

Chemical Analysis Report

SW-DIST-2020-03-10-02

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

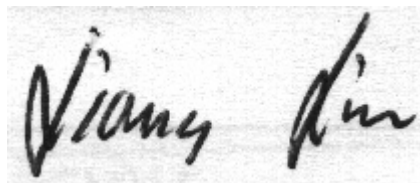
Event Description: **Run 15**
Request ID: **RQ-2020-03-09-24**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 27-MAR-2020 13:48

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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 - TP428

Collection Date/Time: 03/09/2020 10:10

Field ID: G1SW0099

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163407	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P380401	
	EPA 300.0 Rev. 2.1	Bromide	49		mg Br/L	P380677	
	SM 2320 B-2011	Total Alkalinity	126		mg CaCO3/L	P380861	
	SM 2540 D-2011	TSS	4	IA	mg/L	P380984	
	SM 4500 F-C-2011	Fluoride	1.0		mg F/L	P380870	
2163409	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P381035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P380378	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P380903	
	EPA 365.1 Rev. 2.0	Total-P	0.091		mg P/L	P380657	
	SM 5310 B-2011	Organic Carbon	5.1		mg C/L	P380835	
2163411	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.059		mg P/L	P380375	
2163440	EPA 8321B	2,4-D	0.0020	U	ug/L	P380458	
		Acesulfame K**	0.10	UJ	ug/L	P380246	SUR
		AMPA**	1.0	U	ug/L	P380246	
		Sucralose**	0.41		ug/L	P380246	
		Acetaminophen**	0.0080	U	ug/L	P380458	
		Acetamiprid**	0.0020	U	ug/L	P380458	
		Endothall**	0.25	UJ	ug/L	P380246	SUR
		Glufosinate**	1.0	U	ug/L	P380246	
		Glyphosate**	1.0	U	ug/L	P380246	
		Afidopyropen**	0.0020	UJ	ug/L	P380458	
		Bentazon	0.0057		ug/L	P380458	MS
		Benzovindiflupyr**	0.0020	UJ	ug/L	P380458	
		Carbamazepine**	0.0019	I	ug/L	P380458	
		Clothianidin**	0.0020	U	ug/L	P380458	
		Dinotefuran**	0.0020	U	ug/L	P380458	
		Diuron	0.0020	U	ug/L	P380458	
		Fenuron	0.016	U	ug/L	P380458	
		Fluridone**	0.0040		ug/L	P380458	
		Imazapyr**	0.0056	I	ug/L	P380458	
		Hydrocodone**	0.0020	U	ug/L	P380458	
		Ibuprofen**	0.020	U	ug/L	P380458	
		Imidacloprid	0.0020	U	ug/L	P380458	
		Linuron	0.0040	U	ug/L	P380458	
		Mandestrobin**	0.0020	UJ	ug/L	P380458	
		MCP	0.0020	U	ug/L	P380458	
		Naproxen**	0.0080	U	ug/L	P380458	
		Primidone**	0.0063	I	ug/L	P380458	
		Pyraclostrobin**	0.0020	U	ug/L	P380458	
		Thiamethoxam**	0.0020	U	ug/L	P380458	
		Tolfenpyrad**	0.0020	U	ug/L	P380458	
		Triclopyr**	0.0040	U	ug/L	P380458	

Field ID: G1SW0099

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: Results confirmed in sample duplicate. MDL for some parameters elevated due to matrix interference. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: St. Joe Tidal by Westchester Blvd

Collection Date/Time: 03/09/2020 12:45

Field ID: G5SW0169

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163413	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P380401	
	EPA 300.0 Rev. 2.1	Bromide	2.0		mg Br/L	P380924	
	SM 2320 B-2011	Total Alkalinity	191		mg CaCO3/L	P380861	
	SM 2540 D-2011	TSS	3	U	mg/L	P380984	
	SM 4500 F-C-2011	Fluoride	0.47		mg F/L	P381258	
2163415	EPA 350.1 Rev. 2.0	Ammonia-N	0.057		mg N/L	P381035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P380525	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.1		mg N/L	P380903	
	EPA 365.1 Rev. 2.0	Total-P	0.55		mg P/L	P380657	
	SM 5310 B-2011	Organic Carbon	8.4		mg C/L	P380835	
2163417	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.46		mg P/L	P380375	

Ref. Method and Comment:

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

Sample Location: PP Ditch #1 @ 71st St

Collection Date/Time: 03/09/2020 11:00

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163404	EPA 180.1 Rev. 2.0	Turbidity	3.3	A	NTU	P380401	
	EPA 300.0 Rev. 2.1	Bromide	7.0		mg Br/L	P380677	
	SM 2320 B-2011	Total Alkalinity	222		mg CaCO3/L	P380861	
	SM 2540 D-2011	TSS	4	IA	mg/L	P380983	
	SM 4500 F-C-2011	Fluoride	0.39		mg F/L	P381258	
2163405	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P381035	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P380378	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.039		mg N/L	P380903	
	EPA 365.1 Rev. 2.0	Total-P	0.097		mg P/L	P380657	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P380562	
2163406	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P380375	
2163438	EPA 8321B	Aldicarb	0.020	U	ug/L	P380459	
		Aldicarb Sulfone	0.0020	U	ug/L	P380459	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P380459	MS
		Carbaryl	0.0020	U	ug/L	P380459	
		Carbofuran	0.0020	U	ug/L	P380459	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P380459	
		Methiocarb	0.0020	U	ug/L	P380459	
		Methomyl	0.0020	U	ug/L	P380459	
		Oxamyl	0.0020	U	ug/L	P380459	
		Propoxur	0.0020	U	ug/L	P380459	
		2,4-D	0.014		ug/L	P380458	
		Acesulfame K**	1.0	U	ug/L	P380246	
		AMPA**	0.10	U	ug/L	P380246	
2163439		Sucralose**	2.4		ug/L	P380246	
		Acetaminophen**	0.0080	U	ug/L	P380458	
		Acetamiprid**	0.0020	U	ug/L	P380458	
		Endothal**	2.5	U	ug/L	P380246	
		Glufosinate**	0.10	U	ug/L	P380246	
		Glyphosate**	0.10	U	ug/L	P380246	
		Afidopyropen**	0.0025	I J	ug/L	P380458	
		Bentazon	0.12		ug/L	P380458	MS
		Benzovindiflupyr**	0.0020	UJ	ug/L	P380458	
		Carbamazepine**	0.0073		ug/L	P380458	
		Clothianidin**	0.0055	I	ug/L	P380458	
		Dinotefuran**	0.0053	I	ug/L	P380458	
		Diuron	0.080		ug/L	P380458	
		Fenuron	0.016	U	ug/L	P380458	
		Fluridone**	0.18		ug/L	P380458	
		Imazapyr**	0.16		ug/L	P380458	
		Hydrocodone**	0.0020	U	ug/L	P380458	
		Ibuprofen**	0.020	U	ug/L	P380458	
		Imidacloprid	0.045		ug/L	P380458	

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163439	EPA 8321B	Linuron	0.0040	U	ug/L	P380458	
		Mandestrobin**	0.0020	UJ	ug/L	P380458	
		MCP	0.0036	I	ug/L	P380458	
		Naproxen**	0.0080	U	ug/L	P380458	
		Primidone**	0.028		ug/L	P380458	
		Pyraclostrobin**	0.0020	U	ug/L	P380458	
		Thiamethoxam**	0.0020	U	ug/L	P380458	
		Tolfenpyrad**	0.0020	U	ug/L	P380458	
		Triclopyr**	0.0040	U	ug/L	P380458	
2163447	EPA 8270E	Aldrin	4.2	U	ng/L	P380545	
		Alpha-BHC	2.1	U	ng/L	P380545	
		Alpha-Chlordane	1.0	U	ng/L	P380545	
		Beta-BHC	10	U	ng/L	P380545	
		Beta-Cyfluthrin**	16	U	ng/L	P380545	
		Bifenthrin**	4.2	U	ng/L	P380545	
		Delta-BHC	8.4	U	ng/L	P380545	RPD
		Gamma-BHC	8.4	U	ng/L	P380545	
		Chlorothalonil	2.1	U	ng/L	P380545	RPD
		Cis-Nonachlor**	1.3	I	ng/L	P380545	
		Cypermethrin	21	U	ng/L	P380545	
		Dacthal**	1.0	U	ng/L	P380545	
		DDD-p,p'	6.3	U	ng/L	P380545	
		DDE-p,p'	6.3	U	ng/L	P380545	
		DDT-p,p'	7.3	U	ng/L	P380545	
		Dicofol	31	U	ng/L	P380545	
		Dieldrin	4.2	U	ng/L	P380545	
		Endosulfan I	4.2	U	ng/L	P380545	
		Endosulfan II	4.2	U	ng/L	P380545	
		Endosulfan Sulfate	2.1	U	ng/L	P380545	MS, RPD
		Endrin	2.1	U	ng/L	P380545	
		Endrin Aldehyde	2.1	U	ng/L	P380545	
		Endrin Ketone	2.1	U	ng/L	P380545	
		Ethalfuralin**	3.1	U	ng/L	P380545	
		Gamma-Chlordane	1.0	U	ng/L	P380545	
		Heptachlor	1.6	U	ng/L	P380545	
		Heptachlor Epoxide	2.1	U	ng/L	P380545	
		Hexachlorobenzene	2.1	U	ng/L	P380545	
		Lambda-Cyhalothrin**	16	U	ng/L	P380545	RPD
		Methoxychlor	4.2	U	ng/L	P380545	
		Mirex	2.1	U	ng/L	P380545	
		Permethrin	10	U	ng/L	P380545	
		Phenothrin**	31	U	ng/L	P380545	
		Prallethrin**	31	U	ng/L	P380545	
		Trans-Nonachlor**	1.0	U	ng/L	P380545	
		Trifluralin	2.6	U	ng/L	P380545	

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163447	EPA 8276	Chlordane	20	I	ng/L	P380545	
		Toxaphene	31	U	ng/L	P380545	
2163448	EPA 8270E	Acetochlor	0.24	U	ng/L	P380360	
		Alachlor	0.24	U	ng/L	P380360	
		Ametryn	0.57	U	ng/L	P380360	
		Atrazine	70		ng/L	P380360	
		Atrazine Desethyl	6.0		ng/L	P380360	
		Azinphos Methyl	1.9	U	ng/L	P380360	
		Bromacil	0.47	U	ng/L	P380360	
		Butylate	0.38	U	ng/L	P380360	
		Carbophenothion	0.47	U	ng/L	P380360	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P380360	
		Chlorpyrifos Methyl	0.047	U	ng/L	P380360	
		Cyanazine	3.1	U	ng/L	P380360	
		Demeton	1.4	U	ng/L	P380360	
		Diazinon	0.12	U	ng/L	P380360	
		Dimethenamid**	0.094	U	ng/L	P380360	
		Disulfoton	0.47	U	ng/L	P380360	
		Dithiopyr**	0.11	I	ng/L	P380360	
		EPTC	1.2	UJ	ng/L	P380360	RPD
		Ethion	0.14	U	ng/L	P380360	RPD
		Ethoprop	0.094	U	ng/L	P380360	
		Fenamiphos	0.47	U	ng/L	P380360	
		Fipronil	0.34	I	ng/L	P380360	
		Fipronil Desulfinyl**	0.91		ng/L	P380360	
		Fipronil Sulfide	0.82		ng/L	P380360	
		Fipronil Sulfone	1.4		ng/L	P380360	
		Flumioxazin**	1.7	U	ng/L	P380360	MS, RPD
		Fonofos	0.19	U	ng/L	P380360	
		Hexazinone	1.6	I	ng/L	P380360	
		Imazalil**	0.71	U	ng/L	P380360	
		Malathion	0.33	U	ng/L	P380360	
		Metaxyl	0.71	U	ng/L	P380360	
		Metolachlor	0.47	U	ng/L	P380360	
		Metribuzin	3.1	U	ng/L	P380360	
		Mevinphos	0.47	U	ng/L	P380360	
		Molinate	0.28	U	ng/L	P380360	
		Naled**	1.4	UJ	ng/L	P380360	RPD
		Norflurazon	0.47	U	ng/L	P380360	
		Oxadiazon**	0.29	I	ng/L	P380360	
		Parathion Ethyl	0.24	UJ	ng/L	P380360	LCS, RPD
		Parathion Methyl	0.52	UJ	ng/L	P380360	LCS, RPD
		Pendimethalin	0.94	UJ	ng/L	P380360	LCS, RPD
		Phorate	0.24	U	ng/L	P380360	
		Prodiamine**	0.17	UJ	ng/L	P380360	LCS, RPD

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163448	EPA 8270E	Prometon	0.85	U	ng/L	P380360	
		Prometryn	0.19	U	ng/L	P380360	
		Pronamide**	0.14	U	ng/L	P380360	
		Propiconazole**	4.6		ng/L	P380360	
		Simazine	3.6		ng/L	P380360	
		Sulfentrazone**	6.1	J	ng/L	P380360	LCS, MS
		Tebuconazole**	2.6		ng/L	P380360	RPD
		Terbufos	0.094	U	ng/L	P380360	
		Terbuthylazine	0.40	U	ng/L	P380360	
2163449	EPA 200.7 Rev. 4.4	Barium	52		ug/L	P380460	
		Calcium	147		mg/L	P380460	
		Iron	360		ug/L	P380460	
		Manganese	19		ug/L	P380460	
		Potassium	40		mg/L	P380460	
		Sodium	1.03E+03		mg/L	P380460	
	EPA 200.8 Rev. 5.4	Zinc	15	U	ug/L	P380460	
		Aluminum	21	I	ug/L	P380460	
		Antimony	0.28	I	ug/L	P380460	
		Arsenic	1.66		ug/L	P380460	
		Cadmium	0.080	U	ug/L	P380460	
		Chromium	1.6	U	ug/L	P380460	
		Copper	1.6	U	ug/L	P380460	
		Lead	0.80	U	ug/L	P380460	
		Nickel	2.0	U	ug/L	P380460	
		Selenium	0.80	U	ug/L	P380460	
		Silver	0.040	U	ug/L	P380460	
		Thallium	0.40	U	ug/L	P380460	

Ref. Method and Comment:

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

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 8270E: MS accuracy for some parameters not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380401

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380460

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 200.8 Rev. 5.4
Batch ID: P380460

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380677

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380924

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381035

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380378

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380378

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380525

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380903

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380657

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380375

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

Reference Method: EPA 8270E
Batch ID: P380360

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P380360

Component	Result	Code	Units
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

Reference Method: EPA 8270E
Batch ID: P380545

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	10	U	ng/L
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'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P380545

Component	Result	Code	Units
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
Ethalfuralin	3.0	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
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Prallethrin	30	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P380545

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

Reference Method: EPA 8321B
Batch ID: P380246

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: P380458

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P380458

Component	Result	Code	Units
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: P380459

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

Reference Method: SM 2320 B-2011
Batch ID: P380861

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

Reference Method: SM 2540 D-2011
Batch ID: P380983

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P380984

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P380870

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P381258

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P380562

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

Reference Method: SM 5310 B-2011
Batch ID: P380835

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: P380460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	105		P	85 - 115
Calcium	103		P	85 - 115
Iron	105		P	85 - 115
Manganese	107		P	85 - 115
Potassium	101		P	85 - 115
Sodium	101		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	93.1		P	85 - 115
Antimony	90.4		P	85 - 115
Arsenic	94.3		P	85 - 115
Cadmium	95.1		P	85 - 115
Chromium	94.6		P	85 - 115
Copper	97.7		P	85 - 115
Lead	89.6		P	85 - 115
Nickel	94.3		P	85 - 115
Selenium	94.3		P	85 - 115
Silver	91.0		P	85 - 115
Thallium	93.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	97.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380924

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381035

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380378

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380525

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380525

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	91.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380903

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380657

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380375

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

Reference Method: EPA 8270E
Batch ID: P380360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.2	96.7	P/P	71 - 122
Alachlor	92.4	96.7	P/P	70 - 121
Ametryn	102	101	P/P	49 - 137
Atrazine	99.5	104	P/P	76 - 125
Atrazine Desethyl	85.8	89.4	P/P	31 - 144
Azinphos Methyl	123	118	P/P	67 - 150
Bromacil	53.3	58.1	P/P	36 - 121
Butylate	56.7	69.4	P/P	33 - 88.0
Carbophenothion	86.6	94.1	P/P	50 - 150
Chlorpyrifos Ethyl	93.0	97.6	P/P	73 - 117
Chlorpyrifos Methyl	99.4	105	P/P	68 - 121
Cyanazine	122	117	P/P	20 - 250
Demeton	74.1	98.2	P/P	30 - 123
Diazinon	98.4	101	P/P	70 - 128
Dimethenamid	92.9	97.3	P/P	66 - 122
Disulfoton	71.9	95.4	P/P	46 - 124
Dithiopyr	85.8	91.1	P/P	69 - 122
EPTC	47.4	70.9	P/P	31 - 90.0
Ethion	62.7	66.5	P/P	45 - 135
Ethoprop	111	110	P/P	59 - 118
Fenamiphos	80.4	97.1	P/P	30 - 136
Fipronil	93.4	98.3	P/P	57 - 127
Fipronil Desulfinyl	99.5	102	P/P	51 - 122
Fipronil Sulfide	86.5	93.9	P/P	57 - 119
Fipronil Sulfone	69.9	74.5	P/P	51 - 119
Flumioxazin	115	127	P/P	70 - 200
Fonofos	93.0	97.6	P/P	60 - 120
Hexazinone	96.5	104	P/P	57 - 142

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P380360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imazalil	90.5	88.4	P/P	50 - 150
Malathion	114	117	P/P	67 - 128
Metaxyl	95.8	98.3	P/P	21 - 148
Metolachlor	85.5	87.8	P/P	70 - 120
Metribuzin	111	124	P/P	20 - 253
Mevinphos	111	101	P/P	47 - 116
Molinate	68.7	81.7	P/P	41 - 99.0
Naled	41.6	60.6	P/P	40 - 130
Norflurazon	90.9	97.6	P/P	54 - 127
Oxadiazon	86.5	91.0	P/P	65 - 122
Parathion Ethyl	37.4	101	F/P	71 - 113
Parathion Methyl	46.3	111	F/P	73 - 129
Pendimethalin	20.2	88.8	F/P	63 - 130
Phorate	90.6	99.5	P/P	48 - 118
Prodiamine	6.82	69.6	F/P	20 - 144
Prometon	97.9	96.4	P/P	53 - 120
Prometryn	99.0	99.8	P/P	63 - 119
Pronamide	101	105	P/P	50 - 150
Propiconazole	84.0	87.7	P/P	50 - 150
Simazine	113	114	P/P	77 - 129
Sulfentrazone	13.1	14.5	F/F	50 - 150
Tebuconazole	37.7	39.8	P/P	20 - 118
Terbufos	93.2	103	P/P	61 - 119
Terbutylazine	96.5	98.1	P/P	75 - 119

Reference Method: EPA 8270E
Batch ID: P380545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	60.0	56.1	P/P	20 - 87.0
Alpha-BHC	90.3	88.7	P/P	65 - 142
Alpha-Chlordane	89.4	86.8	P/P	58 - 106
Beta-BHC	89.5	101	P/P	65 - 179
Beta-Cyfluthrin	55.4	61.2	P/P	50 - 150
Bifenthrin	78.1	75.1	P/P	38 - 128
Chlorothalonil	120	110	P/P	20 - 214
Cis-Nonachlor	87.0	86.3	P/P	56 - 113
Cypermethrin	65.6	73.3	P/P	37 - 130
Dacthal	101	99.7	P/P	50 - 150
DDD-p,p'	89.1	89.0	P/P	66 - 119
DDE-p,p'	97.7	88.7	P/P	53 - 108
DDT-p,p'	87.4	77.6	P/P	57 - 133
Delta-BHC	113	101	P/P	68 - 187
Dicofol	78.3	78.5	P/P	66 - 123
Dieldrin	101	94.9	P/P	65 - 111
Endosulfan I	101	97.6	P/P	65 - 115
Endosulfan II	96.4	108	P/P	68 - 133
Endosulfan Sulfate	93.3	91.6	P/P	62 - 127
Endrin	99.8	107	P/P	64 - 122
Endrin Aldehyde	104	99.8	P/P	61 - 132
Endrin Ketone	84.1	99.4	P/P	66 - 120
Ethalfuralin	75.3	75.4	P/P	57 - 127

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P380545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Gamma-BHC	99.3	104	P/P	71 - 158
Gamma-Chlordane	82.9	80.3	P/P	53 - 106
Heptachlor	79.4	76.5	P/P	45 - 96.0
Heptachlor Epoxide	100	93.8	P/P	64 - 109
Hexachlorobenzene	70.7	69.2	P/P	46 - 103
Lambda-Cyhalothrin	54.5	64.5	P/P	50 - 150
Methoxychlor	99.8	96.2	P/P	69 - 149
Mirex	64.0	63.4	P/P	31 - 90.0
Permethrin	70.0	69.5	P/P	41 - 108
Phenothrin	51.8	50.2	P/P	50 - 150
Prallethrin	53.5	63.9	P/P	40 - 140
Trans-Nonachlor	84.5	81.7	P/P	50 - 107
Trifluralin	75.1	74.8	P/P	58 - 119

Reference Method: EPA 8276
Batch ID: P380545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	93.5	87.1	P/P	47 - 119
Toxaphene	86.4	83.3	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P380246

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	73.2		P	40 - 150
AMPA	91.6		P	40 - 150
Endothall	113		P	40 - 150
Glufosinate	107		P	40 - 150
Glyphosate	120		P	40 - 140
Sucralose	97.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P380458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	30 - 160
Acetaminophen	70.3		P	30 - 160
Acetamiprid	81.0		P	30 - 160
Afidopyropen	84.1		P	30 - 160
Bentazon	72.5		P	30 - 160
Benzovindiflupyr	72.1		P	30 - 160
Carbamazepine	89.3		P	30 - 160
Clothianidin	74.9		P	30 - 160
Dinotefuran	73.4		P	30 - 160
Diuron	75.1		P	30 - 160
Fenuron	78.3		P	30 - 160
Fluridone	69.7		P	30 - 160
Hydrocodone	64.8		P	30 - 160
Ibuprofen	75.5		P	30 - 160
Imazapyr	83.4		P	30 - 160
Imidacloprid	86.3		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P380458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Linuron	72.0		P	30 - 160
Mandestrobin	73.3		P	30 - 160
MCP	95.7		P	30 - 160
Naproxen	74.5		P	30 - 160
Primidone	79.0		P	30 - 160
Pyraclostrobin	71.6		P	30 - 160
Thiamethoxam	85.0		P	30 - 160
Tolfenpyrad	51.1		P	30 - 160
Triclopyr	111		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P380459

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	89.4		P	30 - 160
Aldicarb	55.1		P	30 - 160
Aldicarb Sulfone	95.3		P	30 - 160
Aldicarb Sulfoxide	80.8		P	30 - 160
Carbaryl	84.0		P	30 - 160
Carbofuran	84.3		P	30 - 160
Methiocarb	77.4		P	30 - 160
Methomyl	93.9		P	30 - 160
Oxamyl	95.8		P	30 - 160
Propoxur	87.5		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P380861

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P380870

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.1		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P381258

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P380562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P380835

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163449	Barium	103	100	P/P	70 - 130
2163449	Iron	106	107	P/P	70 - 130
2163449	Manganese	106	103	P/P	70 - 130
2163449	Zinc	109	109	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163449	Aluminum	92.3	94.0	P/P	70 - 130
2163449	Antimony	92.8	95.5	P/P	70 - 130
2163449	Arsenic	101	102	P/P	70 - 130
2163449	Cadmium	94.3	98.6	P/P	70 - 130
2163449	Chromium	95.5	98.0	P/P	70 - 130
2163449	Copper	97.5	99.4	P/P	70 - 130
2163449	Lead	91.4	92.8	P/P	70 - 130
2163449	Nickel	100	102	P/P	70 - 130
2163449	Selenium	96.5	101	P/P	70 - 130
2163449	Silver	87.0	88.0	P/P	70 - 130
2163449	Thallium	89.9	93.0	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163647	Bromide	94.3	93.9	P/P	90 - 110
2163663	Bromide	94.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380924

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163413	Bromide	94.0	93.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163107	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163107	Kjeldahl Nitrogen	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380525

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163538	Kjeldahl Nitrogen	99.4	98.1	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P380903

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163102	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380657

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163002	Total-P	96.6	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163406	O-Phosphate-P	97.8	98.6	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P380360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161918	Acetochlor	89.1	87.1	P/P	68 - 126
2161918	Alachlor	86.7	88.5	P/P	66 - 125
2161918	Ametryn	115	91.0	P/P	31 - 182
2161918	Azinphos Methyl	130	127	P/P	54 - 162
2161918	Bromacil	75.5	77.8	P/P	34 - 144
2161918	Butylate	70.9	79.6	P/P	16 - 92.0
2161918	Carbophenothion	76.0	73.2	P/P	50 - 150
2161918	Chlorpyrifos Ethyl	104	84.2	P/P	63 - 124
2161918	Chlorpyrifos Methyl	94.6	91.1	P/P	64 - 125
2161918	Cyanazine	103	81.8	P/P	13 - 245
2161918	Demeton	116	114	P/P	20 - 154
2161918	Diazinon	97.9	96.7	P/P	66 - 141
2161918	Dimethenamid	107	81.4	P/P	50 - 130
2161918	Disulfoton	78.3	64.1	P/P	55 - 130
2161918	Dithiopyr	77.0	71.6	P/P	66 - 122
2161918	EPTC	75.2	79.7	P/P	15 - 93.0
2161918	Ethion	87.0	25.5	P/P	15 - 148
2161918	Ethoprop	123	125	P/P	59 - 126
2161918	Fenamiphos	68.8	74.2	P/P	39 - 137
2161918	Fipronil	84.2	75.3	P/P	47 - 131
2161918	Fipronil Desulfinyl	84.8	79.2	P/P	43 - 121
2161918	Fipronil Sulfide	77.1	66.8	P/P	29 - 134
2161918	Fipronil Sulfone	60.9	52.9	P/P	19 - 131
2161918	Flumioxazin	206	144	F/P	70 - 200
2161918	Fonofos	102	97.7	P/P	62 - 128
2161918	Hexazinone	97.4	106	P/P	58 - 154
2161918	Imazalil	79.8	76.3	P/P	50 - 150
2161918	Malathion	116	112	P/P	54 - 135
2161918	Metalaxyl	87.7	89.7	P/P	46 - 136
2161918	Metolachlor	79.5	76.3	P/P	62 - 126
2161918	Metribuzin	113	98.2	P/P	44 - 277
2161918	Mevinphos	131	105	P/P	44 - 135
2161918	Molinate	86.7	85.4	P/P	31 - 104
2161918	Naled	106	102	P/P	40 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P380360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161918	Norflurazon	78.8	74.6	P/P	32 - 134
2161918	Oxadiazon	71.9	61.5	P/P	55 - 123
2161918	Parathion Ethyl	100	98.3	P/P	67 - 120
2161918	Parathion Methyl	132	133	P/P	70 - 140
2161918	Pendimethalin	90.6	87.0	P/P	59 - 145
2161918	Phorate	106	103	P/P	52 - 127
2161918	Prodiamine	51.5	36.9	P/P	11 - 157
2161918	Prometon	87.1	82.9	P/P	55 - 130
2161918	Prometryn	92.7	87.9	P/P	55 - 127
2161918	Pronamide	106	106	P/P	50 - 150
2161918	Propiconazole	73.2	64.4	P/P	50 - 150
2161918	Sulfentrazone	64.3	47.0	P/F	50 - 150
2161918	Tebuconazole	27.1	14.1	P/P	10 - 122
2161918	Terbufos	110	109	P/P	65 - 131
2161918	Terbutylazine	98.9	100	P/P	63 - 131

Reference Method: EPA 8270E
Batch ID: P380545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2164365	Aldrin	63.7	61.4	P/P	32 - 82.0
2164365	Alpha-BHC	99.7	89.5	P/P	68 - 157
2164365	Alpha-Chlordane	94.7	89.5	P/P	54 - 108
2164365	Beta-BHC	107	98.6	P/P	54 - 200
2164365	Beta-Cyfluthrin	97.5	80.4	P/P	50 - 150
2164365	Bifenthrin	102	98.4	P/P	49 - 124
2164365	Chlorothalonil	141	39.5	P/P	10 - 289
2164365	Cis-Nonachlor	99.6	88.7	P/P	53 - 112
2164365	Cypermethrin	96.9	80.3	P/P	43 - 141
2164365	Dacthal	103	93.8	P/P	50 - 150
2164365	DDD-p,p'	104	91.0	P/P	58 - 125
2164365	DDE-p,p'	88.5	93.3	P/P	50 - 108
2164365	DDT-p,p'	83.0	82.6	P/P	52 - 140
2164365	Delta-BHC	195	133	P/P	61 - 228
2164365	Dicofol	69.4	87.6	P/P	59 - 130
2164365	Dieldrin	105	95.8	P/P	57 - 121
2164365	Endosulfan I	111	100	P/P	62 - 123
2164365	Endosulfan II	120	93.3	P/P	48 - 163
2164365	Endosulfan Sulfate	135	80.0	F/P	63 - 132
2164365	Endrin	108	101	P/P	58 - 128
2164365	Endrin Aldehyde	108	96.5	P/P	44 - 126
2164365	Endrin Ketone	114	85.6	P/P	68 - 127
2164365	Ethalfuralin	75.4	75.7	P/P	55 - 131
2164365	Gamma-BHC	127	111	P/P	54 - 206
2164365	Gamma-Chlordane	86.7	81.3	P/P	52 - 105
2164365	Heptachlor	76.9	71.3	P/P	47 - 94.0
2164365	Heptachlor Epoxide	98.4	91.1	P/P	61 - 113
2164365	Hexachlorobenzene	68.5	70.8	P/P	45 - 100
2164365	Lambda-Cyhalothrin	96.0	70.1	P/P	50 - 150
2164365	Methoxychlor	90.9	87.0	P/P	63 - 153
2164365	Mirex	78.8	73.2	P/P	38 - 90.0
2164365	Permethrin	85.3	81.9	P/P	45 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P380545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2164365	Phenothrin	71.6	70.7	P/P	50 - 150
2164365	Prallethrin	74.9	57.8	P/P	40 - 140
2164365	Trans-Nonachlor	89.6	85.2	P/P	50 - 103
2164365	Trifluralin	74.7	76.0	P/P	57 - 122

Reference Method: EPA 8276
Batch ID: P380545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2164959	Chlordane	88.3	88.1	P/P	34 - 129
2164959	Toxaphene	98.5	98.3	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P380246

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163209	Acesulfame K	128	139	P/P	40 - 150
2163209	AMPA	104	112	P/P	40 - 150
2163209	Endothall	122	138	P/P	40 - 150
2163209	Glufosinate	109	108	P/P	40 - 150
2163209	Glyphosate	109	109	P/P	40 - 140
2163209	Sucralose	99.4	99.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P380458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163321	Acetaminophen	82.8	72.8	P/P	30 - 160
2163321	Acetamiprid	84.6	69.5	P/P	30 - 160
2163321	Afidopyropen	120	115	P/P	30 - 160
2163321	Bentazon	27.3	29.7	F/F	30 - 160
2163321	Benzovindiflupyr	82.4	83.3	P/P	30 - 160
2163321	Carbamazepine	75.6	70.0	P/P	30 - 160
2163321	Clothianidin	68.6	89.2	P/P	30 - 160
2163321	Dinotefuran	97.6	104	P/P	30 - 160
2163321	Diuron	67.1	72.0	P/P	30 - 160
2163321	Fenuron	54.2	70.2	P/P	30 - 160
2163321	Fluridone	75.6	75.2	P/P	30 - 160
2163321	Hydrocodone	70.6	80.5	P/P	30 - 160
2163321	Ibuprofen	68.0	71.3	P/P	30 - 160
2163321	Imazapyr	63.7	67.3	P/P	30 - 160
2163321	Imidacloprid	142	152	P/P	30 - 160
2163321	Linuron	61.0	65.0	P/P	30 - 160
2163321	Mandestrobin	75.1	77.1	P/P	30 - 160
2163321	MCP	96.0	102	P/P	30 - 160
2163321	Naproxen	78.9	78.0	P/P	30 - 160
2163321	Primidone	72.3	88.2	P/P	30 - 160
2163321	Pyraclostrobin	82.2	84.4	P/P	30 - 160
2163321	Thiamethoxam	109	125	P/P	30 - 160
2163321	Tolfenpyrad	75.9	75.0	P/P	30 - 160
2163321	Triclopyr	132	124	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P380459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163320	3-Hydroxycarbofuran	71.7	69.1	P/P	30 - 160
2163320	Aldicarb	42.9	40.0	P/P	30 - 160
2163320	Aldicarb Sulfone	86.3	85.7	P/P	30 - 160
2163320	Aldicarb Sulfoxide	26.1	25.5	F/F	30 - 160
2163320	Carbaryl	57.8	63.6	P/P	30 - 160
2163320	Carbofuran	52.9	57.4	P/P	30 - 160
2163320	Methiocarb	58.3	57.7	P/P	30 - 160
2163320	Methomyl	62.1	62.1	P/P	30 - 160
2163320	Oxamyl	63.8	62.3	P/P	30 - 160
2163320	Propoxur	53.0	60.2	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P380870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162914	Fluoride	97.1	97.1	P/P	89 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P381258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163858	Fluoride	97.8	97.8	P/P	89 - 106

Reference Method: SM 5310 B-2011

Batch ID: P380562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163385	Organic Carbon	96.6	95.6	P/P	85 - 115

Reference Method: SM 5310 B-2011

Batch ID: P380835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163409	Organic Carbon	98.2	96.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163404	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163449	Barium	2.67	Spike	P	0 - 20
2163449	Calcium	1.04	Spike	P	0 - 20
2163449	Iron	0.278	Spike	P	0 - 20
2163449	Manganese	2.72	Spike	P	0 - 20
2163449	Potassium	0.138	Spike	P	0 - 20
2163449	Sodium	1.14	Spike	P	0 - 20
2163449	Zinc	0.0455	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163449	Aluminum	1.80	Spike	P	0 - 20
2163449	Antimony	2.92	Spike	P	0 - 20
2163449	Arsenic	1.38	Spike	P	0 - 20
2163449	Cadmium	4.44	Spike	P	0 - 20
2163449	Chromium	2.59	Spike	P	0 - 20
2163449	Copper	1.92	Spike	P	0 - 20
2163449	Lead	1.51	Spike	P	0 - 20
2163449	Nickel	1.82	Spike	P	0 - 20
2163449	Selenium	4.79	Spike	P	0 - 20
2163449	Silver	1.15	Spike	P	0 - 20
2163449	Thallium	3.43	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163647	Bromide	0.407	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380924

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163413	Bromide	0.120	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P381035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163107	Ammonia-N	0.301	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163107	Kjeldahl Nitrogen	0.330	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380525

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163538	Kjeldahl Nitrogen	1.15	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380903

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163102	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163002	Total-P	1.59	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163406	O-Phosphate-P	0.594	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P380360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161918	Acetochlor	2.26	Spike	P	0 - 30
2161918	Alachlor	2.09	Spike	P	0 - 30
2161918	Ametryn	12.1	Spike	P	0 - 30
2161918	Atrazine	5.09	Spike	P	0 - 30
2161918	Atrazine Desethyl	1.75	Spike	P	0 - 30
2161918	Azinphos Methyl	1.62	Spike	P	0 - 30
2161918	Bromacil	2.08	Spike	P	0 - 30
2161918	Butylate	11.6	Spike	P	0 - 30
2161918	Carbophenothion	3.73	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161918	Chlorpyrifos Ethyl	21.4	Spike	P	0 - 30
2161918	Chlorpyrifos Methyl	3.79	Spike	P	0 - 30
2161918	Cyanazine	22.9	Spike	P	0 - 30
2161918	Demeton	1.91	Spike	P	0 - 30
2161918	Diazinon	1.13	Spike	P	0 - 30
2161918	Dimethenamid	27.0	Spike	P	0 - 30
2161918	Disulfoton	19.9	Spike	P	0 - 30
2161918	Dithiopyr	5.80	Spike	P	0 - 30
2161918	EPTC	5.83	Spike	P	0 - 30
2161918	Ethion	109	Spike	F	0 - 30
2161918	Ethoprop	1.75	Spike	P	0 - 30
2161918	Fenamiphos	7.64	Spike	P	0 - 30
2161918	Fipronil	8.76	Spike	P	0 - 30
2161918	Fipronil Desulfinyl	5.29	Spike	P	0 - 30
2161918	Fipronil Sulfide	6.68	Spike	P	0 - 30
2161918	Fipronil Sulfone	3.18	Spike	P	0 - 30
2161918	Flumioxazin	35.1	Spike	F	0 - 30
2161918	Fonofos	4.30	Spike	P	0 - 30
2161918	Hexazinone	8.73	Spike	P	0 - 30
2161918	Imazalil	4.50	Spike	P	0 - 30
2161918	Malathion	3.49	Spike	P	0 - 30
2161918	Metalaxyl	2.19	Spike	P	0 - 30
2161918	Metolachlor	4.15	Spike	P	0 - 30
2161918	Metribuzin	14.1	Spike	P	0 - 30
2161918	Mevinphos	21.6	Spike	P	0 - 30
2161918	Molinate	1.55	Spike	P	0 - 30
2161918	Naled	3.92	Spike	P	0 - 30
2161918	Norflurazon	5.45	Spike	P	0 - 30
2161918	Oxadiazon	8.07	Spike	P	0 - 30
2161918	Parathion Ethyl	1.98	Spike	P	0 - 30
2161918	Parathion Methyl	0.656	Spike	P	0 - 30
2161918	Pendimethalin	4.06	Spike	P	0 - 30
2161918	Phorate	2.41	Spike	P	0 - 30
2161918	Prodiamine	33.1	Spike	F	0 - 30
2161918	Prometon	4.06	Spike	P	0 - 30
2161918	Prometryn	5.31	Spike	P	0 - 30
2161918	Pronamide	0.338	Spike	P	0 - 30
2161918	Propiconazole	6.16	Spike	P	0 - 30
2161918	Simazine	1.97	Spike	P	0 - 30
2161918	Sulfentrazone	6.50	Spike	P	0 - 30
2161918	Tebuconazole	63.0	Spike	F	0 - 30
2161918	Terbufos	1.10	Spike	P	0 - 30
2161918	Terbutylazine	1.52	Spike	P	0 - 30
LFB	Acetochlor	1.54	LCS	P	0 - 30
LFB	Alachlor	4.60	LCS	P	0 - 30
LFB	Ametryn	1.64	LCS	P	0 - 30
LFB	Atrazine	4.77	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.16	LCS	P	0 - 30
LFB	Azinphos Methyl	4.13	LCS	P	0 - 30
LFB	Bromacil	8.68	LCS	P	0 - 30
LFB	Butylate	20.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	8.31	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	4.82	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.97	LCS	P	0 - 30
LFB	Cyanazine	4.57	LCS	P	0 - 30
LFB	Demeton	28.0	LCS	P	0 - 30
LFB	Diazinon	2.35	LCS	P	0 - 30
LFB	Dimethenamid	4.67	LCS	P	0 - 30
LFB	Disulfoton	28.1	LCS	P	0 - 30
LFB	Dithiopyr	6.01	LCS	P	0 - 30
LFB	EPTC	39.7	LCS	F	0 - 30
LFB	Ethion	5.78	LCS	P	0 - 30
LFB	Ethoprop	1.38	LCS	P	0 - 30
LFB	Fenamiphos	18.7	LCS	P	0 - 30
LFB	Fipronil	5.13	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	2.84	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.28	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.39	LCS	P	0 - 30
LFB	Flumioxazin	10.2	LCS	P	0 - 30
LFB	Fonofos	4.86	LCS	P	0 - 30
LFB	Hexazinone	7.62	LCS	P	0 - 30
LFB	Imazalil	2.43	LCS	P	0 - 30
LFB	Malathion	2.00	LCS	P	0 - 30
LFB	Metalaxyl	2.53	LCS	P	0 - 30
LFB	Metolachlor	2.72	LCS	P	0 - 30
LFB	Metribuzin	11.5	LCS	P	0 - 30
LFB	Mevinphos	9.01	LCS	P	0 - 30
LFB	Molinate	17.4	LCS	P	0 - 30
LFB	Naled	37.3	LCS	F	0 - 30
LFB	Norflurazon	7.12	LCS	P	0 - 30
LFB	Oxadiazon	5.08	LCS	P	0 - 30
LFB	Parathion Ethyl	91.9	LCS	F	0 - 30
LFB	Parathion Methyl	82.3	LCS	F	0 - 30
LFB	Pendimethalin	126	LCS	F	0 - 30
LFB	Phorate	9.41	LCS	P	0 - 30
LFB	Prodiamine	164	LCS	F	0 - 30
LFB	Prometon	1.60	LCS	P	0 - 30
LFB	Prometryn	0.817	LCS	P	0 - 30
LFB	Pronamide	4.29	LCS	P	0 - 30
LFB	Propiconazole	4.30	LCS	P	0 - 30
LFB	Simazine	0.825	LCS	P	0 - 30
LFB	Sulfentrazone	9.68	LCS	P	0 - 30
LFB	Tebuconazole	5.31	LCS	P	0 - 30
LFB	Terbufos	9.55	LCS	P	0 - 30
LFB	Terbutylazine	1.63	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P380545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2164365	Aldrin	3.66	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2164365	Alpha-BHC	10.8	Spike	P	0 - 30
2164365	Alpha-Chlordane	5.63	Spike	P	0 - 30
2164365	Beta-BHC	7.79	Spike	P	0 - 30
2164365	Beta-Cyfluthrin	19.2	Spike	P	0 - 30
2164365	Bifenthrin	3.88	Spike	P	0 - 30
2164365	Chlorothalonil	113	Spike	F	0 - 30
2164365	Cis-Nonachlor	11.6	Spike	P	0 - 30
2164365	Cypermethrin	18.7	Spike	P	0 - 30
2164365	Dacthal	9.86	Spike	P	0 - 30
2164365	DDD-p,p'	13.4	Spike	P	0 - 30
2164365	DDE-p,p'	5.21	Spike	P	0 - 30
2164365	DDT-p,p'	0.495	Spike	P	0 - 30
2164365	Delta-BHC	37.7	Spike	F	0 - 30
2164365	Dicofol	23.2	Spike	P	0 - 30
2164365	Dieldrin	8.76	Spike	P	0 - 30
2164365	Endosulfan I	10.4	Spike	P	0 - 30
2164365	Endosulfan II	24.8	Spike	P	0 - 30
2164365	Endosulfan Sulfate	50.9	Spike	F	0 - 30
2164365	Endrin	6.87	Spike	P	0 - 30
2164365	Endrin Aldehyde	11.5	Spike	P	0 - 30
2164365	Endrin Ketone	28.2	Spike	P	0 - 30
2164365	Ethalfuralin	0.307	Spike	P	0 - 30
2164365	Gamma-BHC	13.1	Spike	P	0 - 30
2164365	Gamma-Chlordane	6.39	Spike	P	0 - 30
2164365	Heptachlor	7.55	Spike	P	0 - 30
2164365	Heptachlor Epoxide	7.62	Spike	P	0 - 30
2164365	Hexachlorobenzene	3.35	Spike	P	0 - 30
2164365	Lambda-Cyhalothrin	31.2	Spike	F	0 - 30
2164365	Methoxychlor	4.28	Spike	P	0 - 30
2164365	Mirex	7.38	Spike	P	0 - 30
2164365	Permethrin	4.03	Spike	P	0 - 30
2164365	Phenothrin	1.31	Spike	P	0 - 30
2164365	Prallethrin	25.8	Spike	P	0 - 30
2164365	Trans-Nonachlor	5.13	Spike	P	0 - 30
2164365	Trifluralin	1.63	Spike	P	0 - 30
LFB	Aldrin	6.75	LCS	P	0 - 30
LFB	Alpha-BHC	1.81	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.97	LCS	P	0 - 30
LFB	Beta-BHC	12.0	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	9.93	LCS	P	0 - 30
LFB	Bifenthrin	3.87	LCS	P	0 - 30
LFB	Chlorothalonil	9.46	LCS	P	0 - 30
LFB	Cis-Nonachlor	0.896	LCS	P	0 - 30
LFB	Cypermethrin	11.1	LCS	P	0 - 30
LFB	Dacthal	1.71	LCS	P	0 - 30
LFB	DDD-p,p'	0.0722	LCS	P	0 - 30
LFB	DDE-p,p'	9.63	LCS	P	0 - 30
LFB	DDT-p,p'	11.9	LCS	P	0 - 30
LFB	Delta-BHC	11.0	LCS	P	0 - 30
LFB	Dicofol	0.269	LCS	P	0 - 30
LFB	Dieldrin	6.20	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endosulfan I	3.90	LCS	P	0 - 30
LFB	Endosulfan II	11.3	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.82	LCS	P	0 - 30
LFB	Endrin	7.02	LCS	P	0 - 30
LFB	Endrin Aldehyde	3.77	LCS	P	0 - 30
LFB	Endrin Ketone	16.7	LCS	P	0 - 30
LFB	Ethalfuralin	0.0891	LCS	P	0 - 30
LFB	Gamma-BHC	4.21	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.26	LCS	P	0 - 30
LFB	Heptachlor	3.64	LCS	P	0 - 30
LFB	Heptachlor Epoxide	6.69	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.13	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	16.8	LCS	P	0 - 30
LFB	Methoxychlor	3.62	LCS	P	0 - 30
LFB	Mirex	0.838	LCS	P	0 - 30
LFB	Permethrin	0.825	LCS	P	0 - 30
LFB	Phenothrin	2.99	LCS	P	0 - 30
LFB	Prallethrin	17.6	LCS	P	0 - 30
LFB	Trans-Nonachlor	3.30	LCS	P	0 - 30
LFB	Trifluralin	0.448	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P380545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2164959	Chlordane	0.198	Spike	P	0 - 30
2164959	Toxaphene	0.208	Spike	P	0 - 30
LFB	Chlordane	7.06	LCS	P	0 - 30
LFB	Toxaphene	3.61	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380246

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163209	Acesulfame K	8.05	Spike	P	0 - 30
2163209	AMPA	7.07	Spike	P	0 - 30
2163209	Endothall	12.2	Spike	P	0 - 30
2163209	Glufosinate	0.846	Spike	P	0 - 30
2163209	Glyphosate	0.138	Spike	P	0 - 30
2163209	Sucralose	0.478	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163321	2,4-D	2.12	Spike	P	0 - 30
2163321	Acetaminophen	8.34	Spike	P	0 - 30
2163321	Acetamiprid	19.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P380458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163321	Afidopyropen	4.94	Spike	P	0 - 30
2163321	Bentazon	2.92	Spike	P	0 - 30
2163321	Benzovindiflupyr	1.08	Spike	P	0 - 30
2163321	Carbamazepine	7.73	Spike	P	0 - 30
2163321	Clothianidin	24.9	Spike	P	0 - 30
2163321	Dinotefuran	6.53	Spike	P	0 - 30
2163321	Diuron	7.03	Spike	P	0 - 30
2163321	Fenuron	25.7	Spike	P	0 - 30
2163321	Fluridone	0.527	Spike	P	0 - 30
2163321	Hydrocodone	13.1	Spike	P	0 - 30
2163321	Ibuprofen	4.75	Spike	P	0 - 30
2163321	Imazapyr	2.10	Spike	P	0 - 30
2163321	Imidacloprid	6.51	Spike	P	0 - 30
2163321	Linuron	6.27	Spike	P	0 - 30
2163321	Mandestrobin	2.63	Spike	P	0 - 30
2163321	MCPP	6.38	Spike	P	0 - 30
2163321	Naproxen	1.18	Spike	P	0 - 30
2163321	Primidone	19.8	Spike	P	0 - 30
2163321	Pyraclostrobin	2.59	Spike	P	0 - 30
2163321	Thiamethoxam	13.4	Spike	P	0 - 30
2163321	Tolfenpyrad	1.18	Spike	P	0 - 30
2163321	Triclopyr	6.69	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163320	3-Hydroxycarbofuran	3.66	Spike	P	0 - 30
2163320	Aldicarb	6.97	Spike	P	0 - 30
2163320	Aldicarb Sulfone	0.663	Spike	P	0 - 30
2163320	Aldicarb Sulfoxide	2.28	Spike	P	0 - 30
2163320	Carbaryl	9.48	Spike	P	0 - 30
2163320	Carbofuran	8.22	Spike	P	0 - 30
2163320	Methiocarb	1.06	Spike	P	0 - 30
2163320	Methomyl	0.0717	Spike	P	0 - 30
2163320	Oxamyl	2.40	Spike	P	0 - 30
2163320	Propoxur	12.7	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P380861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162914	Total Alkalinity	0.425	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P380870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P380870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162914	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-2011
Batch ID: P381258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163858	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P380562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163385	Organic Carbon	0.653	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P380835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163409	Organic Carbon	1.41	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2163438
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	69.6	P	30 - 160

Lab Sample ID: 2163439
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	84.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.8	P	30 - 160
EPA 8321B	Diuron-d6	88.2	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	46.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	46.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.1	P	30 - 160
EPA 8321B	Primidone-d5	90.1	P	30 - 160
EPA 8321B	Sucralose-d6	48.8	P	30 - 160
EPA 8321B	Sucralose-d6	48.8	P	30 - 160

Lab Sample ID: 2163440
Field Sample ID: G1SW0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.8	P	30 - 160
EPA 8321B	Diuron-d6	84.6	P	30 - 160
EPA 8321B	Endothall-d6	434	F	30 - 160
EPA 8321B	Endothall-d6	434	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	68.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	68.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.9	P	30 - 160
EPA 8321B	Primidone-d5	94.0	P	30 - 160
EPA 8321B	Sucralose-d6	31.7	P	30 - 160
EPA 8321B	Sucralose-d6	31.7	P	30 - 160

Lab Sample ID: 2163447
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	108	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	65.0	P	34 - 106
EPA 8276	Decachlorobiphenyl	80.9	P	26 - 97.0
EPA 8276	PCNB	112	P	38 - 141

Lab Sample ID: 2163448
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	97.4	P	72 - 135
EPA 8270E	Terbufos-d10	94.5	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98086

Included Lab Sample IDs: 2163404, 2163407

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	98.6	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A98103

Included Lab Sample IDs: 2163406, 2163411, 2163417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	101	P/P	90 - 110
O-Phosphate-P	97.9	99.3	P/P	90 - 110
O-Phosphate-P	99.9	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A98117

Included Lab Sample IDs: 2163404, 2163407, 2163413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A98129

Included Lab Sample IDs: 2163439, 2163440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	80.6	74.5	P/P	60 - 160
Endothall	133	134	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A98159

Included Lab Sample IDs: 2163405, 2163409

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.9	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A98160

Included Lab Sample IDs: 2163439, 2163440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	102	P/P	60 - 160
Sucralose	99.2	100	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A98161

Included Lab Sample IDs: 2163439, 2163440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.2	94.1	P/P	40 - 200
Glufosinate	108	103	P/P	40 - 200
Glyphosate	116	100	P/P	40 - 200

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A98163

Included Lab Sample IDs: 2163405

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	97.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A98195

Included Lab Sample IDs: 2163449

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	107	103	P/P	90 - 110
Calcium	101	100	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Manganese	108	105	P/P	90 - 110
Potassium	99.7	101	P/P	90 - 110
Sodium	99.4	100	P/P	90 - 110
Zinc	107	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98197

Included Lab Sample IDs: 2163449

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	97.5	P/P	90 - 110
Antimony	93.4	90.8	P/P	90 - 110
Arsenic	97.7	95.1	P/P	90 - 110
Cadmium	97.1	94.8	P/P	90 - 110
Chromium	97.5	94.0	P/P	90 - 110
Copper	100	96.9	P/P	90 - 110
Lead	95.9	92.7	P/P	90 - 110
Nickel	101	97.4	P/P	90 - 110
Selenium	95.4	96.2	P/P	90 - 110
Silver	91.1	92.6	P/P	90 - 110
Thallium	91.9	90.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A98214

Included Lab Sample IDs: 2163439, 2163440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	88.6	75.3	P/P	50 - 150
3-Hydroxycarbofuran	104	90.6	P/P	60 - 150
Acetaminophen	92.3	89.6	P/P	60 - 160
Acetamiprid	108	94.0	P/P	50 - 150
Afidopyropen	129	114	P/P	50 - 150
Aldicarb	105	93.1	P/P	60 - 150
Aldicarb Sulfone	100	97.0	P/P	50 - 150
Aldicarb Sulfoxide	77.8	72.2	P/P	50 - 150
Bentazon	118	129	P/P	50 - 160
Bentazon	124	114	P/P	50 - 160
Benzovindiflupyr	108	102	P/P	50 - 150
Carbamazepine	112	101	P/P	60 - 150
Carbaryl	121	110	P/P	60 - 150
Carbofuran	134	132	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A98214

Included Lab Sample IDs: 2163439, 2163440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Clothianidin	98.9	79.4	P/P	60 - 150
Dinotefuran	92.1	86.2	P/P	50 - 150
Diuron	123	107	P/P	60 - 150
Fenuron	95.3	93.2	P/P	60 - 150
Fluridone	98.2	97.1	P/P	60 - 160
Hydrocodone	101	91.7	P/P	60 - 150
Ibuprofen	86.7	90.0	P/P	50 - 160
Imazapyr	100	82.8	P/P	50 - 150
Imidacloprid	98.8	94.9	P/P	60 - 150
Linuron	107	109	P/P	60 - 150
Mandestrobin	101	96.1	P/P	50 - 150
MCPP	70.5	68.0	P/P	50 - 150
Methiocarb	117	115	P/P	50 - 150
Methomyl	86.1	90.9	P/P	50 - 150
Naproxen	95.7	135	P/P	50 - 160
Oxamyl	77.3	82.8	P/P	50 - 150
Primidone	94.3	86.6	P/P	60 - 150
Propoxur	104	123	P/P	50 - 150
Pyraclostrobin	102	99.5	P/P	60 - 150
Thiamethoxam	107	93.8	P/P	50 - 150
Tolfenpyrad	113	116	P/P	60 - 150
Triclopyr	109	95.4	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A98226

Included Lab Sample IDs: 2163415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.3	94.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98237

Included Lab Sample IDs: 2163415

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98240

Included Lab Sample IDs: 2163405, 2163409

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98241

Included Lab Sample IDs: 2163405, 2163409, 2163415

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A98257

Included Lab Sample IDs: 2163409, 2163415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	95.1	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A98267

Included Lab Sample IDs: 2163448

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

Reference Method: SM 2320 B-2011

Run ID: A98269

Included Lab Sample IDs: 2163404, 2163407, 2163413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A98269

Included Lab Sample IDs: 2163407

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	105	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98275

Included Lab Sample IDs: 2163413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	98.8	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A98288

Included Lab Sample IDs: 2163448

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.5		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	99.5		P	80 - 120
Atrazine Desethyl	99.5		P	80 - 120
Azinphos Methyl	93.9		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	95.8		P	80 - 120
Carbophenothion	98.1		P	80 - 120
Chlorpyrifos Ethyl	97.7		P	80 - 120
Chlorpyrifos Methyl	95.0		P	80 - 120
Cyanazine	94.9		P	80 - 120
Demeton	99.8		P	80 - 120
Diazinon	100		P	80 - 120
Dimethenamid	99.5		P	80 - 120
Disulfoton	96.9		P	80 - 120
Dithiopyr	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A98288
Included Lab Sample IDs: 2163448

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
EPTC	98.7		P	80 - 120
Ethion	94.0		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	96.4		P	80 - 120
Fipronil	99.9		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	98.1		P	80 - 120
Fipronil Sulfone	96.1		P	80 - 120
Flumioxazin	89.7		P	80 - 120
Fonofos	98.8		P	80 - 120
Imazalil	98.4		P	80 - 120
Malathion	98.4		P	80 - 120
Metalaxyl	105		P	80 - 120
Metolachlor	96.9		P	80 - 120
Metribuzin	96.9		P	80 - 120
Mevinphos	105		P	80 - 120
Molinate	100		P	80 - 120
Naled	102		P	80 - 120
Norflurazon	103		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	95.8		P	80 - 120
Parathion Methyl	95.9		P	80 - 120
Pendimethalin	95.4		P	80 - 120
Phorate	98.2		P	80 - 120
Prodiamine	95.6		P	80 - 120
Prometon	97.8		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	96.9		P	80 - 120
Propiconazole	100		P	80 - 120
Simazine	96.5		P	80 - 120
Sulfentrazone	100		P	80 - 120
Tebuconazole	112		P	80 - 120
Terbufos	101		P	80 - 120
Terbutylazine	98.9		P	80 - 120

Reference Method: EPA 8270E
Run ID: A98295
Included Lab Sample IDs: 2163448

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	95.5		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A98337
Included Lab Sample IDs: 2163405, 2163409, 2163415

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A98356

Included Lab Sample IDs: 2163447

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.0		P	80 - 120
Toxaphene	102		P	80 - 120

Reference Method: EPA 8270E

Run ID: A98419

Included Lab Sample IDs: 2163447

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	104		P	80 - 120
Alpha-BHC	97.4		P	80 - 120
Alpha-Chlordane	105		P	80 - 120
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	83.3		P	80 - 120
Bifenthrin	94.7		P	80 - 120
Chlorothalonil	110		P	80 - 120
Cis-Nonachlor	104		P	80 - 120
Cypermethrin	86.8		P	80 - 120
Dacthal	106		P	80 - 120
DDD-p,p'	99.8		P	80 - 120
DDE-p,p'	107		P	80 - 120
DDT-p,p'	99.5		P	80 - 120
Delta-BHC	93.0		P	80 - 120
Dicofol	87.9		P	80 - 120
Dieldrin	103		P	80 - 120
Endosulfan I	104		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	90.4		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	107		P	80 - 120
Endrin Ketone	95.0		P	80 - 120
Ethalfuralin	98.8		P	80 - 120
Gamma-BHC	92.5		P	80 - 120
Gamma-Chlordane	104		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	105		P	80 - 120
Hexachlorobenzene	102		P	80 - 120
Lambda-Cyhalothrin	86.7		P	80 - 120
Methoxychlor	99.1		P	80 - 120
Mirex	97.8		P	80 - 120
Permethrin	88.5		P	80 - 120
Phenothrin	86.1		P	80 - 120
Prallethrin	91.1		P	80 - 120
Trans-Nonachlor	105		P	80 - 120
Trifluralin	97.8		P	80 - 120

Reference Method: SM 4500 F-C-2011

Run ID: A98428

Included Lab Sample IDs: 2163404, 2163413

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.0	97.6	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* 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						0.0	
EPA 200.7 Rev. 4.4	Barium	105		103	100			2.67
	Calcium	103						1.04
	Iron	105		106	107			0.278
	Manganese	107		106	103			2.72
	Potassium	101						0.138
	Sodium	101						1.14
	Zinc	107		109	109			0.0455
EPA 200.8 Rev. 5.4	Aluminum	93.1		92.3	94.0			1.80
	Antimony	90.4		92.8	95.5			2.92
	Arsenic	94.3		101	102			1.38
	Cadmium	95.1		94.3	98.6			4.44
	Chromium	94.6		95.5	98.0			2.59
	Copper	97.7		97.5	99.4			1.92
	Lead	89.6		91.4	92.8			1.51
	Nickel	94.3		100	102			1.82
	Selenium	94.3		96.5	101			4.79
	Silver	91.0		87.0	88.0			1.15
	Thallium	93.8		89.9	93.0			3.43
EPA 300.0 Rev. 2.1	Bromide	97.4		94.3	93.9	94.3		0.407
	Bromide	97.6		94.0	93.8			0.120
EPA 350.1 Rev. 2.0	Ammonia-N	99.4		100	101			0.301
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105		102	101			0.330
	Kjeldahl Nitrogen	91.9		99.4	98.1			1.15
EPA 353.2 Rev. 2.0	NO2NO3-N	101		101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	105		96.6	98.2			1.59
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		97.8	98.6			0.594
EPA 8270E	Acetochlor	95.2	96.7	89.1	87.1	1.54		2.26
	Alachlor	92.4	96.7	86.7	88.5	4.60		2.09
	Aldrin	60.0	56.1	63.7	61.4	6.75		3.66
	Alpha-BHC	90.3	88.7	99.7	89.5	1.81		10.8
	Alpha-Chlordane	89.4	86.8	94.7	89.5	2.97		5.63
	Ametryn	102	101	115	91.0	1.64		12.1
	Atrazine	99.5	104			4.77		5.09
	Atrazine Desethyl	85.8	89.4			4.16		1.75
	Azinphos Methyl	123	118	130	127	4.13		1.62
	Beta-BHC	89.5	101	107	98.6	12.0		7.79
	Beta-Cyfluthrin	55.4	61.2	97.5	80.4	9.93		19.2
	Bifenthrin	78.1	75.1	102	98.4	3.87		3.88
	Bromacil	53.3	58.1	75.5	77.8	8.68		2.08
	Butylate	56.7	69.4	70.9	79.6	20.2		11.6
	Carbophenothion	86.6	94.1	76.0	73.2	8.31		3.73
	Chlorothalonil	120	110	141	39.5	9.46		113
	Chlorpyrifos Ethyl	93.0	97.6	104	84.2	4.82		21.4
	Chlorpyrifos Methyl	99.4	105	94.6	91.1	4.97		3.79
	Cis-Nonachlor	87.0	86.3	99.6	88.7	0.896		11.6
	Cyanazine	122	117	103	81.8	4.57		22.9
	Cypermethrin	65.6	73.3	96.9	80.3	11.1		18.7
	Dacthal	101	99.7	103	93.8	1.71		9.86
	DDD-p,p'	89.1	89.0	104	91.0	0.0722		13.4
	DDE-p,p'	97.7	88.7	88.5	93.3	9.63		5.21
	DDT-p,p'	87.4	77.6	83.0	82.6	11.9		0.495
	Delta-BHC	113	101	195	133	11.0		37.7
	Demeton	74.1	98.2	116	114	28.0		1.91

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	SMP
EPA 8270E	Diazinon	98.4	101	97.9	96.7	2.35	1.13
	Dicofol	78.3	78.5	69.4	87.6	0.269	23.2
	Dieldrin	101	94.9	105	95.8	6.20	8.76
	Dimethenamid	92.9	97.3	107	81.4	4.67	27.0
	Disulfoton	71.9	95.4	78.3	64.1	28.1	19.9
	Dithiopyr	85.8	91.1	77.0	71.6	6.01	5.80
	Endosulfan I	101	97.6	111	100	3.90	10.4
	Endosulfan II	96.4	108	120	93.3	11.3	24.8
	Endosulfan Sulfate	93.3	91.6	135	80.0	1.82	50.9
	Endrin	99.8	107	108	101	7.02	6.87
	Endrin Aldehyde	104	99.8	108	96.5	3.77	11.5
	Endrin Ketone	84.1	99.4	114	85.6	16.7	28.2
	EPTC	47.4	70.9	75.2	79.7	39.7	5.83
	Ethalfuralin	75.3	75.4	75.4	75.7	0.0891	0.307
	Ethion	62.7	66.5	87.0	25.5	5.78	109
	Ethoprop	111	110	123	125	1.38	1.75
	Fenamiphos	80.4	97.1	68.8	74.2	18.7	7.64
	Fipronil	93.4	98.3	84.2	75.3	5.13	8.76
	Fipronil Desulfinyl	99.5	102	84.8	79.2	2.84	5.29
	Fipronil Sulfide	86.5	93.9	77.1	66.8	8.28	6.68
	Fipronil Sulfone	69.9	74.5	60.9	52.9	6.39	3.18
	Flumioxazin	115	127	206	144	10.2	35.1
	Fonofos	93.0	97.6	102	97.7	4.86	4.30
	Gamma-BHC	99.3	104	127	111	4.21	13.1
	Gamma-Chlordane	82.9	80.3	86.7	81.3	3.26	6.39
	Heptachlor	79.4	76.5	76.9	71.3	3.64	7.55
	Heptachlor Epoxide	100	93.8	98.4	91.1	6.69	7.62
	Hexachlorobenzene	70.7	69.2	68.5	70.8	2.13	3.35
	Hexazinone	96.5	104	97.4	106	7.62	8.73
	Imazalil	90.5	88.4	79.8	76.3	2.43	4.50
	Lambda-Cyhalothrin	54.5	64.5	96.0	70.1	16.8	31.2
	Malathion	114	117	116	112	2.00	3.49
	Metalaxyl	95.8	98.3	87.7	89.7	2.53	2.19
	Methoxychlor	99.8	96.2	90.9	87.0	3.62	4.28
	Metolachlor	85.5	87.8	79.5	76.3	2.72	4.15
	Metribuzin	111	124	113	98.2	11.5	14.1
	Mevinphos	111	101	131	105	9.01	21.6
	Mirex	64.0	63.4	78.8	73.2	0.838	7.38
	Molinate	68.7	81.7	86.7	85.4	17.4	1.55
	Naled	41.6	60.6	106	102	37.3	3.92
	Norflurazon	90.9	97.6	78.8	74.6	7.12	5.45
	Oxadiazon	86.5	91.0	71.9	61.5	5.08	8.07
	Parathion Ethyl	37.4	101	100	98.3	91.9	1.98
	Parathion Methyl	46.3	111	132	133	82.3	0.656
	Pendimethalin	20.2	88.8	90.6	87.0	126	4.06
	Permethrin	70.0	69.5	85.3	81.9	0.825	4.03
	Phenothrin	51.8	50.2	71.6	70.7	2.99	1.31
	Phorate	90.6	99.5	106	103	9.41	2.41
	Prallethrin	53.5	63.9	74.9	57.8	17.6	25.8
	Prodiamine	6.82	69.6	51.5	36.9	164	33.1
	Prometon	97.9	96.4	87.1	82.9	1.60	4.06
	Prometryn	99.0	99.8	92.7	87.9	0.817	5.31
	Pronamide	101	105	106	106	4.29	0.338
	Propiconazole	84.0	87.7	73.2	64.4	4.30	6.16

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Simazine	113	114			0.825		1.97
	Sulfentrazone	13.1	14.5	64.3	47.0	9.68		6.50
	Tebuconazole	37.7	39.8	27.1	14.1	5.31		63.0
	Terbufos	93.2	103	110	109	9.55		1.10
	Terbuthylazine	96.5	98.1	98.9	100	1.63		1.52
	Trans-Nonachlor	84.5	81.7	89.6	85.2	3.30		5.13
	Trifluralin	75.1	74.8	74.7	76.0	0.448		1.63
EPA 8276	Chlordane	93.5	87.1	88.3	88.1	7.06		0.198
	Toxaphene	86.4	83.3	98.5	98.3	3.61		0.208
EPA 8321B	2,4-D	105						2.12
	3-Hydroxycarbofuran	89.4		71.7	69.1			3.66
	Acesulfame K	73.2		128	139			8.05
	Acetaminophen	70.3		82.8	72.8			8.34
	Acetamiprid	81.0		84.6	69.5			19.6
	Afidopyropen	84.1		120	115			4.94
	Aldicarb	55.1		42.9	40.0			6.97
	Aldicarb Sulfone	95.3		86.3	85.7			0.663
	Aldicarb Sulfoxide	80.8		26.1	25.5			2.28
	AMPA	91.6		104	112			7.07
	Bentazon	72.5		27.3	29.7			2.92
	Benzovindiflupyr	72.1		82.4	83.3			1.08
	Carbamazepine	89.3		75.6	70.0			7.73
	Carbaryl	84.0		57.8	63.6			9.48
	Carbofuran	84.3		52.9	57.4			8.22
	Clothianidin	74.9		68.6	89.2			24.9
	Dinotefuran	73.4		97.6	104			6.53
	Diuron	75.1		67.1	72.0			7.03
	Endothall	113		122	138			12.2
	Fenuron	78.3		54.2	70.2			25.7
	Fluridone	69.7		75.6	75.2			0.527
	Glufosinate	107		109	108			0.846
	Glyphosate	120		109	109			0.138
	Hydrocodone	64.8		70.6	80.5			13.1
	Ibuprofen	75.5		68.0	71.3			4.75
	Imazapyr	83.4		63.7	67.3			2.10
	Imidacloprid	86.3		142	152			6.51
	Linuron	72.0		61.0	65.0			6.27
	Mandestrobin	73.3		75.1	77.1			2.63
	MCPP	95.7		96.0	102			6.38
	Methiocarb	77.4		58.3	57.7			1.06
	Methomyl	93.9		62.1	62.1			0.0717
	Naproxen	74.5		78.9	78.0			1.18
	Oxamyl	95.8		63.8	62.3			2.40
	Primidone	79.0		72.3	88.2			19.8
	Propoxur	87.5		53.0	60.2			12.7
	Pyraclostrobin	71.6		82.2	84.4			2.59
	Sucralose	97.5		99.4	99.9			0.478
	Thiamethoxam	85.0		109	125			13.4
	Tolfenpyrad	51.1		75.9	75.0			1.18
	Triclopyr	111		132	124			6.69
SM 2320 B-2011	Total Alkalinity	102					0.425	
SM 4500 F-C-2011	Fluoride	94.1		97.1	97.1			0.0
	Fluoride	96.7		97.8	97.8			0.0
SM 5310 B-2011	Organic Carbon	96.2		96.6	95.6			0.653

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision		
				LCS	SMP	MS
SM 5310 B-2011	Organic Carbon	100	98.2 96.7			1.41

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2163404, 2163407, 2163413
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2163449
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2163449
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2163404, 2163407, 2163413
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2163405, 2163409, 2163415
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2163405, 2163409, 2163415
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2163405, 2163409, 2163415
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2163405, 2163409, 2163415
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2163406, 2163411, 2163417
EPA 8270E	Organochlorine pesticides in water matrices by GC/MS-SIM	2163447
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2163448
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2163447
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2163438
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2163439, 2163440
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2163439, 2163440
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2163404, 2163407, 2163413
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2163404, 2163407, 2163413
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2163404, 2163407, 2163413
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2163405, 2163409, 2163415

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/10/2020			03/10/2020 16:49	Blanca Fach	2163404, 2163407, 2163413
EPA 200.7 Rev. 4.4	03/10/2020	03/11/2020 16:50	Elliott D. Healy	03/13/2020 19:19	Vijayalakshmi Reddy	2163449
	03/10/2020	03/11/2020 16:50	Elliott D. Healy	03/13/2020 20:18	Vijayalakshmi Reddy	2163449
EPA 200.8 Rev. 5.4	03/10/2020	03/11/2020 16:50	Elliott D. Healy	03/13/2020 12:27	Justin Cutchin	2163449
EPA 300.0 Rev. 2.1	03/10/2020			03/13/2020 16:38	Lipi Saha	2163404
	03/10/2020			03/13/2020 16:55	Lipi Saha	2163407
	03/10/2020			03/18/2020 14:17	Lipi Saha	2163413
EPA 350.1 Rev. 2.0	03/10/2020			03/20/2020 10:58	Ping Hua	2163405
	03/10/2020			03/20/2020 10:59	Ping Hua	2163409
	03/10/2020			03/20/2020 11:01	Ping Hua	2163415
EPA 351.2 Rev. 2.0	03/10/2020	03/11/2020 07:25	Sima Feizi	03/12/2020 11:52	Jhamieka S. Greenwood	2163405
	03/10/2020	03/11/2020 07:25	Sima Feizi	03/12/2020 11:53	Jhamieka S. Greenwood	2163409
	03/10/2020	03/12/2020 12:05	Sima Feizi	03/13/2020 11:17	Jhamieka S. Greenwood	2163415
EPA 353.2 Rev. 2.0	03/10/2020			03/17/2020 11:50	Beverly Y. Sanders	2163405
	03/10/2020			03/17/2020 11:52	Beverly Y. Sanders	2163409
	03/10/2020			03/17/2020 12:01	Beverly Y. Sanders	2163415
EPA 365.1 Rev. 2.0	03/10/2020	03/13/2020 14:30	Yen Ta	03/16/2020 11:42	Benjamin T. Nordmann	2163415
	03/10/2020	03/13/2020 14:30	Yen Ta	03/16/2020 15:31	Benjamin T. Nordmann	2163405
	03/10/2020	03/13/2020 14:30	Yen Ta	03/16/2020 15:32	Benjamin T. Nordmann	2163409
EPA 365.1 Rev. 2.0 dissolved	03/10/2020			03/10/2020 16:01	Carlos Miranda	2163406
	03/10/2020			03/10/2020 16:08	Carlos Miranda	2163411
	03/10/2020			03/10/2020 16:59	Carlos Miranda	2163417
EPA 8270E	03/10/2020	03/10/2020 11:30	Julie Wi	03/12/2020 22:01	Vandana T. Nagar	2163448
	03/10/2020	03/10/2020 11:30	Julie Wi	03/13/2020 18:09	Vandana T. Nagar	2163448
	03/10/2020	03/10/2020 11:30	Julie Wi	03/17/2020 16:42	Vandana T. Nagar	2163448
	03/10/2020	03/16/2020 08:30	Rasheda Ghaffari	03/18/2020 19:58	Arthur Maknenko	2163447
EPA 8276	03/10/2020	03/16/2020 08:30	Rasheda Ghaffari	03/19/2020 07:54	Michael Poppell	2163447
EPA 8321B	03/10/2020	03/10/2020 14:30	Rebecca Ware	03/10/2020 22:30	Rebecca Ware	2163440
	03/10/2020	03/10/2020 14:30	Rebecca Ware	03/10/2020 23:25	Rebecca Ware	2163439
	03/10/2020	03/10/2020 14:30	Rebecca Ware	03/11/2020 14:13	Rebecca Ware	2163439
	03/10/2020	03/10/2020 14:30	Rebecca Ware	03/11/2020 15:17	Rebecca Ware	2163440
	03/10/2020	03/10/2020 14:30	Rebecca Ware	03/12/2020 06:25	Rebecca Ware	2163440
	03/10/2020	03/10/2020 14:30	Rebecca Ware	03/12/2020 12:45	Rebecca Ware	2163439
	03/10/2020	03/12/2020 10:00	Hoor Shaik	03/15/2020 07:09	Juyoung Kim	2163439
	03/10/2020	03/12/2020 10:00	Hoor Shaik	03/15/2020 07:44	Juyoung Kim	2163440
	03/10/2020	03/12/2020 10:00	Hoor Shaik	03/16/2020 17:16	Juyoung Kim	2163439
	03/10/2020	03/16/2020 08:30	Hoor Shaik	03/16/2020 22:28	Juyoung Kim	2163438
SM 2320 B-2011	03/10/2020			03/17/2020 21:30	Dale L. Simmons	2163404
	03/10/2020			03/17/2020 21:44	Dale L. Simmons	2163413
	03/10/2020			03/17/2020 22:46	Dale L. Simmons	2163407

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-2011	03/10/2020			03/13/2020 15:32	Yijie Li	2163404, 2163407, 2163413
SM 4500 F-C-2011	03/10/2020			03/17/2020 20:12	Dale L. Simmons	2163407
	03/10/2020			03/24/2020 15:27	Dale L. Simmons	2163413
	03/10/2020			03/24/2020 15:32	Dale L. Simmons	2163404
	03/10/2020			03/12/2020 02:40	Lauren Lees	2163405
SM 5310 B-2011	03/10/2020			03/17/2020 14:27	Lauren Lees	2163409
	03/10/2020			03/17/2020 15:49	Lauren Lees	2163415