.28	LCS	P	0 - 30
LFB	Endosulfan II	13.1	LCS	P	0 - 30
LFB	Endosulfan Sulfate	8.79	LCS	P	0 - 30
LFB	Endrin	0.217	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.89	LCS	P	0 - 30
LFB	Endrin Ketone	1.76	LCS	P	0 - 30
LFB	Esfenvalerate	8.30	LCS	P	0 - 30
LFB	Ethalfuralin	2.30	LCS	P	0 - 30
LFB	Fenpropathrin	7.33	LCS	P	0 - 30
LFB	Gamma-BHC	2.70	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.67	LCS	P	0 - 30
LFB	Heptachlor	2.25	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.39	LCS	P	0 - 30
LFB	Hexachlorobenzene	0.360	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	3.54	LCS	P	0 - 30
LFB	Methoxychlor	5.05	LCS	P	0 - 30
LFB	MGK-264	13.8	LCS	P	0 - 30
LFB	Mirex	1.54	LCS	P	0 - 30
LFB	Permethrin	5.50	LCS	P	0 - 30
LFB	Phenothrin	6.83	LCS	P	0 - 30
LFB	Piperonyl Butoxide	5.78	LCS	P	0 - 30
LFB	Prallethrin	6.10	LCS	P	0 - 30
LFB	Tau-Fluvalinate	5.30	LCS	P	0 - 30
LFB	Tetramethrin	0.433	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P387554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Trans-Nonachlor	1.94	LCS	P	0 - 30
LFB	Triclosan Methyl	1.50	LCS	P	0 - 30
LFB	Trifluralin	2.27	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P387554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196586	Chlordane	0.854	Spike	P	0 - 30
2196586	Toxaphene	0.538	Spike	P	0 - 30
LFB	Chlordane	9.87	LCS	P	0 - 30
LFB	Toxaphene	3.55	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196584	2,4-D	0.746	Spike	P	0 - 30
2196584	Acetaminophen	5.99	Spike	P	0 - 30
2196584	Acetamiprid	3.09	Spike	P	0 - 30
2196584	Afidopyropen	0.0707	Spike	P	0 - 30
2196584	Bentazon	5.75	Spike	P	0 - 30
2196584	Benzovindiflupyr	0.915	Spike	P	0 - 30
2196584	Carbamazepine	4.60	Spike	P	0 - 30
2196584	Clothianidin	1.92	Spike	P	0 - 30
2196584	Dinotefuran	7.70	Spike	P	0 - 30
2196584	Diuron	5.30	Spike	P	0 - 30
2196584	Fenuron	3.37	Spike	P	0 - 30
2196584	Fluridone	5.80	Spike	P	0 - 30
2196584	Hydrocodone	7.77	Spike	P	0 - 30
2196584	Ibuprofen	14.6	Spike	P	0 - 30
2196584	Imazapyr	1.78	Spike	P	0 - 30
2196584	Imidacloprid	2.89	Spike	P	0 - 30
2196584	Linuron	9.41	Spike	P	0 - 30
2196584	Mandestrobin	1.89	Spike	P	0 - 30
2196584	MCPP	1.56	Spike	P	0 - 30
2196584	Naproxen	35.3	Spike	F	0 - 30
2196584	Primidone	4.56	Spike	P	0 - 30
2196584	Pyraclostrobin	5.86	Spike	P	0 - 30
2196584	Thiamethoxam	4.33	Spike	P	0 - 30
2196584	Tolfenpyrad	5.93	Spike	P	0 - 30
2196584	Triclopyr	3.58	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196261	Acesulfame K	2.58	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P387598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196261	AMPA	3.67	Spike	P	0 - 30
2196261	Endothall	15.0	Spike	P	0 - 30
2196261	Glufosinate	4.11	Spike	P	0 - 30
2196261	Glyphosate	0.902	Spike	P	0 - 30
2196261	Sucralose	8.26	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387668

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196583	3-Hydroxycarbofuran	4.71	Spike	P	0 - 30
2196583	Aldicarb	19.0	Spike	P	0 - 30
2196583	Aldicarb Sulfone	5.32	Spike	P	0 - 30
2196583	Aldicarb Sulfoxide	2.37	Spike	P	0 - 30
2196583	Carbaryl	0.632	Spike	P	0 - 30
2196583	Carbofuran	4.30	Spike	P	0 - 30
2196583	Methiocarb	12.9	Spike	P	0 - 30
2196583	Methomyl	2.58	Spike	P	0 - 30
2196583	Oxamyl	3.18	Spike	P	0 - 30
2196583	Propoxur	1.30	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P387674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196638	Total Alkalinity	0.889	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P387675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196726	Total Alkalinity	1.14	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P387680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196638	Fluoride	0.463	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P387681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196726	Fluoride	0.965	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P387836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196931	Organic Carbon	2.20	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P387838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2197570	Organic Carbon	0.655	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2196583
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	33.3	P	30 - 160

Lab Sample ID: 2196584
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	Acetaminophen-d4	69.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	49.3	P	30 - 160
EPA 8321B	Diuron-d6	43.9	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	47.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	47.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	55.9	P	30 - 160
EPA 8321B	Primidone-d5	68.6	P	30 - 160
EPA 8321B	Sucralose-d6	80.4	P	30 - 160
EPA 8321B	Sucralose-d6	80.4	P	30 - 160

Lab Sample ID: 2196586
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	70.0	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	47.7	P	34 - 106
EPA 8276	Decachlorobiphenyl	50.7	P	26 - 97.0
EPA 8276	PCNB	78.2	P	38 - 141

Lab Sample ID: 2196587
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	104	P	72 - 135
EPA 8270E	Terbufos-d10	94.8	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101022

Included Lab Sample IDs: 2196553, 2196556, 2196559, 2196726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	100	99.8	P/P	90 - 110
Bromide	99.8	98.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101044

Included Lab Sample IDs: 2196584

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	101	126	P/P	50 - 150
Acetaminophen	114	108	P/P	60 - 160
Acetamiprid	114	114	P/P	50 - 150
Afidopyropen	103	83.9	P/P	50 - 150
Bentazon	99.7	98.6	P/P	50 - 160
Benzovindiflupyr	107	110	P/P	50 - 150
Carbamazepine	102	102	P/P	60 - 150
Clothianidin	93.0	101	P/P	60 - 150
Dinotefuran	93.2	89.7	P/P	50 - 150
Diuron	104	105	P/P	60 - 160
Fenuron	107	111	P/P	60 - 150
Fluridone	111	100	P/P	60 - 160
Hydrocodone	105	106	P/P	60 - 150
Ibuprofen	94.4	87.6	P/P	50 - 160
Imazapyr	107	118	P/P	50 - 160
Imidacloprid	92.2	97.2	P/P	60 - 150
Linuron	103	90.5	P/P	60 - 150
Mandestrobin	100	104	P/P	50 - 150
MCPP	113	107	P/P	50 - 150
Naproxen	105	82.8	P/P	50 - 160
Primidone	104	86.6	P/P	60 - 150
Pyraclostrobin	89.2	101	P/P	60 - 150
Thiamethoxam	99.9	98.6	P/P	50 - 150
Tolfenpyrad	86.6	96.0	P/P	60 - 150
Triclopyr	112	109	P/P	50 - 150

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101059

Included Lab Sample IDs: 2196553, 2196556, 2196559, 2196726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A101061

Included Lab Sample IDs: 2196555, 2196558, 2196561, 2196728

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.4	96.1	P/P	90 - 110
O-Phosphate-P	98.8	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101085

Included Lab Sample IDs: 2196554, 2196557, 2196560, 2196727

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	94.4	95.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101096

Included Lab Sample IDs: 2196557, 2196727

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101102

Included Lab Sample IDs: 2196554, 2196560

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.5	99.0	P/P	90 - 110
NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101113

Included Lab Sample IDs: 2196584

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	79.7	71.7	P/P	60 - 160
Glufosinate	79.4	85.5	P/P	60 - 160
Glyphosate	106	120	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101121

Included Lab Sample IDs: 2196557, 2196727

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	108	P/P	90 - 110
Kjeldahl Nitrogen	108	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101124

Included Lab Sample IDs: 2196584

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	87.6	68.0	P/P	60 - 160
Endothall	110	119	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101132

Included Lab Sample IDs: 2196557

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A101133

Included Lab Sample IDs: 2196553, 2196556, 2196559, 2196726

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	105	95.6	P/P	90 - 110
Total Alkalinity	95.6	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A101133

Included Lab Sample IDs: 2196553, 2196556, 2196559, 2196726

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

Reference Method: EPA 8276

Run ID: A101144

Included Lab Sample IDs: 2196586

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.9		P	80 - 120
Toxaphene	100		P	80 - 120

Reference Method: EPA 8270E

Run ID: A101166

Included Lab Sample IDs: 2196587

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	99.5		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	103		P	80 - 120
Azinphos Methyl	98.4		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	99.1		P	80 - 120
Carbophenothion	99.7		P	80 - 120
Chlorpyrifos Ethyl	99.3		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	103		P	80 - 120
Demeton	97.6		P	80 - 120
Diazinon	103		P	80 - 120
Dimethenamid	98.1		P	80 - 120
Disulfoton	97.1		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	97.6		P	80 - 120
Ethion	96.8		P	80 - 120
Ethoprop	96.8		P	80 - 120
Fenamiphos	102		P	80 - 120
Fipronil	98.2		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfide	96.5		P	80 - 120
Fipronil Sulfone	98.2		P	80 - 120
Flumioxazin	96.7		P	80 - 120
Fonofos	99.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A101166
Included Lab Sample IDs: 2196587

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hexazinone	102		P	80 - 120
Imazalil	100		P	80 - 120
Malathion	98.5		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	102		P	80 - 120
Mevinphos	94.8		P	80 - 120
Molinate	92.1		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	99.0		P	80 - 120
Oxadiazon	102		P	80 - 120
Parathion Ethyl	94.1		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	96.3		P	80 - 120
Phorate	99.7		P	80 - 120
Prodiamine	98.3		P	80 - 120
Prometon	99.8		P	80 - 120
Prometryn	99.5		P	80 - 120
Pronamide	98.4		P	80 - 120
Propiconazole	102		P	80 - 120
Simazine	99.7		P	80 - 120
Sulfentrazone	95.3		P	80 - 120
Tebuconazole	98.8		P	80 - 120
Terbufos	97.9		P	80 - 120
Terbutylazine	99.0		P	80 - 120

Reference Method: EPA 8270E
Run ID: A101167
Included Lab Sample IDs: 2196586

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	94.8		P	80 - 120
Beta-Cyfluthrin	88.5		P	80 - 120
Bifenthrin	97.8		P	80 - 120
Chlorothalonil	98.8		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	91.9		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	108		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	110		P	80 - 120
Delta-BHC	102		P	80 - 120
Deltamethrin	96.2		P	80 - 120
Dichlobenil	95.0		P	80 - 120
Dicofol	106		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	104		P	80 - 120
Endosulfan II	130*		F	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A101167

Included Lab Sample IDs: 2196586

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan Sulfate	96.6		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	110		P	80 - 120
Endrin Ketone	97.1		P	80 - 120
Esfenvalerate	91.6		P	80 - 120
Ethalfuralin	98.2		P	80 - 120
Fenpropathrin	101		P	80 - 120
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	100		P	80 - 120
Heptachlor	98.0		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	99.2		P	80 - 120
Lambda-Cyhalothrin	90.6		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	104		P	80 - 120
Mirex	98.4		P	80 - 120
Permethrin	92.9		P	80 - 120
Phenothrin	91.1		P	80 - 120
Piperonyl Butoxide	95.1		P	80 - 120
Prallethrin	91.8		P	80 - 120
Tau-Fluvalinate	97.2		P	80 - 120
Tetramethrin	97.6		P	80 - 120
Trans-Nonachlor	102		P	80 - 120
Triclosan Methyl	103		P	80 - 120
Trifluralin	97.3		P	80 - 120

Reference Method: EPA 8321B

Run ID: A101172

Included Lab Sample IDs: 2196583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	97.0	104	P/P	60 - 150
Aldicarb	80.9	113	P/P	60 - 150
Aldicarb Sulfone	88.6	80.2	P/P	50 - 150
Aldicarb Sulfoxide	84.1	87.2	P/P	50 - 150
Carbaryl	116	113	P/P	60 - 150
Carbofuran	99.1	99.4	P/P	50 - 150
Methiocarb	102	109	P/P	50 - 150
Methomyl	91.0	90.8	P/P	50 - 150
Oxamyl	87.2	87.4	P/P	50 - 150
Propoxur	99.6	104	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A101182

Included Lab Sample IDs: 2196584

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	110	113	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A101194

Included Lab Sample IDs: 2196554, 2196557, 2196560, 2196727

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	99.3	P/P	90 - 110
Organic Carbon	98.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101208

Included Lab Sample IDs: 2196554, 2196560

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.2	102	P/P	90 - 110
Kjeldahl Nitrogen	93.9	91.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101217

Included Lab Sample IDs: 2196588, 2196589

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	103	104	P/P	90 - 110
Barium	98.7	103	P/P	90 - 110
Calcium	102	103	P/P	90 - 110
Calcium	102	99.9	P/P	90 - 110
Iron	105	106	P/P	90 - 110
Iron	105	102	P/P	90 - 110
Manganese	105	105	P/P	90 - 110
Manganese	99.7	105	P/P	90 - 110
Potassium	102	99.6	P/P	90 - 110
Potassium	102	105	P/P	90 - 110
Sodium	103	103	P/P	90 - 110
Sodium	105	110	P/P	90 - 110
Zinc	100	100	P/P	90 - 110
Zinc	96.3	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101226

Included Lab Sample IDs: 2196554, 2196560

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A101291

Included Lab Sample IDs: 2196589

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101296

Included Lab Sample IDs: 2196589

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101296

Included Lab Sample IDs: 2196589

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	108	108	P/P	90 - 110
Arsenic	99.7	100	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Copper	99.6	110	P/P	90 - 110
Lead	102	101	P/P	90 - 110
Nickel	97.4	107	P/P	90 - 110
Selenium	101	105	P/P	90 - 110
Silver	102	101	P/P	90 - 110
Thallium	96.6	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101310

Included Lab Sample IDs: 2196727

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	93.8	93.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101342

Included Lab Sample IDs: 2196588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	99.1	P/P	90 - 110
Antimony	104	105	P/P	90 - 110
Arsenic	98.2	97.2	P/P	90 - 110
Cadmium	98.7	99.3	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Copper	96.7	96.5	P/P	90 - 110
Lead	100	101	P/P	90 - 110
Nickel	97.1	96.7	P/P	90 - 110
Selenium	96.4	95.3	P/P	90 - 110
Thallium	98.7	99.1	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A101367

Included Lab Sample IDs: 2196588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	99.4	96.9	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.71	
	Turbidity							2.53	
EPA 200.7 Rev. 4.4	Barium	105		103	106	106			0.892
	Barium	107		104	101				2.78
	Calcium	108		102	112	108			2.28
	Calcium	106							1.77
	Chromium	96.0		97.0	94.8				2.21
	Iron	110		106	111	110			0.994
	Iron	112		108	110				1.73
	Manganese	106		102	107	106			1.07
	Manganese	108		105	103				2.05
	Potassium	105		101	114	111			2.71
	Potassium	104							0.403
	Sodium	98.4		103	104				3.35
	Sodium	107							0.882
	Zinc	99.4		99.2	102	100			2.05
	Zinc	101		99.7	98.0				1.73
EPA 200.8 Rev. 5.4	Aluminum	100		98.9	99.2	99.7			0.262
	Aluminum	105		117	118				0.673
	Antimony	103		103	104	103			0.385
	Antimony	108		117	117				0.196
	Arsenic	100		99.4	99.3	100			0.131
	Arsenic	102		117	118				0.770
	Cadmium	102		101	101	101			0.0458
	Cadmium	103		110	106				3.85
	Chromium	102		103	102	104			0.497
	Copper	103		101	101	98.6			0.364
	Copper	99.4		116	115				0.942
	Lead	101		99.9	101	101			0.996
	Lead	104		108	109				0.566
	Nickel	102		100	100	99.5			0.285
	Nickel	101		111	110				0.326
	Selenium	97.6		96.0	95.6	94.2			0.450
	Selenium	100		120	118				1.44
	Silver	98.9		98.5	98.6	117			0.124
	Silver	104		102	103				0.915
	Thallium	102		102	103	103			1.63
	Thallium	105		107	110				3.35
EPA 300.0 Rev. 2.1	Bromide	99.3		93.9					
EPA 350.1 Rev. 2.0	Ammonia-N	100		97.1	98.5				1.17
	Ammonia-N	98.9		99.1	98.0				1.06
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	108		110	110				0.0
	Kjeldahl Nitrogen	103		114	106				6.53
	Kjeldahl Nitrogen	109		99.8	103				2.35
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0		97.5	97.5				0.0
	NO2NO3-N	99.5		100	99.8				0.477
	NO2NO3-N	100		99.9	99.4				0.491
EPA 365.1 Rev. 2.0	Total-P	105		95.0	95.6				0.629
	Total-P	108		106	108				1.83
	Total-P	106		101	101				0.0247
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3		98.4	101				2.21
	O-Phosphate-P	99.8		95.6	97.2				1.59
EPA 8270E	Acetochlor	86.2	87.6	86.5	87.2		1.68		0.855
	Alachlor	84.2	88.3	81.9	84.3		4.75		2.87

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Aldrin	45.5	41.1	54.3	50.0	10.1	8.43
	Alpha-BHC	81.3	74.3	68.9	72.2	8.94	4.76
	Alpha-Chlordane	78.1	77.3	64.4	62.1	1.10	3.49
	Ametryn	80.1	80.0	103	97.9	0.0383	5.30
	Atrazine	85.7	90.7	97.1	98.6	5.57	1.57
	Atrazine Desethyl	92.3	96.2	109	102	4.09	7.35
	Azinphos Methyl	127	114	130	135	10.6	3.96
	Beta-BHC	85.0	81.8	78.8	66.3	3.83	17.3
	Beta-Cyfluthrin	55.0	57.7	60.2	58.8	4.76	2.39
	Bifenthrin	69.2	65.2	71.6	70.2	5.97	2.00
	Bromacil	79.0	84.7	80.8	80.8	6.97	0.0085
	Butylate	66.8	69.8	54.8	61.3	4.25	11.2
	Carbophenothion	80.9	83.0	86.0	89.4	2.57	3.79
	Chlorothalonil	78.8	75.7	69.9	61.0	3.97	13.7
	Chlorpyrifos Ethyl	82.0	86.8	68.2	82.3	5.64	18.7
	Chlorpyrifos Methyl	89.0	89.7	91.6	90.0	0.775	1.82
	Cis-Nonachlor	77.9	77.4	67.7	65.6	0.588	3.14
	Cyanazine	156	145	146	162	7.25	10.6
	Cypermethrin	70.1	67.6	77.3	71.3	3.68	8.02
	Dacthal	87.5	85.3	75.5	70.7	2.49	6.15
	DDD-p,p'	85.9	84.5	68.9	65.8	1.65	4.54
	DDE-p,p'	75.1	74.2	65.4	62.1	1.19	5.21
	DDT-p,p'	84.4	84.8	69.1	64.2	0.546	7.47
	Delta-BHC	95.6	87.6	82.9	73.7	8.68	11.8
	Deltamethrin	73.7	78.1	77.0	59.5	5.78	25.6
	Demeton	76.9	78.7	86.8	82.4	2.40	5.15
	Diazinon	91.7	92.5	98.6	96.2	0.926	2.39
	Dichlobenil	35.2	34.9	48.8	49.5	0.903	1.38
	Dicofol	95.8	84.0	63.8	64.3	13.1	0.842
	Dieldrin	83.9	81.6	69.9	66.4	2.78	5.20
	Dimethenamid	84.7	85.2	83.1	84.5	0.613	1.76
	Disulfoton	74.3	78.1	84.0	90.8	4.91	7.87
	Dithiopyr	84.0	87.6	84.0	86.2	4.16	2.64
	Endosulfan I	82.8	84.7	75.7	73.7	2.28	2.80
	Endosulfan II	110	96.3	83.4	83.6	13.1	0.244
	Endosulfan Sulfate	84.4	77.3	83.8	81.9	8.79	2.34
	Endrin	87.3	87.5	73.3	71.4	0.217	2.65
	Endrin Aldehyde	97.1	103	98.6	80.4	5.89	20.3
	Endrin Ketone	100	98.2	86.9	79.5	1.76	8.86
	EPTC	62.3	60.3	52.4	52.5	3.41	0.221
	Esfenvalerate	74.2	80.7	84.7	76.5	8.30	10.1
	Ethalfuralin	64.6	63.2	58.1	58.1	2.30	0.0594
	Ethion	77.0	81.9	76.8	82.5	6.17	7.16
	Ethoprop	82.1	79.1	88.1	88.7	3.74	0.575
	Fenamiphos	77.1	83.0	83.6	81.2	7.40	2.98
	Fenpropathrin	90.1	96.9	129	170	7.33	27.7
	Fipronil	88.9	93.5	90.6	90.4	5.03	0.268
	Fipronil Desulfinyl	85.4	90.9	90.1	84.7	6.13	6.24
	Fipronil Sulfide	70.2	74.5	73.8	75.9	5.88	2.78
	Fipronil Sulfone	74.2	78.1	72.8	85.3	5.12	15.8
	Flumioxazin	145	141	155	161	2.81	3.58
	Fonofos	83.7	78.5	87.5	88.3	6.47	0.836
	Gamma-BHC	83.8	86.1	88.2	80.9	2.70	8.55
	Gamma-Chlordane	74.0	71.3	62.1	60.3	3.67	2.75

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Heptachlor	62.1	63.5	58.4	55.1	2.25	5.65
	Heptachlor Epoxide	81.5	79.5	71.4	68.2	2.39	4.55
	Hexachlorobenzene	59.2	59.0	52.4	48.1	0.360	8.39
	Hexazinone	78.2	75.8	82.3	85.7	3.24	4.10
	Imazalil	87.9	94.4	127	119	7.08	6.40
	Lambda-Cyhalothrin	61.6	59.5	66.7	64.0	3.54	4.23
	Malathion	83.6	87.7	84.6	89.8	4.68	5.93
	Metalaxyl	84.6	91.3	90.4	88.8	7.62	1.77
	Methoxychlor	83.3	79.2	65.7	63.6	5.05	3.29
	Metolachlor	80.0	82.3	81.9	78.2	2.94	4.59
	Metribuzin	87.9	92.1	94.5	82.2	4.69	13.9
	Mevinphos	82.0	80.8	88.4	88.4	1.45	0.0827
	MGK-264	63.7	55.5	81.9	79.5	13.8	2.94
	Mirex	62.0	61.1	59.9	57.7	1.54	3.76
	Molinate	67.6	65.8	61.6	64.1	2.83	3.93
	Naled	57.2	60.1	63.1	65.8	4.88	4.31
	Norflurazon	88.1	90.9	88.8	88.5	3.16	0.428
	Oxadiazon	78.9	81.1	76.1	73.3	2.68	3.60
	Parathion Ethyl	82.0	88.0	90.4	87.8	7.07	2.93
	Parathion Methyl	95.6	96.6	102	99.4	1.14	2.10
	Pendimethalin	72.8	74.5	79.3	86.6	2.26	8.85
	Permethrin	73.4	69.4	61.4	58.6	5.50	4.14
	Phenothrin	49.9	46.6	64.2	60.2	6.83	6.50
	Phorate	111	108	87.9	88.5	2.44	0.678
	Piperonyl Butoxide	97.2	91.8	92.4	78.9	5.78	15.9
	Prallethrin	56.1	52.8	67.3	61.3	6.10	9.33
	Prodiamine	40.1	37.5	40.7	45.0	6.73	10.1
	Prometon	78.3	74.1	101	101	5.60	0.129
	Prometryn	82.0	85.9	90.5	95.0	4.63	4.81
	Pronamide	88.2	86.3	108	116	2.17	7.05
	Propiconazole	90.8	94.0	98.2	104	3.46	5.97
	Simazine	85.8	78.0	88.9	75.9	9.49	15.8
	Sulfentrazone	82.8	82.3	86.1	81.2	0.559	5.92
	Tau-Fluvalinate	67.3	71.0	77.8	76.7	5.30	1.40
	Tebuconazole	70.8	72.0	67.5	68.4	1.76	1.36
	Terbufos	78.7	76.5	83.8	85.6	2.80	2.15
	Terbutylazine	82.9	81.5	84.9	85.0	1.66	0.158
	Tetramethrin	83.5	83.8	79.5	75.6	0.433	5.09
	Trans-Nonachlor	72.6	71.2	59.2	59.3	1.94	0.255
	Triclosan Methyl	92.6	91.2	71.1	67.7	1.50	4.62
	Trifluralin	66.8	65.3	57.3	57.3	2.27	0.0183
EPA 8276	Chlordane	89.8	81.4	103	103	9.87	0.854
	Toxaphene	107	103	180	181	3.55	0.538
EPA 8321B	2,4-D	129					0.746
	3-Hydroxycarbofuran	66.6		59.7	57.0		4.71
	Acesulfame K	75.3		34.2	35.1		2.58
	Acetaminophen	85.7		64.4	70.3		5.99
	Acetamiprid	68.4		60.4	62.3		3.09
	Afidopyropen	60.5		52.4	52.5		0.0707
	Aldicarb	62.3		44.4	53.8		19.0
	Aldicarb Sulfone	68.4		75.4	71.5		5.32
	Aldicarb Sulfoxide	74.1		34.1	33.3		2.37
	AMPA	86.3		6.76	7.01		3.67
	Bentazon	56.0					5.75

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Benzovindiflupyr	64.6	49.7	49.3			0.915
	Carbamazepine	57.3	43.5	45.9			4.60
	Carbaryl	48.9	36.9	36.7			0.632
	Carbofuran	42.0	36.7	35.1			4.30
	Clothianidin	78.9	62.7	61.1			1.92
	Dinotefuran	88.9	72.0	78.1			7.70
	Diuron	50.5	37.9	40.5			5.30
	Endothall	104	110	128			15.0
	Fenuron	89.3	66.7	69.0			3.37
	Fluridone	70.0					5.80
	Glufosinate	92.5	37.8	39.4			4.11
	Glyphosate	105	72.6	73.3			0.902
	Hydrocodone	83.3	61.3	66.2			7.77
	Ibuprofen	71.2	45.2	52.3			14.6
	Imazapyr	99.5					1.78
	Imidacloprid	96.1					2.89
	Linuron	63.5	43.5	47.8			9.41
	Mandestrobin	77.6	58.9	60.1			1.89
	MCPP	108	86.9	85.5			1.56
	Methiocarb	49.0	36.9	41.9			12.9
	Methomyl	74.7	71.8	70.0			2.58
	Naproxen	105	83.7	58.6			35.3
	Oxamyl	72.0	65.9	68.0			3.18
	Primidone	71.9	66.5	63.0			4.56
	Propoxur	43.8	38.1	37.6			1.30
	Pyraclostrobin	55.2	48.0	50.9			5.86
	Sucralose	105	29.5	32.1			8.26
	Thiamethoxam	80.1	72.4	75.9			4.33
	Tolfenpyrad	36.5	33.9	31.9			5.93
	Triclopyr	104	91.3	88.1			3.58
SM 2320 B-2011	Total Alkalinity	99.4				0.889	
	Total Alkalinity	99.1				1.14	
SM 4500 F-C-2011	Fluoride	98.1	96.2	96.9			0.463
	Fluoride	98.6	100	102			0.965
SM 5310 B-2011	Organic Carbon	94.8	98.8	102			2.20
	Organic Carbon	97.8	96.3	97.0			0.655

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2196553, 2196556, 2196559, 2196726
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2196588, 2196589
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2196588, 2196589
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2196553, 2196556, 2196559, 2196726
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2196554, 2196557, 2196560, 2196727
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2196554, 2196557, 2196560, 2196727
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2196554, 2196557, 2196560, 2196727
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2196554, 2196557, 2196560, 2196727
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2196555, 2196558, 2196561, 2196728
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2196586

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2196587
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2196586
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2196583
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2196584
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2196584
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2196553, 2196556, 2196559, 2196726
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2196553, 2196556, 2196559, 2196726
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2196553, 2196556, 2196559, 2196726
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2196554, 2196557, 2196560, 2196727

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	09/17/2020			09/17/2020 15:06	Yen Ta	2196553, 2196556, 2196559, 2196726
EPA 200.7 Rev. 4.4	09/17/2020	09/22/2020 14:45	Elliott D. Healy	09/25/2020 13:41	Betina Topolski	2196588
	09/17/2020	09/24/2020 13:15	Elliott D. Healy	09/25/2020 21:56	Betina Topolski	2196589
	09/17/2020	09/24/2020 13:15	Elliott D. Healy	09/25/2020 22:04	Betina Topolski	2196589
	09/17/2020	09/29/2020 15:30	Elliott D. Healy	09/30/2020 14:54	Betina Topolski	2196589
EPA 200.8 Rev. 5.4	09/17/2020	09/22/2020 14:45	Elliott D. Healy	10/02/2020 16:24	Alexander Thompson	2196588
	09/17/2020	09/22/2020 14:45	Elliott D. Healy	10/05/2020 13:33	Alexander Thompson	2196588
	09/17/2020	09/24/2020 13:15	Elliott D. Healy	09/30/2020 18:24	Alexander Thompson	2196589
	09/17/2020	09/24/2020 13:15	Elliott D. Healy	09/30/2020 20:03	Alexander Thompson	2196589
EPA 300.0 Rev. 2.1	09/17/2020			09/18/2020 18:40	Lipi Saha	2196553
	09/17/2020			09/18/2020 18:58	Lipi Saha	2196556
	09/17/2020			09/18/2020 19:15	Lipi Saha	2196559
	09/17/2020			09/18/2020 21:14	Lipi Saha	2196726
EPA 350.1 Rev. 2.0	09/17/2020			09/19/2020 15:06	Ping Hua	2196557
	09/17/2020			09/19/2020 15:07	Ping Hua	2196727
	09/17/2020			09/19/2020 15:12	Ping Hua	2196554
	09/17/2020			09/19/2020 15:13	Ping Hua	2196560
EPA 351.2 Rev. 2.0	09/17/2020	09/18/2020 17:20	David Boose	09/21/2020 16:17	Elliott Rodriguez	2196557
	09/17/2020	09/18/2020 17:20	David Boose	09/21/2020 16:42	Elliott Rodriguez	2196727
	09/17/2020	09/23/2020 19:10	David Boose	09/25/2020 13:40	Elliott Rodriguez	2196554
	09/17/2020	09/23/2020 19:10	David Boose	09/25/2020 13:57	Elliott Rodriguez	2196560
EPA 353.2 Rev. 2.0	09/17/2020			09/18/2020 10:33	Beverly Y. Sanders	2196554
	09/17/2020			09/18/2020 11:01	Beverly Y. Sanders	2196560
	09/17/2020			09/21/2020 09:47	Beverly Y. Sanders	2196557
	09/17/2020			09/21/2020 10:05	Beverly Y. Sanders	2196727
EPA 365.1 Rev. 2.0	09/17/2020	09/18/2020 13:22	Shengyu Wang	09/21/2020 14:43	Benjamin T. Nordmann	2196557
	09/17/2020	09/25/2020 12:17	Yen Ta	09/28/2020 09:59	Benjamin T. Nordmann	2196554
	09/17/2020	09/25/2020 12:17	Yen Ta	09/28/2020 10:00	Benjamin T. Nordmann	2196560
	09/17/2020	09/28/2020 12:44	Yen Ta	10/01/2020 12:36	Lipi Saha	2196727
EPA 365.1 Rev. 2.0 dissolved	09/17/2020			09/17/2020 17:12	Julia Storbeck	2196558
	09/17/2020			09/17/2020 17:18	Julia Storbeck	2196728
	09/17/2020			09/17/2020 17:20	Julia Storbeck	2196561
	09/17/2020			09/17/2020 17:24	Julia Storbeck	2196555
EPA 8270E	09/17/2020	09/18/2020 08:00	Fe-Val Siddell	09/21/2020 19:39	Michael Poppell	2196586
	09/17/2020	09/18/2020 08:00	Rasheda Ghaffari	09/22/2020 15:22	Vandana T. Nagar	2196587
EPA 8276	09/17/2020	09/18/2020 08:00	Fe-Val Siddell	09/22/2020 03:29	Arthur Maknenko	2196586
EPA 8321B	09/17/2020	09/18/2020 13:00	Hoor Shaik	09/19/2020 16:36	Juyoung Kim	2196584
	09/17/2020	09/18/2020 13:00	Hoor Shaik	09/21/2020 11:49	Juyoung Kim	2196584
	09/17/2020	09/21/2020 10:00	Rebecca Ware	09/21/2020 11:29	Rebecca Ware	2196584
	09/17/2020	09/21/2020 10:00	Rebecca Ware	09/21/2020 17:09	Rebecca Ware	2196584

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	09/17/2020	09/21/2020 10:00	Rebecca Ware	09/23/2020 11:28	Rebecca Ware	2196584
	09/17/2020	09/23/2020 12:15	Hoor Shaik	09/24/2020 04:18	Juyoung Kim	2196583
SM 2320 B-2011	09/17/2020			09/18/2020 13:11	Dale L. Simmons	2196553
	09/17/2020			09/18/2020 14:56	Dale L. Simmons	2196559
	09/17/2020			09/18/2020 16:25	Dale L. Simmons	2196726
	09/17/2020			09/18/2020 16:37	Dale L. Simmons	2196556
SM 2540 D-2011	09/17/2020			09/18/2020 15:11	Yijie Li	2196553, 2196556, 2196559, 2196726
SM 4500 F-C-2011	09/17/2020			09/18/2020 13:11	Dale L. Simmons	2196553
	09/17/2020			09/18/2020 14:56	Dale L. Simmons	2196559
	09/17/2020			09/18/2020 15:42	Dale L. Simmons	2196726
	09/17/2020			09/18/2020 15:56	Dale L. Simmons	2196556
SM 5310 B-2011	09/17/2020			09/24/2020 17:30	Madeline Gruver	2196554
	09/17/2020			09/24/2020 17:44	Madeline Gruver	2196560
	09/17/2020			09/25/2020 05:21	Madeline Gruver	2196557
	09/17/2020			09/25/2020 05:58	Madeline Gruver	2196727