

Chemical Analysis Report

NW-DIST-2020-02-28-01

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

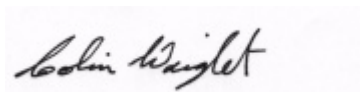
Event Description: **Pensacola Bayous**
Request ID: **RQ-2020-02-24-14**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 23-MAR-2020 08:02

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular 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: 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: BAYOU CHICO WESTERN ARM

Collection Date/Time: 02/27/2020 09:15

Field ID: G4NW0451

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161213	EPA 8321B	2,4-D	0.0026	I	ug/L	P379970	
		Acesulfame K**	0.10	U	ug/L	P379902	MS
		AMPA**	1.0	U	ug/L	P379902	
		Sucralose**	0.081		ug/L	P379902	
		Acetaminophen**	0.0080	U	ug/L	P379970	
		Acetamiprid**	0.0020	U	ug/L	P379970	
		Endothall**	0.25	U	ug/L	P379902	
		Glufosinate**	1.0	U	ug/L	P379902	
		Glyphosate**	1.0	U	ug/L	P379902	
		Afidopyropen**	0.0020	UJ	ug/L	P379970	
		Bentazon	0.0010	I	ug/L	P379970	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P379970	
		Carbamazepine**	0.0010	I	ug/L	P379970	
		Clothianidin**	0.0020	U	ug/L	P379970	
		Dinotefuran**	0.0020	U	ug/L	P379970	
		Diuron	0.0032	I	ug/L	P379970	
		Fenuron	0.016	U	ug/L	P379970	
		Fluridone**	8.0E-04	U	ug/L	P379970	
		Imazapyr**	0.010	I	ug/L	P379970	
		Hydrocodone**	0.0020	U	ug/L	P379970	
		Ibuprofen**	0.020	U	ug/L	P379970	
		Imidacloprid	0.0049	I	ug/L	P379970	MS
		Linuron	0.0040	U	ug/L	P379970	
		Mandestrobin**	0.0020	UJ	ug/L	P379970	
		MCP	0.0020	U	ug/L	P379970	MS
		Naproxen**	0.0080	U	ug/L	P379970	
		Primidone**	0.0040	U	ug/L	P379970	
		Pyraclostrobin**	0.0020	U	ug/L	P379970	
		Thiamethoxam**	0.0020	U	ug/L	P379970	
		Tolfenpyrad**	0.0020	U	ug/L	P379970	
		Triclopyr**	0.0040	U	ug/L	P379970	
2161217	EPA 8270E	Aldrin	4.2	U	ng/L	P379957	
		Alpha-BHC	2.1	U	ng/L	P379957	
		Alpha-Chlordane	1.1	U	ng/L	P379957	
		Beta-BHC	11	U	ng/L	P379957	
		Beta-Cyfluthrin**	16	U	ng/L	P379957	
		Bifenthrin**	4.2	U	ng/L	P379957	
		Delta-BHC	8.5	U	ng/L	P379957	MS
		Gamma-BHC	8.5	U	ng/L	P379957	
		Chlorothalonil	2.1	U	ng/L	P379957	
		Cis-Nonachlor**	1.1	U	ng/L	P379957	
		Cypermethrin	21	U	ng/L	P379957	
		Dacthal**	1.1	U	ng/L	P379957	
		DDD-p,p'	6.3	U	ng/L	P379957	

Field ID: G4NW0451

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161217	EPA 8270E	DDE-p,p'	6.3	U	ng/L	P379957	
		DDT-p,p'	7.4	U	ng/L	P379957	
		Dicofol	32	U	ng/L	P379957	
		Dieldrin	4.2	U	ng/L	P379957	
		Endosulfan I	4.2	U	ng/L	P379957	
		Endosulfan II	4.2	U	ng/L	P379957	
		Endosulfan Sulfate	2.1	U	ng/L	P379957	
		Endrin	2.1	U	ng/L	P379957	
		Endrin Aldehyde	2.1	U	ng/L	P379957	
		Endrin Ketone	2.1	U	ng/L	P379957	
		Ethalfuralin**	3.2	U	ng/L	P379957	
		Gamma-Chlordane	1.1	U	ng/L	P379957	
		Heptachlor	1.6	U	ng/L	P379957	
		Heptachlor Epoxide	2.1	U	ng/L	P379957	
		Hexachlorobenzene	2.1	U	ng/L	P379957	
		Lambda-Cyhalothrin**	16	U	ng/L	P379957	
		Methoxychlor	4.2	U	ng/L	P379957	
		Mirex	2.1	U	ng/L	P379957	
		Permethrin	11	U	ng/L	P379957	
		Phenothrin**	32	U	ng/L	P379957	
		Prallethrin**	32	U	ng/L	P379957	
		Trans-Nonachlor**	1.1	U	ng/L	P379957	
		Trifluralin	2.6	U	ng/L	P379957	
	EPA 8276	Chlordane	7.7	I	ng/L	P379957	
		Toxaphene	32	U	ng/L	P379957	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for bentazon 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.

Sample Location: Bayou Chico NW of Barrancas Bridge

Collection Date/Time: 02/27/2020 09:30

Field ID: G4NW0450

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161214	EPA 8321B	2,4-D	0.0023	I	ug/L	P379970	
		Acesulfame K**	0.10	U	ug/L	P379902	MS
		AMPA**	1.0	U	ug/L	P379902	
		Sucralose**	0.11		ug/L	P379902	
		Acetaminophen**	0.0080	U	ug/L	P379970	
		Acetamiprid**	0.0020	U	ug/L	P379970	
		Endothall**	0.25	U	ug/L	P379902	
		Glufosinate**	1.0	U	ug/L	P379902	
		Glyphosate**	1.0	U	ug/L	P379902	
		Afidopyropen**	0.0020	UJ	ug/L	P379970	
		Bentazon	8.2E-04	I	ug/L	P379970	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P379970	
		Carbamazepine**	0.0014	I	ug/L	P379970	
		Clothianidin**	0.0020	U	ug/L	P379970	
		Dinotefuran**	0.0020	U	ug/L	P379970	
		Diuron	0.0038	I	ug/L	P379970	
		Fenuron	0.016	U	ug/L	P379970	
		Fluridone**	8.0E-04	U	ug/L	P379970	
		Imazapyr**	0.0085	I	ug/L	P379970	
		Hydrocodone**	0.0020	U	ug/L	P379970	
		Ibuprofen**	0.020	U	ug/L	P379970	
		Imidacloprid	0.0059	I	ug/L	P379970	MS
		Linuron	0.0040	U	ug/L	P379970	
		Mandestrobin**	0.0020	UJ	ug/L	P379970	
		MCP	0.0020	U	ug/L	P379970	MS
		Naproxen**	0.0080	U	ug/L	P379970	
		Primidone**	0.0040	U	ug/L	P379970	
		Pyraclostrobin**	0.0020	U	ug/L	P379970	
		Thiamethoxam**	0.0020	U	ug/L	P379970	
		Tolfenpyrad**	0.0020	U	ug/L	P379970	
		Triclopyr**	0.0040	U	ug/L	P379970	
2161218	EPA 8270E	Aldrin	4.2	U	ng/L	P379957	
		Alpha-BHC	2.1	U	ng/L	P379957	
		Alpha-Chlordane	1.1	U	ng/L	P379957	
		Beta-BHC	11	U	ng/L	P379957	
		Beta-Cyfluthrin**	16	U	ng/L	P379957	
		Bifenthrin**	4.2	U	ng/L	P379957	
		Delta-BHC	8.5	U	ng/L	P379957	MS
		Gamma-BHC	8.5	U	ng/L	P379957	
		Chlorothalonil	2.1	U	ng/L	P379957	
		Cis-Nonachlor**	1.1	U	ng/L	P379957	
		Cypermethrin	21	U	ng/L	P379957	
		Dacthal**	1.1	U	ng/L	P379957	
		DDD-p,p'	6.3	U	ng/L	P379957	

Field ID: G4NW0450

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161218	EPA 8270E	DDE-p,p'	6.3	U	ng/L	P379957	
		DDT-p,p'	7.4	U	ng/L	P379957	
		Dicofol	32	U	ng/L	P379957	
		Dieldrin	4.2	U	ng/L	P379957	
		Endosulfan I	4.2	U	ng/L	P379957	
		Endosulfan II	4.2	U	ng/L	P379957	
		Endosulfan Sulfate	2.1	U	ng/L	P379957	
		Endrin	2.1	U	ng/L	P379957	
		Endrin Aldehyde	2.1	U	ng/L	P379957	
		Endrin Ketone	2.1	U	ng/L	P379957	
		Ethalfuralin**	3.2	U	ng/L	P379957	
		Gamma-Chlordane	1.1	U	ng/L	P379957	
		Heptachlor	1.6	U	ng/L	P379957	
		Heptachlor Epoxide	2.1	U	ng/L	P379957	
		Hexachlorobenzene	2.1	U	ng/L	P379957	
		Lambda-Cyhalothrin**	16	U	ng/L	P379957	
		Methoxychlor	4.2	U	ng/L	P379957	
		Mirex	2.1	U	ng/L	P379957	
		Permethrin	11	U	ng/L	P379957	
		Phenothrin**	32	U	ng/L	P379957	
		Prallethrin**	32	U	ng/L	P379957	
		Trans-Nonachlor**	1.1	U	ng/L	P379957	
		Trifluralin	2.6	U	ng/L	P379957	
	EPA 8276	Chlordane	5.3	U	ng/L	P379957	
		Toxaphene	32	U	ng/L	P379957	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for bentazon 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.

Sample Location: BAYOU GRANDE

Collection Date/Time: 02/27/2020 10:15

Field ID: G4NW0500

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161194	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P379851	
	EPA 300.0 Rev. 2.1	Bromide	22		mg Br/L	P380275	
	SM 2320 B-2011	Total Alkalinity	49		mg CaCO3/L	P380394	
	SM 2540 D-2011	TSS	4	I	mg/L	P380335	
	SM 4500 F-C-2011	Fluoride	0.41		mg F/L	P380596	
2161195	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P380069	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21	I	mg N/L	P379931	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.049		mg N/L	P380212	
	EPA 365.1 Rev. 2.0	Total-P	0.008	I	mg P/L	P380140	
	SM 5310 B-2011	Organic Carbon	4.3		mg C/L	P379930	
2161196	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379832	

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: Bayou Grande near Navy Point Boat Ramp

Collection Date/Time: 02/27/2020 10:35

Field ID: G4NW0501

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161197	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P379851	
	EPA 300.0 Rev. 2.1	Bromide	24		mg Br/L	P380275	
	SM 2320 B-2011	Total Alkalinity	51		mg CaCO3/L	P380394	
	SM 2540 D-2011	TSS	3	IA	mg/L	P380335	
	SM 4500 F-C-2011	Fluoride	0.45		mg F/L	P380596	
2161198	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P380069	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29	I	mg N/L	P379931	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.050		mg N/L	P380212	
	EPA 365.1 Rev. 2.0	Total-P	0.01	I	mg P/L	P380140	
	SM 5310 B-2011	Organic Carbon	4.2		mg C/L	P379930	
2161199	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379832	
2161210	EPA 8321B	2,4-D	0.0045	I	ug/L	P379970	
		Acesulfame K**	0.10	UJ	ug/L	P379902	MS, SUR
		AMPA**	1.0	U	ug/L	P379902	
		Sucralose**	0.023	I	ug/L	P379902	
		Acetaminophen**	0.0080	U	ug/L	P379970	
		Acetamiprid**	0.0020	U	ug/L	P379970	
		Endothall**	0.25	UJ	ug/L	P379902	SUR
		Glufosinate**	1.0	U	ug/L	P379902	
		Glyphosate**	1.0	U	ug/L	P379902	
		Afidopyropen**	0.0020	UJ	ug/L	P379970	
		Bentazon	0.0013	I	ug/L	P379970	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P379970	
		Carbamazepine**	8.0E-04	U	ug/L	P379970	
		Clothianidin**	0.0020	U	ug/L	P379970	
		Dinotefuran**	0.0020	U	ug/L	P379970	
		Diuron	0.0020	U	ug/L	P379970	
		Fenuron	0.016	U	ug/L	P379970	
		Fluridone**	8.0E-04	U	ug/L	P379970	
		Imazapyr**	0.0099	I	ug/L	P379970	
		Hydrocodone**	0.0020	U	ug/L	P379970	
		Ibuprofen**	0.020	U	ug/L	P379970	
		Imidacloprid	0.0020	U	ug/L	P379970	MS
		Linuron	0.0040	U	ug/L	P379970	
		Mandestrobin**	0.0020	UJ	ug/L	P379970	
		MCP	0.0020	U	ug/L	P379970	MS
		Naproxen**	0.0080	U	ug/L	P379970	
		Primidone**	0.0040	U	ug/L	P379970	
		Pyraclostrobin**	0.0020	U	ug/L	P379970	
		Thiamethoxam**	0.0020	U	ug/L	P379970	
		Tolfenpyrad**	0.0020	U	ug/L	P379970	
		Triclopyr**	0.0040	U	ug/L	P379970	

Field ID: G4NW0501

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 bentazon 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. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Bayou Texar 200 Meters above Hwy 90 Bridge Collection Date/Time: 02/27/2020 11:20

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161200	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P379851	
	EPA 300.0 Rev. 2.1	Bromide	14		mg Br/L	P380275	
	SM 2320 B-2011	Total Alkalinity	37	A	mg CaCO3/L	P380394	
	SM 2540 D-2011	TSS	4	I	mg/L	P380334	
	SM 4500 F-C-2011	Fluoride	0.41		mg F/L	P380596	
2161201	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P380069	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P379931	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.37		mg N/L	P380354	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P380140	
	SM 5310 B-2011	Organic Carbon	3.6		mg C/L	P379929	
2161202	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P379832	
2161211	EPA 8321B	Aldicarb	0.020	U	ug/L	P379970	
		Aldicarb Sulfone	0.0020	U	ug/L	P379970	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P379970	
		Carbaryl	0.0020	U	ug/L	P379970	
		Carbofuran	0.0020	U	ug/L	P379970	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P379970	
		Methiocarb	0.0020	U	ug/L	P379970	
		Methomyl	0.0020	U	ug/L	P379970	
		Oxamyl	0.0020	U	ug/L	P379970	
		Propoxur	0.0020	U	ug/L	P379970	
		2,4-D	0.014		ug/L	P379970	
		Acesulfame K**	0.10	U	ug/L	P379902	MS
		AMPA**	1.0	U	ug/L	P379902	
2161212		Sucralose**	0.057		ug/L	P379902	
		Acetaminophen**	0.014	I	ug/L	P379970	
		Acetamiprid**	0.0020	U	ug/L	P379970	
		Endothal**	0.25	U	ug/L	P379902	
		Glufosinate**	1.0	U	ug/L	P379902	
		Glyphosate**	1.0	U	ug/L	P379902	
		Afidopyropen**	0.0020	UJ	ug/L	P379970	
		Bentazon	0.0034		ug/L	P379970	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P379970	
		Carbamazepine**	8.0E-04	U	ug/L	P379970	
		Clothianidin**	0.0020	U	ug/L	P379970	
		Dinotefuran**	0.0020	U	ug/L	P379970	
		Diuron	0.0020	U	ug/L	P379970	
		Fenuron	0.016	U	ug/L	P379970	
		Fluridone**	8.0E-04	U	ug/L	P379970	
		Imazapyr**	0.010	I	ug/L	P379970	
		Hydrocodone**	0.0020	U	ug/L	P379970	
		Ibuprofen**	0.020	U	ug/L	P379970	
		Imidacloprid	0.0091		ug/L	P379970	MS

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161212	EPA 8321B	Linuron	0.0040	U	ug/L	P379970	
		Mandestrobin**	0.0020	UJ	ug/L	P379970	
		MCP	0.0028	I	ug/L	P379970	MS
		Naproxen**	0.0080	U	ug/L	P379970	
		Primidone**	0.0040	U	ug/L	P379970	
		Pyraclostrobin**	0.0020	U	ug/L	P379970	
		Thiamethoxam**	0.0020	U	ug/L	P379970	
		Tolfenpyrad**	0.0020	U	ug/L	P379970	
		Triclopyr**	0.0040	U	ug/L	P379970	
2161215	EPA 8270E	Aldrin	4.2	U	ng/L	P379957	
		Alpha-BHC	2.1	U	ng/L	P379957	
		Alpha-Chlordane	1.1	U	ng/L	P379957	
		Beta-BHC	11	U	ng/L	P379957	
		Beta-Cyfluthrin**	16	U	ng/L	P379957	
		Bifenthrin**	4.2	U	ng/L	P379957	
		Delta-BHC	8.5	U	ng/L	P379957	MS
		Gamma-BHC	8.5	U	ng/L	P379957	
		Chlorothalonil	2.1	U	ng/L	P379957	
		Cis-Nonachlor**	1.1	U	ng/L	P379957	
		Cypermethrin	21	U	ng/L	P379957	
		Dacthal**	1.1	U	ng/L	P379957	
		DDD-p,p'	6.4	U	ng/L	P379957	
		DDE-p,p'	6.4	U	ng/L	P379957	
		DDT-p,p'	7.4	U	ng/L	P379957	
		Dicofol	32	U	ng/L	P379957	
		Dieldrin	4.2	U	ng/L	P379957	
		Endosulfan I	4.2	U	ng/L	P379957	
		Endosulfan II	4.2	U	ng/L	P379957	
		Endosulfan Sulfate	2.1	U	ng/L	P379957	
		Endrin	2.1	U	ng/L	P379957	
		Endrin Aldehyde	2.1	U	ng/L	P379957	
		Endrin Ketone	2.1	U	ng/L	P379957	
		Ethalfuralin**	3.2	U	ng/L	P379957	
		Gamma-Chlordane	1.1	U	ng/L	P379957	
		Heptachlor	1.6	U	ng/L	P379957	
		Heptachlor Epoxide	2.1	U	ng/L	P379957	
		Hexachlorobenzene	2.1	U	ng/L	P379957	
		Lambda-Cyhalothrin**	16	U	ng/L	P379957	
		Methoxychlor	4.2	U	ng/L	P379957	
		Mirex	2.1	U	ng/L	P379957	
		Permethrin	11	U	ng/L	P379957	
		Phenothrin**	32	U	ng/L	P379957	
		Prallethrin**	32	U	ng/L	P379957	
		Trans-Nonachlor**	1.1	U	ng/L	P379957	
		Trifluralin	2.6	U	ng/L	P379957	

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161215	EPA 8276	Chlordane	5.3	U	ng/L	P379957	
		Toxaphene	32	U	ng/L	P379957	
2161216	EPA 8270E	Acetochlor	0.24	U	ng/L	P380108	
		Alachlor	0.24	U	ng/L	P380108	
		Ametryn	0.58	U	ng/L	P380108	
		Atrazine	11		ng/L	P380108	
		Atrazine Desethyl	2.9	I	ng/L	P380108	
		Azinphos Methyl	4.8	U	ng/L	P380108	
		Bromacil	56		ng/L	P380108	
		Butylate	0.39	UJ	ng/L	P380108	LCS, RPD
		Carbophenothion	0.48	U	ng/L	P380108	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P380108	
		Chlorpyrifos Methyl	0.048	U	ng/L	P380108	
		Cyanazine	3.1	U	ng/L	P380108	
		Demeton	6.8	U	ng/L	P380108	
		Diazinon	0.12	U	ng/L	P380108	
		Dimethenamid**	0.097	U	ng/L	P380108	
		Disulfoton	0.48	U	ng/L	P380108	
		Dithiopyr**	0.20	I	ng/L	P380108	
		EPTC	1.2	UJ	ng/L	P380108	RPD
		Ethion	0.15	U	ng/L	P380108	
		Ethoprop	0.097	U	ng/L	P380108	
		Fenamiphos	0.48	U	ng/L	P380108	
		Fipronil	1.8		ng/L	P380108	
		Fipronil Desulfinyl**	0.69		ng/L	P380108	
		Fipronil Sulfide	0.31	I	ng/L	P380108	
		Fipronil Sulfone	2.3		ng/L	P380108	
		Flumioxazin**	1.7	UJ	ng/L	P380108	LCS
		Fonofos	0.19	U	ng/L	P380108	
		Hexazinone	1.6	I	ng/L	P380108	
		Imazalil**	0.73	UJ	ng/L	P380108	RPD
		Malathion	0.34	U	ng/L	P380108	
		Metalaxyl	0.73	U	ng/L	P380108	
		Metolachlor	2.5		ng/L	P380108	
		Metribuzin	3.1	U	ng/L	P380108	
		Mevinphos	0.48	U	ng/L	P380108	
		Molinate	0.29	U	ng/L	P380108	
		Naled**	1.5	U	ng/L	P380108	
		Norflurazon	0.48	U	ng/L	P380108	
		Oxadiazon**	0.097	U	ng/L	P380108	
		Parathion Ethyl	0.24	U	ng/L	P380108	
		Parathion Methyl	0.53	U	ng/L	P380108	
		Pendimethalin	0.97	U	ng/L	P380108	
		Phorate	0.24	U	ng/L	P380108	
		Prodiamine**	0.65	I	ng/L	P380108	

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2161216	EPA 8270E	Prometon	1.4	I	ng/L	P380108	
		Prometryn	0.19	U	ng/L	P380108	
		Pronamide**	0.15	U	ng/L	P380108	
		Propiconazole**	0.53	I	ng/L	P380108	
		Simazine	3.6		ng/L	P380108	
		Sulfentrazone**	0.48	UJ	ng/L	P380108	LCS
		Tebuconazole**	0.48	U	ng/L	P380108	
		Terbufos	0.097	U	ng/L	P380108	
		Terbuthylazine	0.41	U	ng/L	P380108	

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 bentazon 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P379851

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380275

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380069

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379931

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380212

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380354

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380140

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379832

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

Reference Method: EPA 8270E
Batch ID: P379957

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P379957

Component	Result	Code	Units
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
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 8270E
Batch ID: P380108

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
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	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P380108

Component	Result	Code	Units
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
Metaxyl	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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P379957

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

Reference Method: EPA 8321B
Batch ID: P379902

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P379902

Component	Result	Code	Units
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P379970

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	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
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	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
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P380394

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P380334

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P380335

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P380596

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P379929

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

Reference Method: SM 5310 B-2011
Batch ID: P379930

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P380275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P380069

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P379931

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P380212

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P380354

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380140

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: P379832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.7		P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P379957

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	50.3	49.6	P/P	20 - 87.0
Alpha-BHC	87.9	90.4	P/P	65 - 142
Alpha-Chlordane	88.7	87.8	P/P	58 - 106
Beta-BHC	97.0	99.4	P/P	65 - 179
Beta-Cyfluthrin	83.4	84.1	P/P	50 - 150
Bifenthrin	88.4	88.6	P/P	38 - 128
Chlorothalonil	86.3	93.4	P/P	20 - 214
Cis-Nonachlor	89.7	88.3	P/P	56 - 113
Cypermethrin	87.8	87.9	P/P	37 - 130
Dacthal	91.6	88.9	P/P	50 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P379957

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDD-p,p'	95.0	93.7	P/P	66 - 119
DDE-p,p'	85.2	83.7	P/P	53 - 108
DDT-p,p'	79.0	78.9	P/P	57 - 133
Delta-BHC	113	110	P/P	68 - 187
Dicofol	75.2	73.8	P/P	66 - 123
Dieldrin	94.8	89.9	P/P	65 - 111
Endosulfan I	104	92.2	P/P	65 - 115
Endosulfan II	108	103	P/P	68 - 133
Endosulfan Sulfate	99.4	97.6	P/P	62 - 127
Endrin	96.6	90.6	P/P	64 - 122
Endrin Aldehyde	89.5	90.3	P/P	61 - 132
Endrin Ketone	97.4	96.0	P/P	66 - 120
Ethalfuralin	78.2	80.1	P/P	57 - 127
Gamma-BHC	99.1	98.9	P/P	71 - 158
Gamma-Chlordane	84.2	82.6	P/P	53 - 106
Heptachlor	77.4	75.7	P/P	45 - 96.0
Heptachlor Epoxide	89.7	87.8	P/P	64 - 109
Hexachlorobenzene	75.4	74.9	P/P	46 - 103
Lambda-Cyhalothrin	78.9	78.0	P/P	50 - 150
Methoxychlor	94.4	94.2	P/P	69 - 149
Mirex	69.5	69.2	P/P	31 - 90.0
Permethrin	76.2	77.4	P/P	41 - 108
Phenothrin	52.3	52.8	P/P	50 - 150
Prallethrin	64.6	64.3	P/P	40 - 140
Trans-Nonachlor	84.4	82.3	P/P	50 - 107
Trifluralin	81.3	80.4	P/P	58 - 119

Reference Method: EPA 8270E
Batch ID: P380108

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.3	101	P/P	71 - 122
Alachlor	96.3	100	P/P	70 - 121
Ametryn	98.3	102	P/P	49 - 137
Atrazine	101	106	P/P	76 - 125
Atrazine Desethyl	81.3	90.2	P/P	31 - 144
Azinphos Methyl	102	98.1	P/P	67 - 150
Bromacil	65.1	69.0	P/P	36 - 121
Butylate	66.8	94.3	P/F	33 - 88.0
Carbophenothion	96.2	90.3	P/P	50 - 150
Chlorpyrifos Ethyl	98.6	101	P/P	73 - 117
Chlorpyrifos Methyl	97.8	98.4	P/P	68 - 121
Cyanazine	175	180	P/P	20 - 250
Demeton	86.9	89.7	P/P	30 - 123
Diazinon	94.0	100	P/P	70 - 128
Dimethenamid	92.5	99.2	P/P	66 - 122
Disulfoton	84.1	85.7	P/P	46 - 124
Dithiopyr	87.2	91.2	P/P	69 - 122
EPTC	56.5	88.7	P/P	31 - 90.0
Ethion	91.5	71.7	P/P	45 - 135
Ethoprop	90.7	96.7	P/P	59 - 118
Fenamiphos	91.1	86.4	P/P	30 - 136

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P380108

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil	92.7	93.6	P/P	57 - 127
Fipronil Desulfinyl	96.1	98.2	P/P	51 - 122
Fipronil Sulfide	89.7	86.1	P/P	57 - 119
Fipronil Sulfone	87.1	80.3	P/P	51 - 119
Flumioxazin	83.8	67.9	P/F	70 - 200
Fonofos	88.4	91.4	P/P	60 - 120
Hexazinone	101	101	P/P	57 - 142
Imazalil	93.4	92.1	P/P	50 - 150
Malathion	104	107	P/P	67 - 128
Metaxyl	101	103	P/P	21 - 148
Metolachlor	90.1	96.7	P/P	70 - 120
Metribuzin	159	175	P/P	20 - 253
Mevinphos	92.5	107	P/P	47 - 116
Molinate	72.0	93.6	P/P	41 - 99.0
Naled	61.2	63.6	P/P	40 - 130
Norflurazon	94.4	93.9	P/P	54 - 127
Oxadiazon	91.8	91.7	P/P	65 - 122
Parathion Ethyl	97.5	95.1	P/P	71 - 113
Parathion Methyl	102	106	P/P	73 - 129
Pendimethalin	88.9	89.8	P/P	63 - 130
Phorate	95.4	100	P/P	48 - 118
Prodiamine	73.3	89.2	P/P	20 - 144
Prometon	94.9	95.3	P/P	53 - 120
Prometryn	95.4	98.5	P/P	63 - 119
Pronamide	100	100	P/P	50 - 150
Propiconazole	87.4	84.1	P/P	50 - 150
Simazine	101	105	P/P	77 - 129
Sulfentrazone	15.6	17.7	F/F	50 - 150
Tebuconazole	60.6	47.8	P/P	20 - 118
Terbufos	93.8	96.4	P/P	61 - 119
Terbutylazine	96.6	99.9	P/P	75 - 119

Reference Method: EPA 8276
 Batch ID: P379957

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	98.1	95.8	P/P	47 - 119
Toxaphene	92.1	94.4	P/P	41 - 112

Reference Method: EPA 8321B
 Batch ID: P379902

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	114		P	40 - 150
AMPA	99.4		P	40 - 150
Endothall	98.1		P	40 - 150
Glufosinate	126		P	40 - 150
Glyphosate	114		P	40 - 140
Sucralose	103		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P379970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	108		P	30 - 160
3-Hydroxycarbofuran	67.6		P	30 - 160
Acetaminophen	74.9		P	30 - 160
Acetamiprid	78.2		P	30 - 160
Afidopyropen	77.7		P	30 - 160
Aldicarb	48.6		P	30 - 160
Aldicarb Sulfone	76.4		P	30 - 160
Aldicarb Sulfoxide	74.4		P	30 - 160
Bentazon	133		P	30 - 160
Benzovindiflupyr	76.5		P	30 - 160
Carbamazepine	85.2		P	30 - 160
Carbaryl	70.2		P	30 - 160
Carbofuran	66.6		P	30 - 160
Clothianidin	65.8		P	30 - 160
Dinotefuran	80.5		P	30 - 160
Diuron	86.0		P	30 - 160
Fenuron	83.7		P	30 - 160
Fluridone	80.8		P	30 - 160
Hydrocodone	87.3		P	30 - 160
Ibuprofen	67.8		P	30 - 160
Imazapyr	73.3		P	30 - 160
Imidacloprid	87.7		P	30 - 160
Linuron	74.9		P	30 - 160
Mandestrobin	79.2		P	30 - 160
MCPP	139		P	30 - 160
Methiocarb	65.8		P	30 - 160
Methomyl	75.9		P	30 - 160
Naproxen	70.0		P	30 - 160
Oxamyl	78.1		P	30 - 160
Primidone	83.8		P	30 - 160
Propoxur	64.2		P	30 - 160
Pyraclostrobin	74.3		P	30 - 160
Thiamethoxam	80.8		P	30 - 160
Tolfenpyrad	46.9		P	30 - 160
Triclopyr	109		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P380394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P380596

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.0		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P379929

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

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P379929

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

Reference Method: SM 5310 B-2011
Batch ID: P379930

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162533	Bromide	93.6	94.4	P/P	90 - 110
2162535	Bromide	94.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380069

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161195	Ammonia-N	98.7	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161195	Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161201	NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2159121	NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161165	Total-P	98.6	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161196	O-Phosphate-P	102	97.6	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P379957

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161118	Aldrin	67.9	66.4	P/P	32 - 82.0
2161118	Alpha-BHC	93.3	92.6	P/P	68 - 157
2161118	Alpha-Chlordane	89.9	88.5	P/P	54 - 108
2161118	Beta-BHC	104	100	P/P	54 - 200
2161118	Beta-Cyfluthrin	91.4	95.5	P/P	50 - 150
2161118	Bifenthrin	96.9	98.2	P/P	49 - 124
2161118	Chlorothalonil	41.8	31.8	P/P	10 - 289
2161118	Cis-Nonachlor	92.0	90.9	P/P	53 - 112
2161118	Cypermethrin	102	112	P/P	43 - 141

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P379957

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161118	Dacthal	90.5	88.1	P/P	50 - 150
2161118	DDD-p,p'	97.2	96.2	P/P	58 - 125
2161118	DDE-p,p'	81.4	79.5	P/P	50 - 108
2161118	DDT-p,p'	79.7	77.3	P/P	52 - 140
2161118	Delta-BHC	219	233	P/F	61 - 228
2161118	Dicofol	65.2	63.4	P/P	59 - 130
2161118	Dieldrin	90.3	88.9	P/P	57 - 121
2161118	Endosulfan I	101	108	P/P	62 - 123
2161118	Endosulfan II	114	109	P/P	48 - 163
2161118	Endosulfan Sulfate	112	114	P/P	63 - 132
2161118	Endrin	96.7	91.0	P/P	58 - 128
2161118	Endrin Aldehyde	92.0	89.0	P/P	44 - 126
2161118	Endrin Ketone	99.6	101	P/P	68 - 127
2161118	Ethalfuralin	82.8	83.3	P/P	55 - 131
2161118	Gamma-BHC	102	103	P/P	54 - 206
2161118	Gamma-Chlordane	84.9	84.8	P/P	52 - 105
2161118	Heptachlor	77.7	76.6	P/P	47 - 94.0
2161118	Heptachlor Epoxide	90.4	89.1	P/P	61 - 113
2161118	Hexachlorobenzene	72.2	72.5	P/P	45 - 100
2161118	Lambda-Cyhalothrin	92.6	95.0	P/P	50 - 150
2161118	Methoxychlor	98.0	98.3	P/P	63 - 153
2161118	Mirex	74.8	73.5	P/P	38 - 90.0
2161118	Permethrin	86.1	87.1	P/P	45 - 112
2161118	Phenothrin	75.4	76.4	P/P	50 - 150
2161118	Prallethrin	75.4	74.3	P/P	40 - 140
2161118	Trans-Nonachlor	84.4	82.9	P/P	50 - 103
2161118	Trifluralin	81.7	81.9	P/P	57 - 122

Reference Method: EPA 8270E
Batch ID: P380108

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161216	Acetochlor	102	93.2	P/P	68 - 126
2161216	Alachlor	104	94.6	P/P	66 - 125
2161216	Ametryn	99.7	107	P/P	31 - 182
2161216	Atrazine Desethyl	73.0	74.3	P/P	13 - 161
2161216	Azinphos Methyl	103	94.4	P/P	54 - 162
2161216	Butylate	78.1	75.0	P/P	16 - 92.0
2161216	Carbophenothion	92.3	86.7	P/P	50 - 150
2161216	Chlorpyrifos Ethyl	103	97.0	P/P	63 - 124
2161216	Chlorpyrifos Methyl	101	94.5	P/P	64 - 125
2161216	Cyanazine	180	159	P/P	13 - 245
2161216	Demeton	96.5	89.2	P/P	20 - 154
2161216	Diazinon	101	94.9	P/P	66 - 141
2161216	Dimethenamid	101	94.5	P/P	50 - 130
2161216	Disulfoton	86.9	77.8	P/P	55 - 130
2161216	Dithiopyr	89.1	88.3	P/P	66 - 122
2161216	EPTC	75.2	67.7	P/P	15 - 93.0
2161216	Ethion	89.3	84.1	P/P	15 - 148
2161216	Ethoprop	99.9	92.1	P/P	59 - 126
2161216	Fenamiphos	83.4	82.3	P/P	39 - 137
2161216	Fipronil	98.4	91.5	P/P	47 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P380108

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161216	Fipronil Desulfinyl	97.9	94.9	P/P	43 - 121
2161216	Fipronil Sulfide	89.7	84.9	P/P	29 - 134
2161216	Fipronil Sulfone	87.8	74.8	P/P	19 - 131
2161216	Flumioxazin	134	131	P/P	70 - 200
2161216	Fonofos	95.0	90.0	P/P	62 - 128
2161216	Hexazinone	114	95.3	P/P	58 - 154
2161216	Imazalil	86.5	148	P/P	50 - 150
2161216	Malathion	104	100	P/P	54 - 135
2161216	Metalaxyl	105	97.6	P/P	46 - 136
2161216	Metolachlor	96.2	91.7	P/P	62 - 126
2161216	Metribuzin	171	156	P/P	44 - 277
2161216	Mevinphos	107	96.0	P/P	44 - 135
2161216	Molinate	87.1	80.9	P/P	31 - 104
2161216	Naled	78.6	63.7	P/P	40 - 130
2161216	Norflurazon	92.5	87.6	P/P	32 - 134
2161216	Oxadiazon	95.1	90.2	P/P	55 - 123
2161216	Parathion Ethyl	99.2	91.6	P/P	67 - 120
2161216	Parathion Methyl	107	98.9	P/P	70 - 140
2161216	Pendimethalin	108	99.5	P/P	59 - 145
2161216	Phorate	96.8	90.2	P/P	52 - 127
2161216	Prodiamine	95.3	114	P/P	11 - 157
2161216	Prometon	97.8	90.9	P/P	55 - 130
2161216	Prometryn	101	96.3	P/P	55 - 127
2161216	Pronamide	124	116	P/P	50 - 150
2161216	Propiconazole	86.0	80.4	P/P	50 - 150
2161216	Simazine	107	82.8	P/P	58 - 159
2161216	Sulfentrazone	88.4	77.9	P/P	50 - 150
2161216	Tebuconazole	56.8	53.5	P/P	10 - 122
2161216	Terbufos	101	96.0	P/P	65 - 131
2161216	Terbutylazine	110	103	P/P	63 - 131

Reference Method: EPA 8276
Batch ID: P379957

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161141	Chlordane	105	105	P/P	34 - 129
2161141	Toxaphene	103	105	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P379902

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161094	Acesulfame K	30.2	34.3	F/F	40 - 150
2161094	AMPA	104	106	P/P	40 - 150
2161094	Endothall	126	136	P/P	40 - 150
2161094	Glufosinate	114	116	P/P	40 - 150
2161094	Glyphosate	93.9	101	P/P	40 - 140
2161094	Sucralose	102	99.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P379970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161094	2,4-D	151	143	P/P	30 - 160
2161094	Acetaminophen	87.4	83.9	P/P	30 - 160
2161094	Acetamiprid	78.8	75.6	P/P	30 - 160
2161094	Afidopyropen	93.2	85.5	P/P	30 - 160
2161094	Benzovindiflupyr	81.3	84.8	P/P	30 - 160
2161094	Carbamazepine	83.0	77.3	P/P	30 - 160
2161094	Clothianidin	76.2	65.1	P/P	30 - 160
2161094	Dinotefuran	138	119	P/P	30 - 160
2161094	Diuron	83.2	76.1	P/P	30 - 160
2161094	Fenuron	74.1	75.7	P/P	30 - 160
2161094	Fluridone	84.7	82.1	P/P	30 - 160
2161094	Hydrocodone	111	103	P/P	30 - 160
2161094	Ibuprofen	72.3	79.1	P/P	30 - 160
2161094	Imazapyr	112	105	P/P	30 - 160
2161094	Imidacloprid	161	170	F/F	30 - 160
2161094	Linuron	76.8	74.8	P/P	30 - 160
2161094	Mandestrobin	82.3	82.3	P/P	30 - 160
2161094	MCP	152	164	P/F	30 - 160
2161094	Naproxen	101	86.6	P/P	30 - 160
2161094	Primidone	79.7	85.2	P/P	30 - 160
2161094	Pyraclostrobin	83.9	89.1	P/P	30 - 160
2161094	Thiamethoxam	104	128	P/P	30 - 160
2161094	Tolfenpyrad	66.6	65.6	P/P	30 - 160
2161094	Triclopyr	132	141	P/P	30 - 160
2161211	3-Hydroxycarbofuran	71.9	62.1	P/P	30 - 160
2161211	Aldicarb	75.5	90.4	P/P	30 - 160
2161211	Aldicarb Sulfone	75.4	81.2	P/P	30 - 160
2161211	Aldicarb Sulfoxide	31.2	30.1	P/P	30 - 160
2161211	Carbaryl	58.8	60.0	P/P	30 - 160
2161211	Carbofuran	53.7	54.0	P/P	30 - 160
2161211	Methiocarb	60.6	63.6	P/P	30 - 160
2161211	Methomyl	72.1	69.4	P/P	30 - 160
2161211	Oxamyl	75.2	69.8	P/P	30 - 160
2161211	Propoxur	56.4	55.2	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P380596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161200	Fluoride	99.3	100	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P379929

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160718	Organic Carbon	104		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P379930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2160249	Organic Carbon	97.5	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P379851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161160	Turbidity	0.615	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162533	Bromide	0.653	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161195	Ammonia-N	0.624	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P379931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161195	Kjeldahl Nitrogen	2.72	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161201	NO2NO3-N	0.694	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2159121	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161165	Total-P	0.733	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P379832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161196	O-Phosphate-P	4.11	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P379957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161118	Aldrin	2.24	Spike	P	0 - 30
2161118	Alpha-BHC	0.776	Spike	P	0 - 30
2161118	Alpha-Chlordane	1.61	Spike	P	0 - 30
2161118	Beta-BHC	3.54	Spike	P	0 - 30
2161118	Beta-Cyfluthrin	4.30	Spike	P	0 - 30
2161118	Bifenthrin	1.27	Spike	P	0 - 30
2161118	Chlorothalonil	27.3	Spike	P	0 - 30
2161118	Cis-Nonachlor	1.19	Spike	P	0 - 30
2161118	Cypermethrin	8.76	Spike	P	0 - 30
2161118	Dacthal	2.66	Spike	P	0 - 30
2161118	DDD-p,p'	1.07	Spike	P	0 - 30
2161118	DDE-p,p'	2.34	Spike	P	0 - 30
2161118	DDT-p,p'	3.15	Spike	P	0 - 30
2161118	Delta-BHC	6.31	Spike	P	0 - 30
2161118	Dicofol	2.70	Spike	P	0 - 30
2161118	Dieldrin	1.59	Spike	P	0 - 30
2161118	Endosulfan I	6.54	Spike	P	0 - 30
2161118	Endosulfan II	3.88	Spike	P	0 - 30
2161118	Endosulfan Sulfate	1.60	Spike	P	0 - 30
2161118	Endrin	6.01	Spike	P	0 - 30
2161118	Endrin Aldehyde	3.34	Spike	P	0 - 30
2161118	Endrin Ketone	1.15	Spike	P	0 - 30
2161118	Ethalfuralin	0.576	Spike	P	0 - 30
2161118	Gamma-BHC	0.954	Spike	P	0 - 30
2161118	Gamma-Chlordane	0.149	Spike	P	0 - 30
2161118	Heptachlor	1.34	Spike	P	0 - 30
2161118	Heptachlor Epoxide	1.43	Spike	P	0 - 30
2161118	Hexachlorobenzene	0.489	Spike	P	0 - 30
2161118	Lambda-Cyhalothrin	2.58	Spike	P	0 - 30
2161118	Methoxychlor	0.215	Spike	P	0 - 30
2161118	Mirex	1.83	Spike	P	0 - 30
2161118	Permethrin	1.15	Spike	P	0 - 30
2161118	Phenothrin	1.27	Spike	P	0 - 30
2161118	Prallethrin	1.36	Spike	P	0 - 30
2161118	Trans-Nonachlor	1.88	Spike	P	0 - 30
2161118	Trifluralin	0.269	Spike	P	0 - 30
LFB	Aldrin	1.43	LCS	P	0 - 30
LFB	Alpha-BHC	2.75	LCS	P	0 - 30
LFB	Alpha-Chlordane	0.946	LCS	P	0 - 30
LFB	Beta-BHC	2.47	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	0.860	LCS	P	0 - 30
LFB	Bifenthrin	0.149	LCS	P	0 - 30
LFB	Chlorothalonil	7.93	LCS	P	0 - 30
LFB	Cis-Nonachlor	1.47	LCS	P	0 - 30
LFB	Cypermethrin	0.115	LCS	P	0 - 30
LFB	Dacthal	2.93	LCS	P	0 - 30
LFB	DDD-p,p'	1.41	LCS	P	0 - 30
LFB	DDE-p,p'	1.74	LCS	P	0 - 30
LFB	DDT-p,p'	0.0705	LCS	P	0 - 30
LFB	Delta-BHC	2.75	LCS	P	0 - 30
LFB	Dicofol	1.81	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P379957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Dieldrin	5.25	LCS	P	0 - 30
LFB	Endosulfan I	11.9	LCS	P	0 - 30
LFB	Endosulfan II	4.70	LCS	P	0 - 30
LFB	Endosulfan Sulfate	1.81	LCS	P	0 - 30
LFB	Endrin	6.42	LCS	P	0 - 30
LFB	Endrin Aldehyde	0.799	LCS	P	0 - 30
LFB	Endrin Ketone	1.40	LCS	P	0 - 30
LFB	Ethalfuralin	2.48	LCS	P	0 - 30
LFB	Gamma-BHC	0.218	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.98	LCS	P	0 - 30
LFB	Heptachlor	2.24	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.06	LCS	P	0 - 30
LFB	Hexachlorobenzene	0.620	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	1.08	LCS	P	0 - 30
LFB	Methoxychlor	0.245	LCS	P	0 - 30
LFB	Mirex	0.461	LCS	P	0 - 30
LFB	Permethrin	1.53	LCS	P	0 - 30
LFB	Phenothrin	1.01	LCS	P	0 - 30
LFB	Prallethrin	0.396	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.61	LCS	P	0 - 30
LFB	Trifluralin	1.10	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P380108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161216	Acetochlor	8.75	Spike	P	0 - 30
2161216	Alachlor	9.74	Spike	P	0 - 30
2161216	Ametryn	6.93	Spike	P	0 - 30
2161216	Atrazine	4.63	Spike	P	0 - 30
2161216	Atrazine Desethyl	1.32	Spike	P	0 - 30
2161216	Azinphos Methyl	9.05	Spike	P	0 - 30
2161216	Bromacil	4.69	Spike	P	0 - 30
2161216	Butylate	4.04	Spike	P	0 - 30
2161216	Carbophenothion	6.30	Spike	P	0 - 30
2161216	Chlorpyrifos Ethyl	5.93	Spike	P	0 - 30
2161216	Chlorpyrifos Methyl	6.58	Spike	P	0 - 30
2161216	Cyanazine	12.0	Spike	P	0 - 30
2161216	Demeton	7.91	Spike	P	0 - 30
2161216	Diazinon	6.07	Spike	P	0 - 30
2161216	Dimethenamid	6.71	Spike	P	0 - 30
2161216	Disulfoton	11.1	Spike	P	0 - 30
2161216	Dithiopyr	0.820	Spike	P	0 - 30
2161216	EPTC	10.6	Spike	P	0 - 30
2161216	Ethion	5.92	Spike	P	0 - 30
2161216	Ethoprop	8.12	Spike	P	0 - 30
2161216	Fenamiphos	1.29	Spike	P	0 - 30
2161216	Fipronil	4.91	Spike	P	0 - 30
2161216	Fipronil Desulfinyl	2.60	Spike	P	0 - 30
2161216	Fipronil Sulfide	4.59	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161216	Fipronil Sulfone	6.50	Spike	P	0 - 30
2161216	Flumioxazin	1.91	Spike	P	0 - 30
2161216	Fonofos	5.40	Spike	P	0 - 30
2161216	Hexazinone	16.0	Spike	P	0 - 30
2161216	Imazalil	52.7	Spike	F	0 - 30
2161216	Malathion	3.65	Spike	P	0 - 30
2161216	Metalaxyl	7.34	Spike	P	0 - 30
2161216	Metolachlor	3.93	Spike	P	0 - 30
2161216	Metribuzin	8.87	Spike	P	0 - 30
2161216	Mevinphos	10.7	Spike	P	0 - 30
2161216	Molinate	7.35	Spike	P	0 - 30
2161216	Naled	21.0	Spike	P	0 - 30
2161216	Norflurazon	5.43	Spike	P	0 - 30
2161216	Oxadiazon	5.28	Spike	P	0 - 30
2161216	Parathion Ethyl	8.01	Spike	P	0 - 30
2161216	Parathion Methyl	7.45	Spike	P	0 - 30
2161216	Pendimethalin	8.51	Spike	P	0 - 30
2161216	Phorate	7.08	Spike	P	0 - 30
2161216	Prodiamine	15.2	Spike	P	0 - 30
2161216	Prometon	6.17	Spike	P	0 - 30
2161216	Prometryn	4.56	Spike	P	0 - 30
2161216	Pronamide	7.10	Spike	P	0 - 30
2161216	Propiconazole	5.75	Spike	P	0 - 30
2161216	Simazine	12.8	Spike	P	0 - 30
2161216	Sulfentrazone	12.6	Spike	P	0 - 30
2161216	Tebuconazole	5.87	Spike	P	0 - 30
2161216	Terbufos	5.42	Spike	P	0 - 30
2161216	Terbutylazine	6.26	Spike	P	0 - 30
LFB	Acetochlor	6.19	LCS	P	0 - 30
LFB	Alachlor	3.73	LCS	P	0 - 30
LFB	Ametryn	3.78	LCS	P	0 - 30
LFB	Atrazine	4.66	LCS	P	0 - 30
LFB	Atrazine Desethyl	10.4	LCS	P	0 - 30
LFB	Azinphos Methyl	4.30	LCS	P	0 - 30
LFB	Bromacil	5.72	LCS	P	0 - 30
LFB	Butylate	34.2	LCS	F	0 - 30
LFB	Carbophenothion	6.33	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.64	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.592	LCS	P	0 - 30
LFB	Cyanazine	3.12	LCS	P	0 - 30
LFB	Demeton	3.21	LCS	P	0 - 30
LFB	Diazinon	6.35	LCS	P	0 - 30
LFB	Dimethenamid	6.99	LCS	P	0 - 30
LFB	Disulfoton	1.96	LCS	P	0 - 30
LFB	Dithiopyr	4.49	LCS	P	0 - 30
LFB	EPTC	44.4	LCS	F	0 - 30
LFB	Ethion	24.2	LCS	P	0 - 30
LFB	Ethoprop	6.40	LCS	P	0 - 30
LFB	Fenamiphos	5.32	LCS	P	0 - 30
LFB	Fipronil	0.976	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	2.14	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil Sulfide	4.03	LCS	P	0 - 30
LFB	Fipronil Sulfone	8.12	LCS	P	0 - 30
LFB	Flumioxazin	21.0	LCS	P	0 - 30
LFB	Fonofos	3.31	LCS	P	0 - 30
LFB	Hexazinone	0.607	LCS	P	0 - 30
LFB	Imazalil	1.37	LCS	P	0 - 30
LFB	Malathion	2.75	LCS	P	0 - 30
LFB	Metalaxyl	2.04	LCS	P	0 - 30
LFB	Metolachlor	7.13	LCS	P	0 - 30
LFB	Metribuzin	9.56	LCS	P	0 - 30
LFB	Mevinphos	14.2	LCS	P	0 - 30
LFB	Molinate	26.1	LCS	P	0 - 30
LFB	Naled	3.83	LCS	P	0 - 30
LFB	Norflurazon	0.485	LCS	P	0 - 30
LFB	Oxadiazon	0.153	LCS	P	0 - 30
LFB	Parathion Ethyl	2.47	LCS	P	0 - 30
LFB	Parathion Methyl	4.20	LCS	P	0 - 30
LFB	Pendimethalin	0.994	LCS	P	0 - 30
LFB	Phorate	4.90	LCS	P	0 - 30
LFB	Prodiamine	19.6	LCS	P	0 - 30
LFB	Prometon	0.419	LCS	P	0 - 30
LFB	Prometryn	3.22	LCS	P	0 - 30
LFB	Pronamide	0.0685	LCS	P	0 - 30
LFB	Propiconazole	3.82	LCS	P	0 - 30
LFB	Simazine	3.52	LCS	P	0 - 30
LFB	Sulfentrazone	13.0	LCS	P	0 - 30
LFB	Tebuconazole	23.6	LCS	P	0 - 30
LFB	Terbufos	2.68	LCS	P	0 - 30
LFB	Terbutylazine	3.44	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P379957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161141	Chlordane	0.472	Spike	P	0 - 30
2161141	Toxaphene	1.41	Spike	P	0 - 30
LFB	Chlordane	2.31	LCS	P	0 - 30
LFB	Toxaphene	2.48	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P379902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161094	Acesulfame K	12.8	Spike	P	0 - 30
2161094	AMPA	2.23	Spike	P	0 - 30
2161094	Endothall	7.18	Spike	P	0 - 30
2161094	Glufosinate	1.59	Spike	P	0 - 30
2161094	Glyphosate	7.64	Spike	P	0 - 30
2161094	Sucralose	1.70	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P379970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161094	2,4-D	4.76	Spike	P	0 - 30
2161094	Acetaminophen	4.11	Spike	P	0 - 30
2161094	Acetamiprid	4.07	Spike	P	0 - 30
2161094	Afidopyropen	8.63	Spike	P	0 - 30
2161094	Bentazon	2.40	Spike	P	0 - 30
2161094	Benzovindiflupyr	4.21	Spike	P	0 - 30
2161094	Carbamazepine	7.11	Spike	P	0 - 30
2161094	Clothianidin	15.8	Spike	P	0 - 30
2161094	Dinotefuran	12.3	Spike	P	0 - 30
2161094	Diuron	8.36	Spike	P	0 - 30
2161094	Fenuron	2.21	Spike	P	0 - 30
2161094	Fluridone	3.06	Spike	P	0 - 30
2161094	Hydrocodone	8.33	Spike	P	0 - 30
2161094	Ibuprofen	9.02	Spike	P	0 - 30
2161094	Imazapyr	4.14	Spike	P	0 - 30
2161094	Imidacloprid	4.96	Spike	P	0 - 30
2161094	Linuron	2.64	Spike	P	0 - 30
2161094	Mandestrobin	0.0392	Spike	P	0 - 30
2161094	MCPP	7.07	Spike	P	0 - 30
2161094	Naproxen	15.3	Spike	P	0 - 30
2161094	Primidone	6.60	Spike	P	0 - 30
2161094	Pyraclostrobin	5.98	Spike	P	0 - 30
2161094	Thiamethoxam	19.5	Spike	P	0 - 30
2161094	Tolfenpyrad	1.48	Spike	P	0 - 30
2161094	Triclopyr	6.43	Spike	P	0 - 30
2161211	3-Hydroxycarbofuran	14.6	Spike	P	0 - 30
2161211	Aldicarb	17.9	Spike	P	0 - 30
2161211	Aldicarb Sulfone	7.44	Spike	P	0 - 30
2161211	Aldicarb Sulfoxide	3.58	Spike	P	0 - 30
2161211	Carbaryl	2.07	Spike	P	0 - 30
2161211	Carbofuran	0.494	Spike	P	0 - 30
2161211	Methiocarb	4.85	Spike	P	0 - 30
2161211	Methomyl	3.80	Spike	P	0 - 30
2161211	Oxamyl	7.38	Spike	P	0 - 30
2161211	Propoxur	2.13	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P380394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161200	Total Alkalinity	0.349	Sample	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P380596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161200	Fluoride	0.516	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P379929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160718	Organic Carbon	1.05	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P379930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2160249	Organic Carbon	0.473	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2161210
Field Sample ID: G4NW0501

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	117	P	30 - 160
EPA 8321B	Acetaminophen-d4	73.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.9	P	30 - 160
EPA 8321B	Diuron-d6	95.8	P	30 - 160
EPA 8321B	Endothall-d6	617	F	30 - 160
EPA 8321B	Endothall-d6	617	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	30 - 160
EPA 8321B	Ibuprofen-d3	72.3	P	30 - 160
EPA 8321B	Primidone-d5	77.1	P	30 - 160
EPA 8321B	Sucralose-d6	33.7	P	30 - 160
EPA 8321B	Sucralose-d6	33.7	P	30 - 160

Lab Sample ID: 2161211
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	69.0	P	30 - 160

Lab Sample ID: 2161212
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	138	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.2	P	30 - 160
EPA 8321B	Diuron-d6	92.1	P	30 - 160
EPA 8321B	Endothall-d6	50.6	P	30 - 160
EPA 8321B	Endothall-d6	50.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	68.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	68.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.9	P	30 - 160
EPA 8321B	Primidone-d5	85.8	P	30 - 160
EPA 8321B	Sucralose-d6	41.6	P	30 - 160
EPA 8321B	Sucralose-d6	41.6	P	30 - 160

Lab Sample ID: 2161213
Field Sample ID: G4NW0451

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	138	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Diuron-d6	113	P	30 - 160
EPA 8321B	Endothall-d6	78.8	P	30 - 160
EPA 8321B	Endothall-d6	78.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	132	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	132	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.8	P	30 - 160
EPA 8321B	Primidone-d5	92.3	P	30 - 160
EPA 8321B	Sucralose-d6	44.3	P	30 - 160
EPA 8321B	Sucralose-d6	44.3	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2161214
Field Sample ID: G4NW0450

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	139	P	30 - 160
EPA 8321B	Acetaminophen-d4	81.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.4	P	30 - 160
EPA 8321B	Diuron-d6	95.5	P	30 - 160
EPA 8321B	Endothall-d6	78.9	P	30 - 160
EPA 8321B	Endothall-d6	78.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.8	P	30 - 160
EPA 8321B	Primidone-d5	80.6	P	30 - 160
EPA 8321B	Sucralose-d6	41.4	P	30 - 160
EPA 8321B	Sucralose-d6	41.4	P	30 - 160

Lab Sample ID: 2161215
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	80.2	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	67.1	P	34 - 106
EPA 8276	Decachlorobiphenyl	68.0	P	26 - 97.0
EPA 8276	PCNB	101	P	38 - 141

Lab Sample ID: 2161216
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	104	P	72 - 135
EPA 8270E	Terbufos-d10	97.9	P	57 - 134

Lab Sample ID: 2161217
Field Sample ID: G4NW0451

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	86.4	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	68.5	P	34 - 106
EPA 8276	Decachlorobiphenyl	73.9	P	26 - 97.0
EPA 8276	PCNB	106	P	38 - 141

Lab Sample ID: 2161218
Field Sample ID: G4NW0450

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	85.6	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	69.0	P	34 - 106
EPA 8276	Decachlorobiphenyl	72.4	P	26 - 97.0
EPA 8276	PCNB	109	P	38 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97893

Included Lab Sample IDs: 2161196, 2161199, 2161202

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	95.2	93.6	P/P	90 - 110
O-Phosphate-P	99.3	95.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97897

Included Lab Sample IDs: 2161194, 2161197, 2161200

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

Reference Method: SM 5310 B-2011

Run ID: A97937

Included Lab Sample IDs: 2161195, 2161198, 2161201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	96.6	P/P	90 - 110
Organic Carbon	96.6	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97988

Included Lab Sample IDs: 2161195, 2161198, 2161201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	P/P	90 - 110
Kjeldahl Nitrogen	103	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97999

Included Lab Sample IDs: 2161195, 2161198, 2161201

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98039

Included Lab Sample IDs: 2161195, 2161198

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

Reference Method: EPA 8321B

Run ID: A98041

Included Lab Sample IDs: 2161210, 2161212, 2161213, 2161214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	95.4	95.9	P/P	40 - 200
Glufosinate	132	124	P/P	40 - 200
Glyphosate	115	111	P/P	40 - 200

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A98051

Included Lab Sample IDs: 2161215, 2161217, 2161218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.2		P	80 - 120
Toxaphene	109		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98056

Included Lab Sample IDs: 2161194, 2161197, 2161200

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

Reference Method: EPA 8321B

Run ID: A98069

Included Lab Sample IDs: 2161210, 2161212, 2161213, 2161214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	114	98.9	P/P	60 - 160
Endothall	147	137	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98071

Included Lab Sample IDs: 2161195, 2161198, 2161201

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

Reference Method: EPA 8270E

Run ID: A98085

Included Lab Sample IDs: 2161215, 2161217, 2161218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.9		P	80 - 120
Alpha-BHC	98.4		P	80 - 120
Alpha-Chlordane	99.2		P	80 - 120
Beta-BHC	102		P	80 - 120
Beta-Cyfluthrin	90.6		P	80 - 120
Bifenthrin	97.6		P	80 - 120
Chlorothalonil	96.8		P	80 - 120
Cis-Nonachlor	96.9		P	80 - 120
Cypermethrin	91.1		P	80 - 120
Dacthal	97.1		P	80 - 120
DDD-p,p'	95.1		P	80 - 120
DDE-p,p'	95.5		P	80 - 120
DDT-p,p'	99.2		P	80 - 120
Delta-BHC	98.4		P	80 - 120
Dicofol	94.1		P	80 - 120
Dieldrin	97.6		P	80 - 120
Endosulfan I	98.5		P	80 - 120
Endosulfan II	98.6		P	80 - 120
Endosulfan Sulfate	100		P	80 - 120
Endrin	96.5		P	80 - 120
Endrin Aldehyde	96.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A98085

Included Lab Sample IDs: 2161215, 2161217, 2161218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Ketone	100		P	80 - 120
Ethalfuralin	99.3		P	80 - 120
Gamma-BHC	97.1		P	80 - 120
Gamma-Chlordane	98.1		P	80 - 120
Heptachlor	97.1		P	80 - 120
Heptachlor Epoxide	97.5		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Lambda-Cyhalothrin	89.0		P	80 - 120
Methoxychlor	97.8		P	80 - 120
Mirex	97.8		P	80 - 120
Permethrin	86.3		P	80 - 120
Phenothrin	85.0		P	80 - 120
Prallethrin	89.9		P	80 - 120
Trans-Nonachlor	98.1		P	80 - 120
Trifluralin	98.0		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98101

Included Lab Sample IDs: 2161201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A98111

Included Lab Sample IDs: 2161194, 2161197, 2161200

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A98130

Included Lab Sample IDs: 2161216

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	105		P	80 - 120
Ametryn	105		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	94.3		P	80 - 120
Azinphos Methyl	96.1		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	110		P	80 - 120
Carbophenothion	98.4		P	80 - 120
Chlorpyrifos Ethyl	99.4		P	80 - 120
Chlorpyrifos Methyl	98.3		P	80 - 120
Cyanazine	91.9		P	80 - 120
Demeton	98.5		P	80 - 120
Diazinon	102		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	96.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A98130
Included Lab Sample IDs: 2161216

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dithiopyr	103		P	80 - 120
EPTC	108		P	80 - 120
Ethion	98.6		P	80 - 120
Ethoprop	98.8		P	80 - 120
Fenamiphos	98.7		P	80 - 120
Fipronil	98.3		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	100		P	80 - 120
Fipronil Sulfone	97.2		P	80 - 120
Flumioxazin	88.2		P	80 - 120
Fonofos	98.0		P	80 - 120
Hexazinone	97.5		P	80 - 120
Imazalil	96.5		P	80 - 120
Malathion	93.2		P	80 - 120
Metaxyl	105		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	97.8		P	80 - 120
Mevinphos	99.4		P	80 - 120
Molinate	108		P	80 - 120
Naled	100		P	80 - 120
Norflurazon	98.6		P	80 - 120
Oxadiazon	105		P	80 - 120
Parathion Ethyl	98.4		P	80 - 120
Parathion Methyl	96.1		P	80 - 120
Pendimethalin	97.7		P	80 - 120
Phorate	98.5		P	80 - 120
Prodiamine	92.4		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	99.1		P	80 - 120
Propiconazole	100		P	80 - 120
Simazine	98.5		P	80 - 120
Sulfentrazone	97.4		P	80 - 120
Tebuconazole	100		P	80 - 120
Terbufos	98.0		P	80 - 120
Terbuthylazine	101		P	80 - 120

Reference Method: SM 4500 F-C-2011
Run ID: A98174
Included Lab Sample IDs: 2161194, 2161197, 2161200

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	98.6	P/P	90 - 110
Fluoride	98.6	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A98184
Included Lab Sample IDs: 2161210, 2161212, 2161213, 2161214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	91.9	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A98184

Included Lab Sample IDs: 2161211

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	104	92.7	P/P	60 - 150
Acetaminophen	98.5	101	P/P	60 - 160
Acetamiprid	94.9	101	P/P	50 - 150
Afidopyropen	88.6	106	P/P	50 - 150
Aldicarb	86.2	92.2	P/P	60 - 150
Aldicarb Sulfone	95.3	85.9	P/P	50 - 150
Aldicarb Sulfoxide	101	81.2	P/P	50 - 150
Bentazon	102	159	P/P	50 - 160
Benzovindiflupyr	101	112	P/P	50 - 150
Carbamazepine	106	105	P/P	60 - 150
Carbaryl	93.8	103	P/P	60 - 150
Carbofuran	102	101	P/P	50 - 150
Clothianidin	86.1	75.2	P/P	60 - 150
Dinotefuran	106	104	P/P	50 - 150
Diuron	118	121	P/P	60 - 150
Fenuron	100	83.4	P/P	60 - 150
Fluridone	93.6	98.6	P/P	60 - 160
Hydrocodone	115	109	P/P	60 - 150
Ibuprofen	101	89.2	P/P	50 - 160
Imazapyr	85.1	82.8	P/P	50 - 150
Imidacloprid	100	96.6	P/P	60 - 150
Linuron	111	119	P/P	60 - 150
Mandestrobin	99.0	102	P/P	50 - 150
MCPP	90.2	92.7	P/P	50 - 150
Methiocarb	104	102	P/P	50 - 150
Methomyl	86.7	92.2	P/P	50 - 150
Naproxen	64.6	89.7	P/P	50 - 160
Oxamyl	91.1	94.3	P/P	50 - 150
Primidone	101	97.8	P/P	60 - 150
Propoxur	109	100	P/P	50 - 150
Pyraclostrobin	103	117	P/P	60 - 150
Thiamethoxam	82.8	104	P/P	50 - 150
Tolfenpyrad	104	106	P/P	60 - 150
Triclopyr	80.0	85.1	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A98193

Included Lab Sample IDs: 2161210, 2161212, 2161213, 2161214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	104	P/P	60 - 160

* 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	MS
								SMP	
EPA 180.1 Rev. 2.0	Turbidity							0.615	
EPA 300.0 Rev. 2.1	Bromide	99.1		93.6	94.4	94.2			0.653
EPA 350.1 Rev. 2.0	Ammonia-N	98.6		98.7	99.4				0.624
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		101	104				2.72
EPA 353.2 Rev. 2.0	NO2NO3-N	100		97.5					0.694
	NO2NO3-N	99.0		98.0	98.0				0.0
EPA 365.1 Rev. 2.0	Total-P	105		98.6	99.3				0.733
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.7		102	97.6				4.11
EPA 8270E	Acetochlor	95.3	101	102	93.2		6.19		8.75
	Alachlor	96.3	100	104	94.6		3.73		9.74
	Aldrin	50.3	49.6	67.9	66.4		1.43		2.24
	Alpha-BHC	90.4	87.9	93.3	92.6		2.75		0.776
	Alpha-Chlordane	87.8	88.7	89.9	88.5		0.946		1.61
	Ametryn	98.3	102	99.7	107		3.78		6.93
	Atrazine	101	106				4.66		4.63
	Atrazine Desethyl	81.3	90.2	73.0	74.3		10.4		1.32
	Azinphos Methyl	102	98.1	103	94.4		4.30		9.05
	Beta-BHC	99.4	97.0	104	100		2.47		3.54
	Beta-Cyfluthrin	84.1	83.4	91.4	95.5		0.860		4.30
	Bifenthrin	88.6	88.4	96.9	98.2		0.149		1.27
	Bromacil	65.1	69.0				5.72		4.69
	Butylate	66.8	94.3	78.1	75.0		34.2		4.04
	Carbophenothion	96.2	90.3	92.3	86.7		6.33		6.30
	Chlorothalonil	86.3	93.4	41.8	31.8		7.93		27.3
	Chlorpyrifos Ethyl	98.6	101	103	97.0		2.64		5.93
	Chlorpyrifos Methyl	97.8	98.4	101	94.5		0.592		6.58
	Cis-Nonachlor	89.7	88.3	92.0	90.9		1.47		1.19
	Cyanazine	175	180	180	159		3.12		12.0
	Cypermethrin	87.8	87.9	102	112		0.115		8.76
	Dacthal	91.6	88.9	90.5	88.1		2.93		2.66
	DDD-p,p'	95.0	93.7	97.2	96.2		1.41		1.07
	DDE-p,p'	85.2	83.7	81.4	79.5		1.74		2.34
	DDT-p,p'	79.0	78.9	79.7	77.3		0.0705		3.15
	Delta-BHC	110	113	219	233		2.75		6.31
	Demeton	86.9	89.7	96.5	89.2		3.21		7.91
	Diazinon	94.0	100	101	94.9		6.35		6.07
	Dicofol	75.2	73.8	65.2	63.4		1.81		2.70
	Dieldrin	94.8	89.9	90.3	88.9		5.25		1.59
	Dimethenamid	92.5	99.2	101	94.5		6.99		6.71
	Disulfoton	84.1	85.7	86.9	77.8		1.96		11.1
	Dithiopyr	87.2	91.2	89.1	88.3		4.49		0.820
	Endosulfan I	104	92.2	101	108		11.9		6.54
	Endosulfan II	103	108	114	109		4.70		3.88
	Endosulfan Sulfate	97.6	99.4	112	114		1.81		1.60
	Endrin	90.6	96.6	96.7	91.0		6.42		6.01
	Endrin Aldehyde	90.3	89.5	92.0	89.0		0.799		3.34
	Endrin Ketone	96.0	97.4	99.6	101		1.40		1.15
	EPTC	56.5	88.7	75.2	67.7		44.4		10.6
	Ethalfuralin	80.1	78.2	82.8	83.3		2.48		0.576
	Ethion	91.5	71.7	89.3	84.1		24.2		5.92
	Ethoprop	90.7	96.7	99.9	92.1		6.40		8.12
	Fenamiphos	91.1	86.4	83.4	82.3		5.32		1.29
	Fipronil	92.7	93.6	98.4	91.5		0.976		4.91
	Fipronil Desulfinyl	96.1	98.2	97.9	94.9		2.14		2.60

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Fipronil Sulfide	89.7	86.1	89.7	84.9	4.03		4.59
	Fipronil Sulfone	87.1	80.3	87.8	74.8	8.12		6.50
	Flumioxazin	83.8	67.9	134	131	21.0		1.91
	Fonofos	88.4	91.4	95.0	90.0	3.31		5.40
	Gamma-BHC	98.9	99.1	102	103	0.218		0.954
	Gamma-Chlordane	82.6	84.2	84.9	84.8	1.98		0.149
	Heptachlor	75.7	77.4	77.7	76.6	2.24		1.34
	Heptachlor Epoxide	87.8	89.7	90.4	89.1	2.06		1.43
	Hexachlorobenzene	74.9	75.4	72.2	72.5	0.620		0.489
	Hexazinone	101	101	114	95.3	0.607		16.0
	Imazalil	93.4	92.1	86.5	148	1.37		52.7
	Lambda-Cyhalothrin	78.0	78.9	92.6	95.0	1.08		2.58
	Malathion	104	107	104	100	2.75		3.65
	Metalaxyl	101	103	105	97.6	2.04		7.34
	Methoxychlor	94.2	94.4	98.0	98.3	0.245		0.215
	Metolachlor	90.1	96.7	96.2	91.7	7.13		3.93
	Metribuzin	159	175	171	156	9.56		8.87
	Mevinphos	92.5	107	107	96.0	14.2		10.7
	Mirex	69.2	69.5	74.8	73.5	0.461		1.83
	Molinate	72.0	93.6	87.1	80.9	26.1		7.35
	Naled	61.2	63.6	78.6	63.7	3.83		21.0
	Norflurazon	94.4	93.9	92.5	87.6	0.485		5.43
	Oxadiazon	91.8	91.7	95.1	90.2	0.153		5.28
	Parathion Ethyl	97.5	95.1	99.2	91.6	2.47		8.01
	Parathion Methyl	102	106	107	98.9	4.20		7.45
	Pendimethalin	88.9	89.8	108	99.5	0.994		8.51
	Permethrin	77.4	76.2	86.1	87.1	1.53		1.15
	Phenothrin	52.8	52.3	75.4	76.4	1.01		1.27
	Phorate	95.4	100	96.8	90.2	4.90		7.08
	Prallethrin	64.3	64.6	75.4	74.3	0.396		1.36
	Prodiamine	73.3	89.2	95.3	114	19.6		15.2
	Prometon	94.9	95.3	97.8	90.9	0.419		6.17
	Prometryn	95.4	98.5	101	96.3	3.22		4.56
	Pronamide	100	100	124	116	0.0685		7.10
	Propiconazole	87.4	84.1	86.0	80.4	3.82		5.75
	Simazine	101	105	107	82.8	3.52		12.8
	Sulfentrazone	15.6	17.7	88.4	77.9	13.0		12.6
	Tebuconazole	60.6	47.8	56.8	53.5	23.6		5.87
	Terbufos	93.8	96.4	101	96.0	2.68		5.42
	Terbutylazine	96.6	99.9	110	103	3.44		6.26
	Trans-Nonachlor	82.3	84.4	84.4	82.9	2.61		1.88
	Trifluralin	80.4	81.3	81.7	81.9	1.10		0.269
EPA 8276	Chlordane	98.1	95.8	105	105	2.31		0.472
	Toxaphene	92.1	94.4	103	105	2.48		1.41
EPA 8321B	2,4-D	108		151	143			4.76
	3-Hydroxycarbofuran	67.6		71.9	62.1			14.6
	Acesulfame K	114		30.2	34.3			12.8
	Acetaminophen	74.9		87.4	83.9			4.11
	Acetamiprid	78.2		78.8	75.6			4.07
	Afidopyropen	77.7		93.2	85.5			8.63
	Aldicarb	48.6		75.5	90.4			17.9
	Aldicarb Sulfone	76.4		75.4	81.2			7.44
	Aldicarb Sulfoxide	74.4		31.2	30.1			3.58
	AMPA	99.4		104	106			2.23

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Bentazon	133				2.40
	Benzovindiflupyr	76.5	81.3	84.8		4.21
	Carbamazepine	85.2	83.0	77.3		7.11
	Carbaryl	70.2	58.8	60.0		2.07
	Carbofuran	66.6	53.7	54.0		0.494
	Clothianidin	65.8	76.2	65.1		15.8
	Dinotefuran	80.5	138	119		12.3
	Diuron	86.0	83.2	76.1		8.36
	Endothall	98.1	126	136		7.18
	Fenuron	83.7	74.1	75.7		2.21
	Fluridone	80.8	84.7	82.1		3.06
	Glufosinate	126	114	116		1.59
	Glyphosate	114	93.9	101		7.64
	Hydrocodone	87.3	111	103		8.33
	Ibuprofen	67.8	72.3	79.1		9.02
	Imazapyr	73.3	112	105		4.14
	Imidacloprid	87.7	161	170		4.96
	Linuron	74.9	76.8	74.8		2.64
	Mandestrobin	79.2	82.3	82.3		0.0392
	MCPP	139	152	164		7.07
	Methiocarb	65.8	60.6	63.6		4.85
	Methomyl	75.9	72.1	69.4		3.80
	Naproxen	70.0	101	86.6		15.3
	Oxamyl	78.1	75.2	69.8		7.38
	Primidone	83.8	79.7	85.2		6.60
	Propoxur	64.2	56.4	55.2		2.13
	Pyraclostrobin	74.3	83.9	89.1		5.98
	Sucralose	103	102	99.8		1.70
	Thiamethoxam	80.8	104	128		19.5
	Tolfenpyrad	46.9	66.6	65.6		1.48
	Triclopyr	109	132	141		6.43
SM 2320 B-2011	Total Alkalinity	101			0.349	
SM 4500 F-C-2011	Fluoride	95.0	99.3	100		0.516
SM 5310 B-2011	Organic Carbon	97.4	104			1.05
	Organic Carbon	97.2	97.5	97.0		0.473

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2161194, 2161197, 2161200
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2161194, 2161197, 2161200
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2161195, 2161198, 2161201
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2161195, 2161198, 2161201
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2161195, 2161198, 2161201
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2161195, 2161198, 2161201
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2161196, 2161199, 2161202
EPA 8270E	Organochlorine pesticides in water matrices by GC/MS-SIM	2161215, 2161217, 2161218
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2161216
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2161215, 2161217, 2161218
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2161211
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2161210, 2161212, 2161213, 2161214

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2161210, 2161212, 2161213, 2161214
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2161194, 2161197, 2161200
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2161194, 2161197, 2161200
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2161194, 2161197, 2161200
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2161195, 2161198, 2161201

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	02/28/2020			02/28/2020 15:40	Yen Ta	2161194, 2161197, 2161200
EPA 300.0 Rev. 2.1	02/28/2020			03/06/2020 23:17	Lipi Saha	2161194
	02/28/2020			03/06/2020 23:34	Lipi Saha	2161197
	02/28/2020			03/06/2020 23:52	Lipi Saha	2161200
EPA 350.1 Rev. 2.0	02/28/2020			03/04/2020 12:43	Ping Hua	2161195
	02/28/2020			03/04/2020 12:48	Ping Hua	2161198
	02/28/2020			03/04/2020 12:50	Ping Hua	2161201
EPA 351.2 Rev. 2.0	02/28/2020	03/03/2020 09:25	Sima Feizi	03/04/2020 10:40	Jhamieka S. Greenwood	2161195
	02/28/2020	03/03/2020 09:25	Sima Feizi	03/04/2020 10:59	Jhamieka S. Greenwood	2161198
	02/28/2020	03/03/2020 09:25	Sima Feizi	03/04/2020 11:00	Jhamieka S. Greenwood	2161201
EPA 353.2 Rev. 2.0	02/28/2020			03/06/2020 11:43	Lauren Lees	2161195
	02/28/2020			03/06/2020 11:45	Lauren Lees	2161198
	02/28/2020			03/10/2020 09:19	Beverly Y. Sanders	2161201
EPA 365.1 Rev. 2.0	02/28/2020	03/05/2020 13:48	Yen Ta	03/09/2020 13:46	Benjamin T. Nordmann	2161195
	02/28/2020	03/05/2020 13:48	Yen Ta	03/09/2020 13:47	Benjamin T. Nordmann	2161198
	02/28/2020	03/05/2020 13:48	Yen Ta	03/09/2020 13:48	Benjamin T. Nordmann	2161201
EPA 365.1 Rev. 2.0 dissolved	02/28/2020			02/28/2020 14:56	Carlos Miranda	2161196
	02/28/2020			02/28/2020 15:03	Carlos Miranda	2161199
	02/28/2020			02/28/2020 15:04	Carlos Miranda	2161202
EPA 8270E	02/28/2020	03/04/2020 09:00	Julie Wi	03/06/2020 15:38	Vandana T. Nagar	2161216
	02/28/2020	03/04/2020 09:30	Rasheda Ghaffari	03/09/2020 22:40	Arthur Maknenko	2161215
	02/28/2020	03/04/2020 09:30	Rasheda Ghaffari	03/09/2020 23:11	Arthur Maknenko	2161217
	02/28/2020	03/04/2020 09:30	Rasheda Ghaffari	03/09/2020 23:43	Arthur Maknenko	2161218
EPA 8276	02/28/2020	03/04/2020 09:30	Rasheda Ghaffari	03/07/2020 04:09	Michael Poppell	2161215
	02/28/2020	03/04/2020 09:30	Rasheda Ghaffari	03/07/2020 05:05	Michael Poppell	2161217
	02/28/2020	03/04/2020 09:30	Rasheda Ghaffari	03/07/2020 06:00	Michael Poppell	2161218
EPA 8321B	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/03/2020 14:20	Rebecca Ware	2161210
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/03/2020 14:31	Rebecca Ware	2161212
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/03/2020 14:42	Rebecca Ware	2161213
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/03/2020 14:52	Rebecca Ware	2161214
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/04/2020 13:24	Rebecca Ware	2161210
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/04/2020 13:38	Rebecca Ware	2161212
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/04/2020 13:52	Rebecca Ware	2161213
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/04/2020 14:06	Rebecca Ware	2161214
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/12/2020 21:24	Rebecca Ware	2161210
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/12/2020 21:36	Rebecca Ware	2161212
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/12/2020 21:48	Rebecca Ware	2161213
	02/28/2020	03/03/2020 10:45	Rebecca Ware	03/12/2020 21:59	Rebecca Ware	2161214
	02/28/2020	03/05/2020 09:00	Hoor Shaik	03/10/2020 02:37	Juyoung Kim	2161211
	02/28/2020	03/05/2020 09:00	Hoor Shaik	03/10/2020 14:11	Juyoung Kim	2161210

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	02/28/2020	03/05/2020 09:00	Hoor Shaik	03/10/2020 14:45	Juyoung Kim	2161212
	02/28/2020	03/05/2020 09:00	Hoor Shaik	03/10/2020 15:20	Juyoung Kim	2161213
	02/28/2020	03/05/2020 09:00	Hoor Shaik	03/10/2020 15:55	Juyoung Kim	2161214
SM 2320 B-2011	02/28/2020			03/10/2020 16:36	Dale L. Simmons	2161200
	02/28/2020			03/10/2020 16:46	Dale L. Simmons	2161194
	02/28/2020			03/10/2020 16:56	Dale L. Simmons	2161197
SM 2540 D-2011	02/28/2020			03/02/2020 14:22	Yijie Li	2161194, 2161197, 2161200
SM 4500 F-C-2011	02/28/2020			03/12/2020 14:53	Dale L. Simmons	2161200
	02/28/2020			03/12/2020 15:49	Dale L. Simmons	2161194
	02/28/2020			03/12/2020 15:53	Dale L. Simmons	2161197
SM 5310 B-2011	02/28/2020			03/03/2020 04:06	Lauren Lees	2161201
	02/28/2020			03/03/2020 06:05	Lauren Lees	2161195
	02/28/2020			03/03/2020 06:17	Lauren Lees	2161198